



PSYCHOLOGICAL STRAIN AND SUICIDAL IDEATION AMONG CHINESE YOUNG PEOPLE



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ABSTRACT

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Background: In China, suicide is one of the major causes of death among adolescents and young adults. Various factors affect suicidal ideation. Aim: The current study examined how psychological strains affected suicidal ideation. Method: A questionnaire survey study was conducted in a Chinese university, with a large sample of 979 undergraduate students. The multiple linear regression analysis was used to examine the possible risk factors for suicidal ideation. Results: Grade, religion, course attendance, appearance self-evaluation, depression, social support and psychological strains measured by differential values strain and relative deprivation strain were significantly associated with suicidal ideation. Conclusions: Chinese young people's psychological strains were predictors of suicidal ideation with the important demographic variables controlled for.

Contribution/ Originality: This study is one of very few studies which have investigated the association between psychological strains and suicidal ideation among Chinese young people. It revives an understanding that psychological strains especially measured by differential values strain and relative deprivation strain were significantly associated with suicidal ideation.

1. INTRODUCTION

Suicide is a world-wide public health problem and a leading cause of death in the world. It is a public health issue that affects family, communities, provinces and entire countries (WHO, 2014). Suicide is now the second leading cause of death for young people between the ages of 15 and 29 years globally (WHO, 2014). According to "China Health Statistical Yearbook," the suicide death of young people in 15-34 years group was the second leading cause of death after traffic accident. Suicide has caused serious mental health and economic burden to Chinese young people.

Western scholars have put forward some theories about suicide from the dimension of sociology, and psychology. From the perspective of sociology, (Durkheim, 1951) believed that suicide is caused by the individual's adaptability to social experience, and he puts forward the concept of social integration and social disorder. He proposed four types of suicide, including egoistic suicide, altruistic suicide, anomic suicide, fatalistic suicide. Egoistic suicide is likely to occur when individuals show extreme individualism. Altruistic suicide is to meet the

requirements of social norms, such as commit ritualistic suicide in Japan. Anomic suicide is due to the disorder of individual behavior. Due to the excessive oppression of society, fatalistic suicide often occurs, such as slave suicide. Merton (1957) put forward anomie theory of deviance. He believed that society fails to provide individuals the reasonable opportunities needed to become successful. So individuals may experience enormous personal pressure, and then they may engage in deviant behavior. From the perspective of psychology, the psychoanalysis theory holds that people have the instinct of life and death. They are in a constant dynamic. Menninger (1956) claimed that suicide is a reflection of the murder or a mean of self punishment. He saw it as a self-directed death instinct.

There are also some related studies on suicide ideation in Chinese academic circles. Domestic research finds that the factors related to suicidal ideation include family situation, depression and negative life events (He and Yang, 2015; Hu *et al.*, 2016; Li *et al.*, 2016). Most of the studies of Chinese scholars only explores some factors which may influence the suicide ideation or the mechanism of the effect of a specific factor on suicide ideation. Those studies do not integrate correlation factors and mechanism of action.

In order to overcome the shortcomings of the past research, we introduce the concept of "psychological strain" to explain the psychological experience of a person who has suffered a conflict and has to make a decision. Psychological strain comes mainly from four dimensions: differential values strain, discrepancy between aspiration and reality, relative deprivation, and crisis and the lack of coping skills (Zhang *et al.*, 2016). Differential values strain: When two conflicting social values or beliefs are competing in an individual's daily life, the person experiences value strain. The two conflicting social facts are competing personal beliefs internalized in the person's value system. In developing countries, there may be two distinct values of traditional collectivism and modern individualism. When the two conflicting values are taken as equally important in a person's daily life, the person experiences great strain and when one value is more important than the other, there is then little or no strain. Discrepancy between aspiration and reality: It involves two conflicting social experience, is a personal goal, and the other is a reality that might hinder its goal. If the reality is too far away from the desire, people will suffer great strain. Relative deprivation: If a person living in poor areas, he may not feel pain or deprivation, if this person is poor but other people live rich, he will think that he is deprived, so he will be depressed. Crisis and the lack of coping skills: Simply experiencing a crisis does not necessarily have pressure, for those who lack the skills to deal with them, they will experience the pressure of disharmony. The less experience and skills you have, the stronger the strain will be when the crisis occurs. Psychological strain is comprised of at least two sources, rather than simply one (Zhang *et al.*, 2011). When the individual is unable to give up any one of the two conflicting factors, it will experience the psychological distress, and the psychological distress forces the individual to make rational choices, which may commit suicide in order to alleviate the psychological strain (Zhang *et al.*, 2011; Zhang and Lv, 2014).

In this study, we aim to explore how psychological strains affect suicidal ideation among Chinese young people. We assume that psychological strains are positive predictors of suicidal ideation and some of them can significantly predict suicidal ideation.

2. METHOD

2.1. Procedure and Participants

The data collection was conducted in a Chinese university in Beijing. The questionnaire survey was implemented by the Student Affairs Department and the research team. It was an annual survey in the university aiming to collect the data of students' social values, school performance, and mental health, etc. All the respondents of survey were full-time undergraduate students randomly sampled from the university population.

Above all, we obtain a list of all full-time undergraduate students which is provided from the student work department of the school, including basic information list. According to the list, we select respondents systematically in the survey. We use centralized on-site recycling collection questionnaire method. Selected

students answer the questionnaires in groups. The students are concentrated in a number of classrooms to fill answer, and each classroom has two professional supervisors who are responsible for answering questions and on-site supervision.

Informed consent was obtained from each student before the questionnaire survey started. It took about 30 min to finish the questionnaire. The number of valid questionnaires of this survey is 979. Because the survey is anonymous, and all statistical data will be used only for research, privacy protection and human rights can be fully guaranteed.

3. MEASURES

Gender (1= male and 2= female), grade (1= grade one, 2= grade two, 3= grade three, 4= grade four), political status (1= party member, 2= non-party member), religion (1= not believing and 2= believing in a religion), economic difficulty in registration (1= not all, 2= general difficult and 3= particularly difficult). Course attendance is measured by the question "In last month, what percentage of your attendance was." Appearance self-evaluation is measured by the question "How do you evaluate your appearance." The answer is divided into ten grades. And the ten choices is coded from 1= the most general to 10= the most outstanding.

3.1. Depression (CES-D)

The Center for Epidemiologic Studies-Depression (CES-D) scale is designed for research use in the general population (Radloff, 1977). Unlike many scales of depression, the CES-D scale is not designed for clinical population. The 20-item scale taps cognitive, affective, behavioral and somatic symptoms associated with depression (Radloff, 1977). Higher scores indicate higher depression after reversing the four items. The CES-D scale demonstrate good psychometric properties in China among college students (Zhang and Norvilitis, 2002). Orme *et al.* (1986) claimed that the scale demonstrates good factorial validity. In other cultures, the CES-D scale also receives a high degree of attention. It has been translated into many other languages and has already been used in China. Lin (1989) used the CES-D as the basis for a new scale to form the Chinese Depressive Symptom Scale and also reported that the CES-D scale is a valid instrument for Chinese research when compared to quality of life factors. Rankin *et al.* (1993) claimed the CES-D scale has good internal consistency reliability to diabetic Chinese in San Francisco.

3.2. Social Support (MSPSS)

The Multidimensional Scale of Perceived Social Support (Zimet, 1988) is used to measure subjective social support. The scale is comprised of 12 items addressing support received from different facets. Higher scores indicate greater social support. The reliability and validity of MSPSS have been demonstrated across different populations (Canty-Mitchell and Zimet, 2000). The scale has been used to assess social support among South Asians (Tonsing *et al.*, 2012). In China, the scale is also reliable and valid for use (Zhang and Norvilitis, 2002).

3.3. The Psychological Strain Scales (PSS)

The strain theory of suicide and mental disorder (Zhang, 2005; Zhang *et al.*, 2010) is used to predict suicide, suicidal behavior, and mental disorders, and there is a standardized instrument to facilitate quantitative research where the theory is applied. The Psychological Strain Scales (PSS) is developed by the Center for Suicide Prevention Research (CSPR) at Shandong University of China and the Chinese version of the instrument was previously validated and published. The scale is comprised of 60 items. There are four sources of psychological strains by the Strain Theory of suicide and mental disorder: (1) differential values strain, (2) discrepancy between aspiration and reality, (3) relative deprivation, and (4) crisis and the lack of coping skills (Zhang *et al.*, 2011). Each of them is likely to precede a suicidal behavior or mental disorder onset. Higher scores indicate higher psychological

stains. The psychological strain theory has been tested and supported in a number of empirical studies (Zhang and Lester, 2008). It emerged as an additional theoretical conceptualization to explain the unique patterns of Chinese rural young suicide (Zhang, 2005). Cronbach's Alpha coefficient of PSS is 0.936 and the Split-Half Coefficient of PSS is 0.839, which shows the excellent reliability of the total PSS, and the factor analysis results demonstrated strong construct validity of each scale (Zhang and Lyu, 2014).

3.4. Suicidal Ideation

Suicidal ideation is measured by using the National Comorbidity Survey (Kessler *et al.*, 1994). The National Comorbidity Survey include suicidal wishes, suicidal plans and suicidal attempts. These question are "have you ever seriously considered to die," "in the past 12 months, have you ever had this idea," "have you ever made a suicide plan," "in the past 12 months, have you ever done this kind of plan," "have you ever had suicidal behavior," and "Over the past 12 months, have you ever had suicidal behavior." Answer choices in these questions are: 0= no, 1= yes. The last question is "which of the following three statements best describes your thoughts at that time." Answer choices in the question are: 1= i tried to commit suicide for attention or help, but i am not willing to die, 2=i tried to commit suicide, but I know that's not a good idea, 3= i did want to commit suicide, but it was just bad luck, no success. We will add the score of these seven questions. Higher scores indicate higher suicidal ideation.

4. RESULTS

Table-1. Comparison of the Study Variables between Male and Female: Mean and Standard Deviation

Variable	Total (n=979)	Male (n=343)	Female (n=636)	t/ χ^2	p
Gender (% females)	65.0				
Grade (%)					
Grade one	323 (33.0)	114 (33.2)	209 (32.9)	0.845	0.839
Grade two	311 (31.8)	104 (30.3)	207 (32.5)		
Grade three	194 (19.8)	68 (19.8)	126 (19.8)		
Grade four	151 (15.4)	57 (16.6)	94 (14.8)		
Political status (%)					
Party member	163 (16.6)	66 (19.2)	97 (15.3)	2.557	0.110
Non-party member	816 (83.4)	277 (80.8)	539 (84.7)		
Religion (%)					
Not believing	921 (94.1)	327 (95.3)	594 (93.4)	1.503	0.220
Believing	58 (5.9)	16 (4.7)	42 (6.6)		
Economic difficulty in registration (%)					
Not all	805 (82.2)	272 (79.3)	533 (83.8)	5.827	0.054
General difficult	115 (11.7)	42 (12.2)	73 (11.5)		
Particularly difficult	59 (6.0)	29 (8.5)	30 (4.7)		
Course attendance	94.18 (13.64)	93.44 (13.47)	94.59 (13.72)	-1.244	0.214
Appearance self-evaluation	5.58 (1.89)	5.74 (2.27)	5.49 (1.64)	1.810	0.071
Depression	45.73 (18.74)	46.95 (20.15)	45.08 (17.91)	1.490	0.137
Social support	63.03 (14.25)	60.77 (15.35)	64.25 (13.47)	-3.667	<0.001***
Differential values	36.36 (11.05)	35.45 (11.81)	36.89 (10.60)	-1.875	0.061
Reality vs. aspiration	35.59 (12.27)	35.08 (12.57)	35.86 (12.10)	-0.944	0.346
Relative deprivation	29.69 (12.06)	31.04 (12.91)	28.96 (11.52)	2.496	0.013*
Deficient coping	30.14 (11.91)	31.24 (12.83)	29.54 (11.36)	2.053	0.040*
Psychological strain	131.80 (42.92)	132.81 (46.03)	131.25 (41.18)	0.528	0.598

*p<.05.**p<.01.***p<.001.

Compared to the male group, the female group score significantly higher than the male group on social support, but significantly lower than the male group on relative deprivation and deficient coping. Although it is not statistically significant, the female group score higher than the male group on differential values and reality vs. aspiration, but lower than the male group on depression. With the current data, the psychological strain scores of the male group and the female group are respectively 132.81 and 131.25.

Table-2. Bivariate Inter-correlations among Major Predictors for Chinese College Students

Variable	Depression	Social support	Differential values	Reality vs. aspiration	Relative deprivation	Deficient coping
Depression	—					
Social support	-0.346**	—				
Differential values	0.370**	-0.015	—			
Reality vs. aspiration	0.447**	-0.130**	0.799**	—		
Relative deprivation	0.385**	-0.257**	0.666**	0.769**	—	
Deficient coping	0.470**	-0.242**	0.682**	0.782**	0.879**	—

*p<.05.**p<.01.

Table 2 shows that lower depression level has associated with stronger social support. The association is statistically significant. The stronger depression level has significantly associated with stronger differential values, reality vs. aspiration, relative deprivation and deficient coping. Weaker social support has significantly associated with stronger reality vs. aspiration, relative deprivation and deficient coping. Although it is not statistically significant, weaker social support has associated with stronger differential values. It is noteworthy that there exist mutually positive and significant relationship in the four dimension of psychological strain, which is consistent with the theory of psychological strain. The psychological strain is different from a single pressure, and it is from at least two conflicting pressures or two variables (Zhang *et al.*, 2011). It shows that the psychological strain comes from the interactions of the four dimensions.

Table-3. Multiple Regression Models for Suicidal Ideation among Chinese College Students

Variable	Suicidal Ideation		
	Model 1	Model 2	Model 3
Gender	.061	.059	.083
Grade (Grade one)			
Grade two	.210**	.160*	.177*
Grade three	.230*	.219*	.227*
Grade four	.324**	.263**	.282**
Political status	-.111	-.082	-.080
Religion	.483***	.403**	.399**
economic difficulty in registration (not all)			
General difficult		.010	-.020
Particularly difficult		.262	.208
Course attendance		-.012***	-.009***
Appearance self-evaluation		-.061***	-.035*
Depression			.005**
Social support			-.015***
Differential values			.012*
Reality vs. aspiration			.005
Relative deprivation			.018**
Deficient coping			.008
R ²	.029	.069	.130

p<.05.**p<.01.***p<.001.

As is shown in table 3, grade, religion, course attendance, appearance self-evaluation, depression and social support as predictors of suicidal ideation are significant. About the four dimensions of psychological strains, higher level of differential values strain and relative deprivation strain significantly predict greater suicide ideation among Chinese young people. Grade, religion, depression, differential values strain and relative deprivation strain are positive predictors of suicidal ideation. Course attendance, appearance self-evaluation, and social support are negative predictors of suicidal ideation. The R^2 in model 3 is 0.130.

5. DISCUSSION AND CONCLUSION

In table 3, grade is positively correlated with the severity of suicidal ideation. With grade, the pressure of employment is becoming more and more obvious. Employment pressure is one of the main sources of students' life stress. Negative life event stress is closely related to suicidal ideation, especially when the problem is not dealt with very well (Linda *et al.*, 2012). So we speculate that employment pressure affects it. Religion is a positive predictor for suicidal ideation. It is inconsistent with the conclusion of foreign studies. Previous studies shows that low religiosity is associated with suicidal ideation and suicidal behaviors (Cook *et al.*, 2002) and religion as a protective role can suppress suicidal ideation (Wong *et al.*, 2011; Cole-Lewis *et al.*, 2016). But it may not play same role in China. In China, most people do not believe in religion. In table 1, the description is also a good proof of it. The religion is not a popular social value in China may lead the person to depression and other negative emotions, and then lead to suicide (Zhang and Lv, 2014). Course attendance and appearance self-evaluation are negative predictors for suicidal ideation. Higher course attendance may reflect less negative emotion, and less negative emotion will suppress suicidal ideation. Higher appearance self-evaluation may reflect higher self-esteem and confidence. Self-esteem negatively predicted depression and suicidal ideation in a sample of Chinese students in Hong Kong (Sun and Hui, 2007). Higher level of depression significantly predicts greater severity of suicidal ideation among Chinese college students. Many studies have shown this point (Kim *et al.*, 2006; Garlow *et al.*, 2008; Cooney *et al.*, 2014). Human is the creature of the pursuit of happiness, which also wish to escape the pain and suffering of life. If people are too depressed in life, it will lead to people to escape the pain and suffering by the way of suicide. The social support of college students significantly suppresses the severity of suicidal ideation. By using social support, especially parent and school support (Miller *et al.*, 2014) college students can get sufficient economic support and psychological support in order to overcome the trouble and suffering of life. If they cannot get enough support to overcome the trouble, they will suffer pain and may emerge suicidal ideation.

Table 2 shows that the four dimensions of psychological strain are significantly related to each other. It proves that the four dimensions of psychological strain are closely related, and the formation of psychological strain must have the existence of multiple related pressure sources (Zhang *et al.*, 2011). As can be seen in the table 3, although not all dimensions of the psychological strain is significantly observed in the multiple regression model, the psychological strain measured by differential values strain and relative deprivation strain significantly and positively predict suicidal ideation. Differential values strain may due to the conflict between modern values and traditional values. Confucianism as a traditional value has a profound and lasting influence on Chinese. But as China continues to open to the outside world, western culture gradually affects the Chinese people. People who cannot adapt to this kind of cultural conflict may lead to negative emotion (Zhang *et al.*, 2010). About relative deprivation, the result is consistent with the earlier findings which confirm the strain can impact suicide ideation (Zhang and Tao, 2013). When everyone is living in poor, poverty is not a stressor, but when the balance is broken, the person may feel frustrated by comparing with others (Zhang *et al.*, 2011) and then may lead to suicide. So we can understand why higher level of relative deprivation significantly predicts greater suicidal ideation.

In summation, this research examined psychological strains and their effect on suicidal ideation in order to explore their relationship in Chinese young people. Differential values strain and relative deprivation strain significantly and positively affect suicidal ideation.

5.1. Study Limitations

As for the limitations of the study, sample selection and data collection exist deficiencies. The data acquisition only choose one university in Beijing because of the time and financial constraints. So conclusion extrapolation may be restricted. On the other hand, the statistical method itself may also exist deficiencies. As a prevalence study, the conclusion is established only in the statistical point of view, which should be confirmed by case study. In addition, as most of the studies are horizontal research, we only use one year of the data, if we can carry out longitudinal study, we can explain the mechanism of action and the change of suicidal ideation and the effect of the correlation factors more effectively. Last but not least, due to the limited professional knowledge, this paper does not study the physiological factors and the effect of mental illness on suicide ideation.

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