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Effects of Value Strains on Psychopathology of Chinese Rural Youths

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Abstract

The Strain Theory of Suicide postulates that psychological strains usually precede mental disorders including suicidal behavior. This paper focuses on the effect of conflicting social value strains on the individual's psychopathology. We analyzed the data of 2,031 respondents who were proxy informants for suicides and community living controls in a large scale psychological autopsy study in rural China, with the CES-D depression measure for the psychopathology. Individuals having experienced value conflicts between Confucian gender role and gender equalitarianism in modern society scored on depression significantly higher than the individuals who do not experience the value conflict, and it is also true when several other relevant variables were held constant in the multiple regression model. This study supports the hypotheses that people who confront value conflicts is likely to lead to psychopathological strain, and the higher the level of strain, the stronger the depression.

Keywords

Value Strain; Depression; Suicide; Psychopathology; China

1. Introduction

The Strain Theory of Suicide postulates that psychological strains usually precede suicide (Zhang et al., 2009). As highly correlated variables (Roy, 1999), suicide and mental disorder might be independently predicted by psychological strains. However, no studies have been performed to test the relationship between psychological strains and mental disorder, although researchers have evidenced the link between psychological strains and suicidal behaviors (Zhang et al., 2011). This current study is designed to examine the relationship between psychological strains and psychopathology with the hypothesis that the social value strain is related to depression, as it is related to suicidal behaviors.

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A single stress cannot be a strain and therefore does not necessarily put an individual into a detrimentally frustrating situation, based on the Strain Theory of Suicide. A psychological strain is formed by at least two stressors, pushing or pulling the individual to different directions, so as to let the individual be in a helpless, hopeless, and psychologically torturing situation (Agnew, 2006; Merton, 1957). For the Strain Theory of Suicide, a strain can be a consequence of any of the four conflicts: (1) differential values, (2) discrepancy between aspiration and reality, (3) relative deprivation, and (4) lack of coping skills for a crisis. The connection between suicide and psychological strains in the form of all the four sources has been tested and supported with a sample of suicide notes in the United States (Zhang and Lester, 2008) and through psychological autopsy studies in rural China (Zhang et al., 2011). The strain theory of suicide forms a challenge to the psychiatric model popular among the psychiatrists in the world, because it argues, suicide, as well as mental disorders, can be preceded by psychological strains in the social structure (Durkheim, 1951). This theoretical conceptualization is based on the theoretical frameworks established by earlier sociologists, e.g. Durkheim (1951), Merton (1957), and Agnew (2006), and again, a source of strain must consist of two, or at least two conflicting social facts. If the two social facts are non-contradictory, there would be no strain.

Mental disorder and suicide are highly correlated. In the West, over 90% of the suicides can be diagnosed with at least one type of mental illnesses (Conwell et al., 1996). In China, the percentage of this type ranges from 30% to 70%, which is much lower than that in the West (Phillips et al., 2002; Zhang et al., 2010b). Nonetheless, mental disease is still the strongest predictor of suicide in China, in either bivariate or multiple regression studies. Therefore, psychiatrists who study suicidal behaviors tend to attribute mental problems to suicide. As of now, there have been few empirical studies to establish the causal relations from mental disorder and suicide. According to the Strain Theory of Suicide, mental disease and suicide, although highly correlated, might be outcomes of some third variables in the social structure. In other words, mental disease and suicide could be independently predicted by psychological strains resulted from certain social facts and personal experiences. As one of the four series studies on strain and suicide/mental disorder, this study focuses on the effect of conflicting value strains on the individual's depression which is an important aspect of individual psychopathology.

A value strain is formed by two conflicting social values internalized in an individual's daily life. When two conflicting social facts or beliefs are competing in an individual's value system, it usually results in discomfort, frustration, or even hopelessness (Zhang et al., 2011). For example, a cult member may experience strain if the mainstream culture and the cult religion are both considered important in the cult member's daily life. In some developing countries, young people might confront value conflicts between modernity and traditionalism, and if the values have been both internalized, they must experience the values strains. A young second generation immigrant in the United States who has to abide by the ethnic culture rules enforced in the family while simultaneously adapting him/herself to the American mainstream culture with peers and school can be another example. In rural China, young women appreciate gender egalitarianism advocated by the communist government, but at the same time, they are trapped in cultural gender discrimination as traditionally cultivated by Confucianism. If the differential values of traditional collectivism and modern individualism are taken equally important, the person should experiences a great strain. However, if one value is taken more important than the other for an individual, there is then little or no value strain.

In today's rural China with rapid economic growth and social change, one major social value conflict is between traditionalism and modernity, as in most other developing countries. The rural young people most likely socialize with different others at school and

home, and therefore acquire and internalize different and may be conflicting social values. Confucianism, deeply rooted in the Chinese culture, downplays the role of women, upholds filial piety, and prioritizes harmony in the family, community, and society (Hsu, 1998; Hwang, 1999). Obviously the Confucian value in gender role goes against the modern value of gender egalitarianism. If a young person scores equally high on both social values and cannot give up either, he or she has a value strain, and the strain, when it is strong enough, may lead to depression as result of frustration.

2. Method

2.1. Subjects and Data Collection

Data for the study were obtained from 16 rural counties of three provinces (Liaoning, Hunan, and Shandong) in China. It was a large psychological autopsy project investigating correlates of completed suicide in comparison with a group of community living controls. Face to face interviews were performed at the household in villages. In each selected county, suicides and living controls were enrolled and two informants (one family member and one friend or neighbor) were interviewed for each suicide case or control. The controls themselves were also interviewed with the same protocol to obtain further information of the study. We interviewed 784 informants for 392 suicides and 1,247 informants for 416 community living controls. While we collected the proxy data for the target person from the informants, we also obtained structured information from the informants and living controls about themselves. In this study, 2031 informants were recruited for the analysis. For the specific procedures in sampling and interviewing and our protocol for the human subjects protection, please refer to our previous publications (Zhang, 2010; Zhang et al., 2010a). Table 1 presents the demographic characteristics of the sample as well as the major independent and dependent variables for the study with gender comparisons.

2.2. Measures

The CES-D Scale (Center for Epidemiologic Studies Depression Scale) was used to evaluate the depression level of the respondents (Radloff, 1991). For each of the 20 items in the full version of the scale, respondents were asked to indicate the frequency of the symptom using a 4-point scale: 0=less than a day, 1=1–2 days, 2=3–4 days, and 3=5–7 days against a time frame of the past week. The four negatively formulated items (item 4, 8, 12 and 16) were reversed before a tally of the scores. The total score of the 20 items ranged from 0 to 60. As Radloff (1977) recommended a total CES-D score of 16 or higher for the likely presence of clinically significant depression (Radloff, 1977), we dichotomized the variable based on this cut-off line: Low or No Depression (Score<16) and High Depression (Score≥16). In the sample, only about one fourth of the respondents (n=399) scored 16 or more on the CES-D total, and the more respondents (n=1,614) had a score lower than 16.

Marital status is also a dichotomous variable. The group of “never married” included those young people who had never married and had been intact in their life (n=377), and the group of “ever married” covered the currently married (n=1576), separated (n=7), divorced (n=10), remarried (n=14) and widowed (n=47). Marital and love affairs usually have important impact on Chinese rural youths due to the traditional values of virtue and fidelity between men and women (Zhang, 2010). Therefore, we categorized those who ever had a marital or love relationship into “ever married,” and those who had been intact into “never married.”

The family annual income was measured in Chinese Ren Min Bi (RMB), which were divided into three levels based on the scale mean: low (< 10,000), middle (10,001–19,999) and high (> 20,000). One US dollar at the time of the data collection was equivalent to about 6.50 RMB.

The question on religion asked what religion the respondent believed in, and the choices were Taoism, Islam, Protestantism, Catholicism, Buddhism, other, and none. The variable of religion was a dichotomous one: a claim of any of the religion vs. none claimed.

The value strain scales were developed in the research project supported by an NIH grant (US NIMH: R01 MH068560). The Differential Values Conflict Scale includes five items and each of them indicate a conflicting situation with six possible answers from 1 (Very easy to decide) to 6 (Very difficult to decide). Specifically, respondents were asked how difficult for them to decide on each of the following situations: (1) To choose between staying at home and working outside? (2) To have to bear/have a son or believe that boy and girl are the same? (3) To have a marriage arranged by parents or choose of your own choice? (4) Being obedient to father or spouse or being self-reliant? (5) To stay with no education or have to go to school? The six choices for each of the items were dichotomized into “0=easy” and “1=difficult,” while the first three choices were coded into 0, and second three choices were coded into 1. The value strain can be positive with one of the five items being 1.

2.3. Data Analysis and Certification of the Methods

SPSS 17.0 was used for all statistical analysis. Coefficients have been converted to odds ratios (ORs) for the interpretation and 95% confidence intervals (CIs) would also be reported. Both authors of this study certify that we are responsible for the methods used in the data collection and data analyses.

3. Results

Table 1 illustrates the distribution (mean for age and frequencies for all others) of the sample for each of the expected correlates of depression and their gender comparisons. There was about equal number of females and males in the sample (51.6% vs. 48.4%), and there is not much difference in the age between the female and male respondents (36.58 vs. 37.62). More respondents were married or ever married, and this was especially true for the females. Males claimed significantly higher family income than the females in the sample. About 7.1% of the respondents indicated a religion as their belief, but between men and women in the sample, women were more likely than men to identify with a religious belief. The measure of the value conflict for the study yielded about 28.1% of the respondents who were positive on the value strain, but there is no difference between men and women in the sample. For the CES-D depression measure, nearly 20% of the respondents scored 16 or above 16 out of 60 and can be identified as likely presence of clinically significant depression, and females tended to be associated with higher score of depression (21.2% vs. 18.4%) than males although the difference was not significant at the .05 probability level.

Chi-square test has been used for the comparison between the informants of suicides and the informants of controls on depression and value strains. The result indicates that the informants of the suicides score significantly higher than those of controls on depression but the difference between their score on value strain is not statistically significant.

Bivariate analyses (see Table 2) indicate that the respondents who had higher on the value strain tended to score higher on the CES-D depression measure and it is especially true of the female sample. For the female sample, depression is also related to older age, religion acceptance, ever married, and less income. For the male sample, the depression measured by CES-D is correlated with older age and less income.

As can be seen in Table 3, the finding that the value strain predicts depression also holds true in the multiple logistic regression analyses with all relevant correlates held constant in

the same model. In addition, the ORs for females in the multiple logistic regressions are generally higher than males. Table 3 also shows that age for both males and females ($P < 0.001$) is a significant predictor of CES-D depression. The older the respondents are, the more likely they experience the depression. The chance to be depressed for a female is about 1.251 times more than a male respondent with all other relevant variables controlled for, although the significance level is higher than the expected .05. Marital status is not a significant predictor of depression for either females or males in the study. On the other hand, religion tends to be a risk factor, especially for females.

4. Discussion

There are two major findings in this study. First, social value strain is a strong predictor of depression, a common presentation of psychopathology, even after other relevant factors controlled for, so as to support the strain theory with the Chinese rural sample. Second, there is no difference between males and females for their scores on the value strain which indicate that both men and women in rural China have equal risks to experience the value strain.

Depression, as a mental disorder, is strongly correlated with suicide and suicidal behaviors. In this study, the informants of suicides report significantly higher depression than those of controls and this is consistent with previous finding that depression and suicidal behaviors are more observed among those who have a suicide death in the family or among close friends as a result of the bereavement effect (Zhang et al., 2005; Zhang and Zhou, 2011). Therefore, mental intervention and crisis prevention need to be called for on those people who have suicides in the family or among friends. In addition, the evidences suggest that informants for both suicides and community living controls in our sample may have equal risks to experience value strains, which brings our attention to those people feel psychological distressed due to the value strains.

While suicide and depression is negatively associated with being married and religious in the West (Stack, 2000), these deviant behaviors are found positively related or no relationship with religion and marriage in Chinese populations. This finding supports what was evidenced in Chinese culture (Zhang, 2010). As of today in China, religion is still a social behavior practiced by a very small number of citizens, and the best estimate for the religious population in China is less than 10% (Badham, 2008). Going to church might be regarded as a deviance in Chinese communities due to its lack of popularity, and it is not very surprising to find suicide and depression, deviant behaviors, to be correlated with another deviance. As time goes on with religion gains its popularity in China, this uncommon correlation may change. On the other hand, the unique finding that marriage is not a protective factor for suicide and depression in China needs further investigation in future studies.

An additional note needs to be made for the relationship between family annual income and the depression of males in the sample. Family income affects depression for males but not for females in the sample: The higher the family income, the less likely a man is depressed. One reason might be the traditional Chinese family value in which the man is supposed to financially sustain the family, and if the family financial situation is in difficulty, he feels responsible, guilty, frustrated, and maybe depressed on it.

Although females (21.2%) are more likely than males (18.4%) to have depression, there is no gender difference for their scores on the value strain. Both men and women in rural China have equal risks to experience the value strain. Individuals having experienced social value conflict, in this case the value strain between Confucian gender role of women and

modern society gender equalitarianism are significantly more likely to score high on depression. In rural China, people especially those young women have been educated at school on gender equality, but at the same time, they are trapped in culturally determined gender discrimination traditionally cultivated by Confucianism. Therefore, when differential values were both taken equally by an individual, it brings about high risk of depression.

The theory predicts that when modernity meets traditionalism, people may confront value conflicts, which may result in value strain for certain people, and the higher the level of strain, the stronger the depression. However, it may not work this way in all societies. In most developing countries in the world, which are in still in the process of going from traditional and agricultural to modern and industrial living styles, people are facing conflicts between the old and new social values. The difference in China is that the new and modern social values, especially the gender equalitarianism, are legally enforced through compulsory education by the new government since 1949 when the communists took over the country. In most other developing societies, modern values such as gender equality are a free choice of the people without governmental enforcement.

In conclusion, this study tested the effect of value strain, which is one of the four sources of psychological strains on depression as one form of psychopathologies. The results indicate that value strain can be experienced through the conflict between traditional and modern social values in rural China and the higher the value strain, the stronger the depressive symptoms among the rural youths. The findings and conclusion of the study, although generalized only from the rural Chinese sample, may be applied to other populations. The psychopathological strains, in terms of social value strains, can be detrimental to people's mental health. There are two major implications for researchers in the future. First, cultural reform along the economic advancement may help to lower people's strains, so as to lower the risk of depression of the people. As China is becoming more and more industrialized, urbanized, and modernized, the importance of Confucianism, as the major form of traditionalism, is decreasing. Therefore, the government needs to carry out and reinforce the policies that help rise education levels, foster gender equality, and alleviate economic burden in order to solve and integrate certain individuals' value conflicts caused by the value strain. Second, giving priority of health investment to poor rural area and offering mental health screening for those rural young people who have illustrated stress feelings due to value strains can help promote suicide awareness and prevention.

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Table 1
Descriptions of the Sample for All the Major Variables and Their Gender Comparisons

Variable	All Subjects (N=2031)			Males (N=983)			Females (N=1048)			Gender Comparison Statistics		
	Mean or Frequency	SD or Percentage		Mean or Frequency	SD or Percentage		Mean or Frequency	SD or Percentage		df	t/ χ^2	p
Age, Years (Mean and SD)	37.09	13.92		37.62	14.28		36.58	13.556		2024	1.688	0.092
Gender												
Male	983	48.4%										
Female	1048	51.6%										
Marital status										1	12.229	<0.001
Never married	377	18.6%		213	21.7%		164	15.6%				
Ever married	1654	81.4%		770	78.3%		885	84.4%				
Family Annual Income RMB*										2	23.07	<0.001
Low (10,000)	1100	54.2%		484	49.2%		617	58.8%				
Middle (10,001–19,999)	520	25.6%		263	26.8%		257	24.5%				
High (20,000)	411	20.2%		236	24.0%		175	16.7%				
Religion										1	14.867	<0.001
No	1885	92.9%		935	95.3%		950	90.7%				
Yes	138	7.1%		46	4.7%		97	9.3%				
Value Strain										1	0	0.989
No	1313	71.9%		634	71.9%		679	71.9%				
Yes	514	28.1%		248	28.1%		266	28.1%				
CES-D Depression										1	2.405	0.121
Low(<16)	1614	80.2%		794	81.6%		820	78.8%				
High(16)	399	19.8%		179	18.4%		220	21.2%				

* RMB is the abbreviation of Ren Min Bi, the Chinese currency. At the time of data collection in China 2005–2008, US\$1 was equal to about 6.5 RMB.

Table 2
Bivariate Inter-correlations among Predictors and Depression Separate for Females and Males[#]

Variable	Females (N=1048)					Males (N=983)				
	CES-D	Age	Religion	Marital	Income	CES-D	Age	Religion	Marital	Income
Age	0.386**	-				0.305**	-			
Religion	0.265*	0.102	-			-0.075	-0.263**	-		
Marital	0.334**	0.756**	0.345*	-		0.144	0.767**	-0.198	-	
Income	-0.205**	-0.084*	-0.003	0.209**	-	-0.336**	-0.125**	0.270*	0.023	-
Value strain	0.223**	-0.076	-0.051	-0.073	-0.034	0.161	-0.116*	0.105	-0.121	-0.221**

[#] Gamma is used as measure of association.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 3
Logistic Multiple Regression Predicting Depression with the Value Strain and Major Covariates

Predictor	All Subjects (N=2031)			Males (N=983)			Females (N=1048)			
	OR	95% CI (lower-upper)	P	OR	95% CI (lower-upper)	P	OR	95% CI (lower-upper)	P	
Age	1.043	1.033	1.052	<0.001	1.036	1.022	1.050	1.035	1.062	<0.001
Gender										
male	1.0 (–)	1.0 (–)	1.0 (–)							
female	1.251	0.983	1.591	0.069						
Marital Status										
never married	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	
ever married	0.829	0.568	1.208	0.329	0.731	0.440	1.214	0.555	1.759	0.968
Family Income										
low	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	
middle	0.655	0.489	0.877	0.005	0.589	0.382	0.907	0.479	1.066	0.100
high	0.581	0.414	0.816	0.002	0.485	0.299	0.787	0.415	1.079	0.099
Religion										
no	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	
yes	1.502	0.957	2.358	0.077	.945	0.351	2.541	0.991	2.833	0.054
Value Strain										
no	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	1.0 (–)	
yes	1.623	1.259	2.092	<0.001	1.434	.984	2.090	1.263	2.526	0.001
Constant	0.053			<0.001	0.088			0.041		<0.001
R ²	0.112			0.093				0.132		
Hosmer-Lemeshow χ^2	11.468			0.177	4.35			0.824	10.616	0.224