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## Studying Suicide with Psychological Autopsy: Social and Cultural Feasibilities of the Methodology in China

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### Abstract

As China opens its door to the world, suicide research is making rapid progress using methods and instruments developed in the West. This is a feasibility study of the psychological autopsy methodology applied in China, with its emphasis on the social and cultural environments. With samples of 66 completed suicides and 66 community normal living controls, the authors found that it is feasible to interview at least two informants for each suicide case and each control, between 2 and 6 months after the suicide. With the Chinese-cultivated contacting method of recruiting cases, the refusal rate is nearly zero. The Western-developed methodology per se proved to be valid in the Chinese culture. Ethical considerations in the context of Chinese culture are as important as in the West. Psychological autopsy technique is shown to be an equally applicable method for the study of completed suicides in Chinese culture as it is in the West. Future epidemiological research on Chinese suicide should use the psychological autopsy method to collect data from larger samples in order to increase our understanding of the risk factors for Chinese suicides.

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Suicide has been an alarming social problem in China, claiming about 300,000 lives each year (Brown, 1997; Murray & Lopez, 1996; World Health Organization, 1988–1995), with more women than men, higher rates in rural areas than in urban, and greater risks for young population aged 15–24 than the younger and the middle-aged (Macleod, 1998; Phillips, Liu, & Zhang, 1999; Pritchard, 1996; Qin & Mortensen, 2001; World Health Organization, 1988–1995; Yip, 2001; Zhang, 1996, 2000a). Researchers both in and out of China are trying to identify the factors that account for the high suicide rates among Chinese rural young women (Ji, Kleinman, & Becker, 2001; Lester, 1994; Yip, Callanan, & Yuen, 2000; Zhang, 1999; Zhang, Jia, Wieczorek, & Jiang, 2002). To understand the causes and social-environmental factors of completed suicide, psychological autopsy may be the best scientific method available to researchers (Clark & Horton-Deutsch, 1992, p. 145).

Psychological autopsy, known as “a procedure for the reconstruction of suicidal death through interviews with survivors” (Beskow, Runeson, & Asgard, 1990, p. 307), has been employed in the West for suicide studies in the past 4 decades. However, it is a relatively new concept in Chinese academia. Cheng (1995) and Cheng, Chen, Chen, and Jenkins (2000) reported applications of the method with ethnic minorities in Taiwan, and Michael Phillips’s (personal communications, April 2000) work is in progress. Other than these sources, there is a lack of

published evidence that the technique can be applied in Chinese culture in mainland China, given the traditional cultural background that is so different from the Western culture where the methodology has been developed. On the basis of the literature on psychological autopsy published in the West, we conducted a feasibility study of the methodology in China. Social and cultural feasibilities are reported, but another intention of this report is to identify key methodological issues to assist those who wish to use the method in studying suicide in China.

A thorough review of previous research with psychological autopsy methods serves as the guide for our feasibility study in China. Internet database searches, including that of Medline (www.medline.com) yielded 126 publications on psychological autopsies between 1990 and June 2001. Among them, the United States has the highest number of studies on the topic (44, 35%), followed by Finland (36, 29%) and the United Kingdom (10, 8%). Of all the countries and regions that have produced psychological autopsy studies during past decades, only a few are non-Western, such as Malaysia (Teoh, 1974), Japan (Ishii, 1985), Taiwan (Cheng, 1995), and India (Vijayakumar & Bajkumar, 1999). The psychological autopsy has basically been a Western methodology.

Further reviews<sup>1</sup> of the literature reveal that about 60% of the studies employed control or comparison groups. As to the number of informants for each target person, 55% of the studies used two or more. In terms of the number of months between the suicidal death and the first interview of informants, many of the studies (23%) started to interview people only 1 month after the incident. Previous researchers approached informants with various methods. Thirteen percent of them sent a letter as the initial approach, and 8% went to the informants' home without earlier notice. As to the psychopathological assessment, the majority of the studies employed various versions of the DSM.

## THE CHINESE PSYCHOLOGICAL AUTOPSY PROJECT

The design of our psychological autopsy project in China is based on these previous studies, which served as a basis for the Chinese project. However, social and cultural differences between East and West may be obstacles for us to transfer the established experience from one culture to another. On the other hand, more often than not, researchers have to borrow the methods and instruments established in one culture and use them in another. Another purpose of doing this is obviously for comparisons. We have to compare things with the same or similar measurements. That is why we try to apply the Western-developed psychological autopsy method to our suicide studies in China. The general design and interview procedure we have adopted in our project reflect the incorporation of the Western experiences with the Chinese culture.

The sampling for the study was conducted in Dalian, a coastal city in northeast China. The area includes the city proper and six counties with a total population of approximately 5 million, about two thirds of whom are rural residents. We did consecutive sampling in Jinzhou County and two townships in Zhuanghe County.<sup>2</sup> With the help of the municipal administration and Dalian Medical University, we identified all suicides that had taken place in the past 12 months from the selected places.

Approved by the institutional review boards at both the Chinese and U.S. institutions, various channels were used to collect the names of persons who had committed suicide. In Jinzhou County, the public health personnel were approached to request the list of suicides in the county

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<sup>1</sup>For detailed information on the summaries of the 126 studies, please contact the first author of this research.

<sup>2</sup>Dalian is one of the cities or districts in Liaoning Province. Similar to other cities or districts in the province, Dalian includes several counties, each county has several townships, and a township is divided into villages. For more detailed information on the Chinese administrative divisions, please look at the Web site: <http://www.chinaguide.org/e-china/administrative/administrative.htm>.

in the past year. In Zhuanghe County, the research team went to the villages in the two selected townships, visited villagers, and identified one or two recent suicides. From the informants, more suicide cases within and outside of the village were introduced to the researchers. Given the rural Chinese social network and the culture that values collectivism more than individual privacy, the chance is very slim that a person who has died of suicide will be unknown to others. Community normal living controls that matched those who had committed suicide in gender and close in age were nominated by the local contact people in the same village or neighborhood.

Sixty-six completed suicides that had occurred within 1 year before the interview were consecutively sampled, with 66 age-, gender-, and location-matched living individuals as the community control group. For each suicide case, there were two informants who were either next of kin or the best friend of the individual who had committed suicide. For each normal control, two informants and the control himself or herself served as the sources of information. The interviews with the living normal controls themselves provided a basis of validity tests. The total number of interviews was 330, and it took approximately 6 months to accomplish all the interviews.

The response rate in the suicide case sample was 100%. Only 2 cases out of 66 controls declined the interview, and replacements were made immediately. The outstanding response rate is due to the Chinese culture, which values conformity and respects authority. Furthermore, most informants of the suicide cases are likely to take the interview as a psychological consultation or a posttrauma treatment, although that was not our intention. The likelihood of therapeutic care did not apply in the case of normal controls, but the credibility and authority of the hospital as well as of the local administrations encourage ordinary citizens to voluntarily comply with the request.

Each interview began with reading and signing the consent form; an interview lasted about 2.5 hours. Audio recording was employed but was not required due to the uncomfortableness of some of the interviewees. For each interviewee, a moderate fee (about U.S.\$10) was paid plus some small gifts to the children around the house to encourage them to stay away from the interview room.

Table 1 illustrates some demographic characteristics of the suicides and normal controls. Because the control group was selected matching age, gender, and location, there are no significant differences between the two groups for age and gender. However, for those uncontrolled variables, the normal control group is more likely to be married, less likely to live alone, physically healthier, and educated for more years than the suicide group.

### **The Protocol and Training Interviewers**

Measurement is one of the most important issues in the study, and it is even more critical in the proxy-based data collection. Instruments such as the Structured Clinical Interview for DSM-III-R (SCID; Spitzer, Williams, Gibbon, & First, 1988) have been used in psychological autopsy studies as reviewed here and have proven to be reliable and valid.

In addition to information about the demographic characteristics of the target person and informant, we employed the following well-established instruments: (1) Beck's Suicide Intent Scale (SIS; Beck, Schuyler, & Herman, 1974), (2) Paykel's Interview for Recent Life Events (IRLE; Paykel, Prusoff, & Uhlenhuth, 1971), (3) Duke Social Support Index (DSSI; Landerman, George, Campbell, & Blazer, 1989), (4) the SCID (Spitzer et al., 1988), (5) Hamilton Depression Rating Scale (HAM-D; Williams, 1988), (6) Center for Epidemiological Studies–Depression (CES-D; Radloff, 1977), (7) the General Social Survey Attitudes Towards Suicide (GSS; Davis & Smith, 1993), and (8) the NEO Five Factor Inventory (NEO-FF-I;

McCrae & Costa, 1997). The protocol is a structured questionnaire used in interviewing informants of suicides as well as controls.

The major instrument in the protocol is the SCID, which takes more time than other parts of the interview. Because the validity of any psychiatric diagnostic scheme is limited at its foundation by the reliability of that scheme (Clark & Horton-Deutsch, 1992), studies of psychiatric classification must necessarily employ structured interviews and companion diagnostic criteria if they are to lay any claims to good reliability and ultimate validity (Spitzer, Endicott, & Robins, 1975).

Translation and back translation of the instruments were conducted two times to ensure the accuracy of each item in the interview. Recognizing that translations cannot always be perfect due to the differences in culture (Zhang, 1991), the bilingual members of the research team met frequently about the disputed items in the translation until consensus was reached.

The training of interviewers is another critical issue that is directly related to the reliability and validity of the methods and instruments. The interview team consists of six faculty members of Dalian Medical University in Dalian, China, who are epidemiologists, psychologists, or psychiatrists. Two members of the team were brought to the United States for a half-year of training in both epidemiology and psychiatry, especially in using the SCID as an interview tool in the diagnosis of mental disorders. Actual interviews conducted in the United States were observed by the trainees and mock interviews were done to improve the interviewers' skills as well as to identify problems with the protocol. Experts in epidemiology and psychiatry from the USA went to Dalian twice within less than 1 year, conducting workshops to prepare the interview team.

### **Sources of Information and Number of Informants per Case**

As in the majority of the psychological autopsy studies accomplished so far, the major source of information is knowledgeable informants through face-to-face interviews with the next of kin and close friends (Barracough, Bunch, Nelson, & Sainsbury, 1974; Brent, 1989; Conwell et al., 1996; Dorpat & Ripley, 1960; Robins, Murphy, Wilkinson, Gassner, & Kayes, 1959). Other sources of information, in addition, consist of the coroner, general practitioner, psychiatrist, and hospital or government records (Barracough et al., 1974; Hawton et al., 1998; Robins et al., 1959). The most knowledgeable informant should be a parent or partner, but for an unmarried person or young adult, parents may not be aware of such things as drug use and interpersonal problems outside the home. In such cases, a sibling or friend may be able to supply important information (Brent, 1989; Hawton et al., 1998).

Because a great number of suicides (approximately 63%) in China are related to family or marital disputes (Zhang et al., 2002), choosing a next of kin as informant for the interview should be done with great caution. If a rural woman committed suicide after physical and/or psychological abuse at home, the chance of obtaining an accurate history about the suicide's last few days is slim if we interview only her husband or mother-in-law. Likewise, if a young man killed himself because he was not able to deal with the "lost face" due to the fact that his wife had had an affair with another man, an interview with the wife may result in a distorted account. To prevent this from happening, we first of all tried to learn from the environment the apparent or commonly assumed cause of the suicide. If it was related to a family conflict, we were very cautious in selecting a least-biased member from the family. To simply stay away from the family for information for this reason is not wise because much valuable information could be missed without a family member's input. To balance the possible bias and valuable information, we used standardized measures for the interview and some standardized combination methods to integrate the information from different sources.

To obtain the maximum amount of information as well as to decrease recall bias about the case and selective recall or selective forgetting (Hawton et al., 1998), most psychological autopsy studies employed more than one informant for each target person. In our study, we used two informants (a next of kin and colleague or neighbor) for each suicide case and two for each control plus the control himself or herself. It obviously increases the cost to conduct two or more interviews for each target person, but it pays off in several important ways. First, the questions left unanswered due to one informant's ignorance may be covered by information from another informant. They can also be complementary on some uncertain issues. Second, with two informants answering questions from the same measurements about the same target person, accuracy of the information may be obtained for the items where the two answers match. Third, in the control group where the target person is also interviewed with the same protocol, the validity tests can be conducted using the target's answers to certain issues (such as mental health and life events) as the criteria for the informants' answers. In other words, the validity of the informants' responses can be assessed by comparisons with the target person's responses.

Using two or more informants for a suicide raises some difficult issues about how the information will be reconciled in a standardized way when there is disagreement between informants, and about how missing data will be handled. These are empirical questions as well: Do two informants really give us more information than one? Is this true for some kinds of data more than others? If so, what does it have to do with the characteristics of the informant? Future analyses of the data may be able to provide insights into these questions.

### Control/Comparison Groups

In a study like the current one, which is different from single case studies of suicide, it is usually desirable to include controls, although sometimes this is not possible because of the cost or lack of a suitable control group (Hawton et al., 1998). The study design and choice of the control group should be based on the hypothesis of the study. Two problems have been noticed in previous studies (Brent, 1989) using a community normal control group: the asymmetry of the informants and information, and the difficulty in approaching the informants. First—the most obvious asymmetry of the psychological autopsy procedure—a suicide victim cannot be interviewed, whereas a living person as control can be a rich source of information (Brent, 1989). Even when the same interview protocol is administered to both suicide and control informants, because of the presence of the living individual, in contrast to the absence of the suicide the asymmetry remains (Beskow et al., 1990; Brent, 1989; Hawton et al., 1998). The second problem is brought up by the first one. Living controls are often unwilling to allow their relatives or friends to be interviewed about them, and the response rate from informants for controls is often less than that from informants for suicides (Beskow et al., 1990). The unwillingness and lower response rate of the living controls also makes the control group subject to bias, which is difficult to assess. Furthermore, the potential biases resulting from this are difficult to ascertain because little or no information will be available about the characteristics of controls when informants refuse to participate (Hawton et al., 1998).

In our approach, we solved the first problem by interviewing selected informants for both suicide and control groups to achieve balance. As for the second problem, our experience in Dalian indicated that it is awkward, if not embarrassing, to ask a person about another living individual's personal life. Therefore in our study, more efforts were made to explain to the living control and his or her informants about the scientific nature of the study as well as the procedures for privacy and confidentiality. As a result, the response rate of our suicide group was 100%, and that of the community normal living group was 97%. Only 2 cases out of 66 selected for control refused to cooperate. For each control case, there should be three interviewees: two informants and one target person. When one of the three interviewees



declined to be interviewed, the case was replaced by another target person selected from the pool.

### **Time Interval Between Suicide and Interview**

During the acute phase of grief immediately after a suicide, the request to complete a long interview protocol may appear insensitive and is perhaps unproductive. On the other hand, if too much time elapses between the death and the interview, recall of events may be indistinct, and the family's motivation for completing such an interview may no longer be optimal (Brent, 1989). There is a sensitive selection of the time interval that probably influences the quality of the information obtained (Beskow et al., 1990). In their pilot study of 27 completed adolescent suicides, Brent, Perper, Kolko, and Goldstein (1988) interviewed the families between 2 and 6 months after the suicide, with a median of 4 months. They examined the correlations of the interval between death and the interview with reported suicidal intent score and with number and type of diagnoses reported and found none to be significant. The data suggest that within the range of 2–6 months, there is no simple or consistent relationship between the timing of the interview and the quality and quantity of data obtained (Brent, 1989). In a later study, Beskow, Runeson, and Asgard (1991) suggested that a median of 9 weeks is acceptable after the suicide of a young person, and they noted that many of the informants in the study seemed to prefer an even shorter interval. In another study, survivors interviewed less than 10 weeks after the suicide were satisfied with the timing more often than those who were interviewed later (Runeson & Beskow, 1991). Cantor (1975) and Herzog and Resnick (1968) have also noted that compliance is greater in families where the suicide has occurred more recently.

On the basis of these previous practices, we decided to conduct our interviews no earlier than 2 months after the suicide and no later than 6 months after the suicide. We did not know whether this time interval would be appropriate for the Chinese environment, but it has been proved very successful and without noticeable problems. The majority of interviewees in the suicide group showed cooperative attitudes, without much apparent distress associated with the suicide and with adequate memories of what had happened more than 2 months ago.

### **Methods of Initial Contact**

Several primary methods have been used to make initial contact with the potential informants: letter, phone, and home visit unannounced. When informants were contacted in person for interviews after suicide without previous notice, the refusal rate was nil or fairly small (Beskow et al., 1990). When a telephone call, usually followed by a letter, was used, the refusal rate was still low, but it increased to one third or more when only an introductory letter was sent (Beskow et al., 1991). For example, Brent, et al. (1988) used a letter followed by a telephone call 1 week later and had a fairly large rate of rejections. In another study, there were no rejections at the door when interviewers called at the homes of survivors without waiting for answers to an introductory letter, but the immediate reply to the initial letter was negative in 17% of the cases (Leblhuber, Schony, Fischer, Sommereder, & Kienbacher, 1982). For many people, it would be easier to refuse participation after only a letter in which details of the procedure are outlined, but some of them may feel that their integrity has been violated without any way of understanding the situation better (Beskow et al., 1991). Facing this conflict between scientific inquiry and human subject protection, today's researchers have to be creative, because a high refusal rate may also affect the quality of the project.

On the basis of previous experiences in the literature and the fact that the majority of Chinese households in rural areas do not have a telephone, we used home visits without an announcement in the initial contact to maximize the response rate. Considering the human subject issue in terms of protecting the suicide's and the interviewee's integrity, we used a combination of the methods by going to the informants directly at the door, but with a full

explanation of the project. In China, there is no medical examiner system as in the West, and most deaths do not go through a coroner's inspection. Therefore, in Jinzhou and Zhuanghe counties, we located the suicide cases through either the county health bureau or the village administration and villagers. With our agreement, the county or village cadres and medical staff from the county hospital or village clinics approached the victim's family to brief them about the research project. With the help of the local officials, we then identified the informants for the case as the next of kin, closest friends, or others. The interviews usually started within 1 or 2 days. With the official tone and therapeutic nature in the initial interaction, plus the payment promised to each interviewee and consent form to be completed, the compliance of the selected interviewees was nearly perfect. Requests from upper-level administrators with power and from medical staff in white robes have authority in the Chinese culture, where conformity and collectivism are respected values (Zhang, 2000b; Zhang & Thomas, 1994).

### Ethical Issues

Ethical considerations are salient in all human-subjects-related studies today. In the past 20 years, with the open-door policy and economic reforms, China is increasingly paying attention to human-subject protection in scientific research. All ethical rules and human-subject protection measures must be followed to conduct a study like the current one. This article has thus far touched on the ethical issues in discussions on other topics. Here we want to focus on Beskow et al.'s (1990) three aspects of ethical considerations for a psychological autopsy study: the integrity of the suicide victim, the integrity and health of the informants, and the psychological strain on the interviewer.

The suicide victim, although deceased, may have something hidden from family members and relatives, and researchers may gain access to the information by interviewing different individuals and reading various documents. Although privacy is not valued by most Chinese as much as by most Westerners (Zhang, 2000b), facts that the deceased has chosen to conceal from others should not be revealed. By doing this, we can also avoid further complications of the situation and guard the unbiased image of the researchers.

The interviewees in a psychological autopsy study are also subjects in a sense. Many of them may still be experiencing distress at the time of the interview. Their integrity and health are our concerns, and measures should be taken to avoid harming them. At the first contact, a refusal to participate should not only be respected, but should also be met with efforts to minimize feelings of guilt for refusing participation (Beskow et al., 1990). Although we have not experienced many refusals in our study, we are prepared for it to happen. The use of a tape-recorder is optional depending on the interviewee's consent. Informants should feel free not to discuss sensitive issues, and they should be allowed to stop at any time without feeling guilty. In our study, at many of the interviews in rural areas, other family members or even neighbors wanted to stay in the room listening, but we had to separate them from the interview to make sure that the interviewees were not influenced by the presence of other people. The consent form was read to each interviewee and then signed before the interview began, in which we told them: (1) they had the choice not to participate, (2) they had the right to stop the interview whenever they liked, and (3) they did not have to answer all the questions. The interviewer has to be flexible and adjust to the psychological needs of the interviewee. During the 2.5 hour interview, we usually stopped whenever needed to comfort the informant in distress, or simply to take a break. The interviewees with noticeable psychological or psychiatric problems were immediately consulted with by our specialists or arranged for a hospital visit, but such visits did not occur very often. We ended the interviews with a fair payment for the interviewees' participation and a therapeutic and positive tone after giving them a chance to ask us any questions they might have.

Psychological autopsy interviews place great demands on the interviewers. While following a structured interview protocol to collect data, the interviewers have to listen to painful stories one after another. The interviewers' health is another substantial concern of the research project. As time goes on, the interviewers have each accumulated more and more episodes of human problems, psychological, mental, and behavioral, and they need to unload the emotional strain by talking about them with others. Because their family is not an appropriate place for the interviewers to discuss the dramatic narratives, we frequently arranged special discussion sessions for our interviewers to counterbalance the pain and sorrow. After the 6 months of field work interviewing 330 individuals, all six of our interviewers remain psychologically healthy and have expressed their positive evaluations of the project through sharing with each other the stories they have heard.

Ethics is often culturally specific, although it is universal that human rights must be protected no matter what culture it is. As for other aspects of ethics, such as the issue of privacy protection, there is a great variation among cultures. Whereas individualism in Western cultures highly values privacy, collectivism in Chinese or other Eastern cultures does not respect it as the top issue. Therefore, as with other topics discussed in this article, ethical issues should be considered within the context of the cultural background.

## CONCLUSIONS

In suicide studies, there may be no better method than the psychological autopsy for understanding the social, psychological, and physical circumstances of the victim (Clark & Horton-Deutsch, 1992, p. 145). Psychological autopsies can be used both for single-case investigations to know the individual situation and for epidemiological studies to know the characteristics and risk factors of suicide among various populations (Beskow et al., 1990). This study was one of the first to apply psychological autopsy methods to conduct a systematic and scientific examination of suicide in mainland China. Western methodology and instrument were used in the examination of Chinese subjects in the Chinese language. Chinese collectivistic culture, which values cooperation and authority (Zhang, 2000b), facilitates the psychological autopsy methodology in China. This study illustrates that psychological autopsy, as developed in West, is an applicable method for studying completed suicides in China.

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**TABLE 1**

Characteristics of Individuals Who Committed Suicide Compared with Age- and Gender-Matched Community Normal Controls

	Suicides ( <i>N</i> = 66)	Controls ( <i>N</i> = 66)	<i>P</i> Value
Age (Years)	45.45	44.86	0.869
Gender (# male)	48 (72.7%)	48 (72.7%)	1.000
Marital status (# Married)	43 (65.2%)	54 (81.8%)	0.048*
Family size (Members)	3.02	3.29	0.942
Family annual income ( <i>Yuan</i> )	7503.03	12075.76	0.132
Education (Years)	5.61	7.36	0.009**
Living alone (Yes)	7 (10.6%)	1 (1.5%)	0.062
Employment (Yes)	44 (66.7%)	49 (74.2%)	0.349
Health (larger score, healthier)	3.59	3.77	0.020*

\* *Note.*  $p < .05$

\*\*  $p < .001$ .