AN ANALYSIS OF FACTORS ASSOCIATED WITH PERSONAL AND PERCEIVED STIGMA AGAINST TALKING ABOUT SUICIDE IN A RURAL JAPANESE COMMUNITY

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Abstract

A cross-sectional study was conducted to clarify what factors were associated with personal and perceived stigma against talking about suicide, considered as prejudicial attitudes, prior to a community-based intervention for suicide prevention. Among 1,442 residents aged 20 years and over who lived in a rural town in northern Japan and returned questionnaire forms containing complete information, 852 answered that they avoided talking about suicide (*i.e.*, personal stigma) and 897 answered that they thought that people avoided talking about suicide (*i.e.*, perceived stigma). The personal and perceived stigma was observed more frequently in females and those aged 40 years and over. The perceived stigma was significantly associated with both bereavement experiences from suicide of a family member and of a friend, belief that suicide is preventable (*i.e.*, preventability), and suicidal ideation within one month. The personal stigma was significantly associated with bereavement experience from suicide of a friend and preventability. This is the first report to demonstrate stigma against talking about suicide at the community level. In addition, these data suggest that persons with perceived stigma against talking about suicide have stronger suicidal ideation than those with the personal stigma. A community-based education is needed to reduce such prejudicial attitudes toward suicide.

Key words : Suicide prevention, Perceived stigma, Personal stigma, Talking about suicide, Rural community

Introduction

Since suicide is a sensitive public health issue, the World Health Organization describes that communities play a critical role in suicide prevention and that they can provide social support to vulnerable individuals and engage in follow-up care, fight stigma and support those bereaved by suicide[1]. In regard to suicide prevention, there are a high-risk strategy targeting suicide attempters and psychiatric patients with suicidal ideation and a community-based intervention through a health promotion approach targeting such residents. Specifically in the latter, public awareness-raising activities emphasizing the empowerment of residents and civic participation are conducted[2], and residents start to confront suicide thereupon. Some residents will avoid talking about suicide, but may be encouraged to talk about it if suicide prevention measures are introduced in the community. Avoidance in talking about suicide often comes about due to prejudicial attitudes (*i.e.*, stigma) toward suicide[3]. In fact, although suicidality is frequently the cause of stigma, it is conversely true that stigma may be the cause

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of suicidality[4]. For effective suicide prevention, it may be crucial to remove such stigma from the society.

There are many studies of stigma associated with mental disorders[5-8]. Personal and perceived stigmatizations of depression have already been established[9], which are thought to be concerned with the respondent's personal attitudes to depression and respondent's beliefs about the attitudes of others to depression, respectively, using the Depression Stigma Scale[10,11]. In contrast, there is little information on personal and perceived stigma around suicide. Pitman and coworkers reported that stigma was perceived more acutely by the relatives and friends of those who died by suicide than those bereaved by other causes of sudden natural or unnatural death[12]. Among college students, perceived, but not personal, stigma scores involved in help-seeking were conclusively different between two groups with and without suicidal ideation[13]. Before beginning a community-based intervention for suicide prevention, it is important to understand the feature of widespread stigma around suicide in the community because of the absence of such basic data in Japan. Of such stigma, we focus on personal and perceived stigma against talking about suicide in a rural community, inasmuch as there exists a myth that talking about suicide always increases the risk of suicide[14]. The objective of this study is to clarify what factors affect the personal and perceived stigma. On the basis of previous studies, factors included in the research question were distressed state[15,16], bereavement experience from suicide of a family member/friend[17,18], attachment to community[16], help-seeking from others[1,14,19], belief that suicide is preventable (*i.e.*, preventability)[20,21], and suicidal ideation[13,14,22,23].

Methods

Study population

In March 2015, a self-reported questionnaire was distributed to approximately 3,000 residents aged 20 years and over, living in a rural town in Akita prefecture, northern Japan. Of them, 1,976 subjects consented to our proposal and returned the forms to community health volunteers (response rate = 65%). Five hundred and thirty-four respondents were excluded because they returned questionnaire forms that contained imperfect information (Table 1). Finally, 1,442 residents were enrolled in the present study. Crude suicide death rates per 100,000 people in 2014 were 19.5 (males, 27.3 ; females, 11.5) in Japan, 26.0 (males, 38.7 ; females, 14.7) in Akita prefecture, and 85.7 (males, 120.8 ; females, 54.2) in that town. Akita prefecture has recorded the highest or considerably high suicide death rate in Japan since 1995. All procedures involving human subjects were approved by the Ethical Review Committee of Akita University Graduate School of Medicine. Written informed consent was obtained from all participants.

Measurements

Psychological distress and individual thoughts about suicide or community, together with age and sex, were inquired via the questionnaire. Psychological distress was assessed by K6[24], and the Japanese version of K6 has been validated in a previous study[25]. K6 consists of six questions about how often an individual has felt the following in the last month : (1) nervous ; (2) hopeless ; (3) restless or fidgety ; (4) so sad that nothing could cheer you up ; (5) everything was an effort ; and (6) worthless. A total K6 score ranges from 0 to 24. In previous studies, three cut-off points of 5, 10 and 13 have been commonly used to screen for psychological stress[26-28] ; in this study, distressed state was regarded as K6 score≥10. Questions about individual thoughts were : *1)* "Have you lost a family member (or friend) due to suicide ?" (*i.e.*, bereavement experience from suicide of a family member/friend) ; *2)* "Do you feel attachment to the place where you live ?" (*i.e.*, attachment to community) ; *3)* "Do you seek help from others ?" (*i.e.*, help-seeking from others) ; *4)* "Do you think it possible to prevent suicide ?" (*i.e.*, preventability of suicidal behavior) ; *5)* "Have you thought about suicide within the last one month ?" (*i.e.*, suicidal ideation within one month) ; *6)* "Do you avoid talking about suicide in your community ?" (*i.e.*, personal stigma against talking about suicide) ; and, *7)* "Do you think that most other people avoid talking about suicide in your community ?" (*i.e.*, perceived stigma against talking about suicide). An answer "yes" (or, always/often) was scored as 1, and others were scored as 0.

Statistical analyses

Dichotomous values between subgroups with and without personal/perceived stigma against talking about suicide were compared by χ^2 test with Yates correction. The difference in proportions of persons with the personal and perceived stigma was compared by McNemar test. The above factors, including age and sex, affecting personal/perceived stigma against talking about suicide were analyzed using multiple logistic regression analysis. All analyses with two-side P values were performed using the Statistical Package for the Biosciences (SPBS Ver. 9.68)[29], and the significance level was set at $P < 0.05$.

Results

Table 1 represents background characteristics of 1,442 participants in the rural community. The proportions of age-specific population groups for habitants of this town in October 2015 were 13.4% for 20-39 years, 25.8% for 40-59 years, 41.9% for 60-79 years, and 18.9% for 80 years and over, and the sex ratio was 0.892, implying that the subjects of this study reflected almost the same age and sex distributions of this town. There were 96 subjects (6.7%) who lost both a family member and friend due to suicide, 381 (26.4%) who did not lose a family member, but a friend, 316 (21.9%) who did not lose a friend, but a family member, and 649 (45.0%) who had no experience with bereavement due to suicide. Concerning the stigma against talking about suicide, there were 701 subjects (48.6%) having both personal and perceived stigma, 151 subjects (10.5%) with personal stigma and without perceived stigma, 196 subjects (13.6%) with perceived stigma and without personal stigma, and 394 subjects (27.3%) without both personal and perceived stigma ($P = 0.018$ by McNemar test).

As shown in Table 2, female subjects had personal and perceived stigma against talking about suicide more frequently than the males, and the preventability of suicidal behavior was significantly higher in those with the personal or perceived stigma than without it. Those with the personal or perceived stigma had bereavement experience from suicide of a friend more frequently than those

Table 1. Basal characteristics of 1,442 participants in a rural community of northern Akita

Variables		1,442 participants with complete data		All participants including incomplete data	
		n	%[b]	%[b]	(total *n*)
Age	20-39 years	197	13.7	11.4	(1,950)
	40-59 years	426	29.5	25.4	(1,950)
	60-79 years	661	45.8	48.3	(1,950)
	80 years and over	158	11.0	14.9	(1,950)
Sex (female number)		750	52.0	54.7	(1,910)
Distressed state (K6 scores ≥ 10)[a]		297	20.6	20.9	(1,697)
Bereavement experience from suicide of a family member (yes)[a]		412	28.6	26.4	(1,976)
Bereavement experience from suicide of a friend (yes)[a]		477	33.1	28.3	(1,976)
Attachment to community (always/often)[a]		1,191	82.6	82.9	(1,820)
Help-seeking from others (always/often)[a]		429	29.8	28.9	(1,729)
Preventability of suicidal behavior (always/often)[a]		935	64.8	61.5	(1,803)
Suicidal ideation within one month (yes)[a]		129	8.9	8.2	(1,822)
Persons with personal stigma against talking about suicide (yes)[a]		852	59.1	58.0	(1,733)
Persons with perceived stigma against talking about suicide (yes)[a]		897	62.2	61.0	(1,739)

[a] See the *Methods* section.

[b] Comparison of percent between 1,442 participants and all participants was made using paired t test ($P > 0.2$, degree of freedom = 13).

Table 2. Characteristics of persons with or without personal and perceived stigma against talking about suicide

Variables	Personal stigma			Perceived stigma		
	Persons with %	Persons without %	P*	Persons with %	Persons without %	P*
Age group			0.079			0.001
20-39	11.7	16.4		11.3	17.6	
40-59	30.6	28.0		30.0	28.8	
60-79	46.4	45.1		48.6	41.3	
80-	11.3	10.5		10.1	12.3	
Females	54.5	48.5	0.028	54.5	47.9	0.017
Distressed state (K6 score ≥ 10)	20.3	21.0	0.741	19.6	22.2	0.254
Bereavement experience from suicide of a family member	30.2	26.3	0.110	31.4	23.9	0.002
Bereavement experience from suicide of a friend	35.4	29.7	0.023	35.1	29.7	0.040
Attachment to community	83.0	82.0	0.672	83.8	80.6	0.115
Help-seeking from others	30.6	28.5	0.412	31.5	26.8	0.057
Preventability of suicidal behavior	68.4	59.7	0.001	69.3	57.4	<0.001
Suicidal ideation within one month	10.1	7.3	0.073	10.0	7.2	0.071

*χ^2 test with Yates correction.

Table 3. Factors affecting personal/perceived stigma against talking about suicide : results of multiple logistic regression analysis

Variables	Personal stigma		Perceived stigma	
	Odds ratio	95% CI*	Odds ratio	95% CI*
Age group				
20-39	1.00		1.00	
40-59	1.56	1.10-2.20	1.66	1.17-2.36
60-79	1.60	1.15-2.22	2.09	1.50-2.93
80-	1.76	1.14-2.73	1.55	1.00-2.40
Females	1.31	1.05-1.62	1.33	1.06-1.66
Bereavement experience from suicide of a family member	1.21	0.96-1.55	1.46	1.14-1.87
Bereavement experience from suicide of a friend	1.42	1.12-1.80	1.44	1.13-1.84
Help-seeking from others	1.02	0.80-1.29	1.17	0.92-1.50
Preventability of suicidal behavior	1.52	1.22-1.91	1.74	1.39-2.19
Suicidal ideation within one month	1.45	0.98-2.14	1.50	1.00-2.24

*Confidence interval.

without it ($P < 0.05$). Bereavement experience from suicide of a family member was significantly higher only in those with the perceived stigma than without it. After distressed state and attachment to community were excluded because they did not show a close relation to the personal or perceived stigma ($P > 0.1$ in Table 2), factors affecting the stigma were analyzed using multiple logistic regression analysis (Table 3). The results were similar to Table 2, and a significant association between the perceived stigma and suicidal ideation within one month ($P = 0.0492$) was newly observed ; the results adding distressed state into the independent variables

also were unchanged.

Discussion

In a rural Japanese community examined by us, 59.1% (95% confidence interval (CI), 56.5-61.6%) of the participants had a personal stigma against talking about suicide and 62.2% (95% CI, 59.6-64.7%) had the perceived stigma. The proportion of those with personal and perceived stigma was higher in females (61.9% and 65.2%, respectively) and at 40 years and over of age than in males (56.1% and 59.0%, respectively) and those aged 20-39 years, respectively, whereas sex difference could not explain why the suicide death rate was approximately twice higher in males than in females in Japan[30]. In contrast, personal stigma associated with depression was lower in females than males[5,8,9,31] and decreased with age[9], and the concept of personal stigma appears to differ between suicide and depression. To our knowledge, since there are no previous studies addressing prevalence of such stigma in the community, this is the first report to demonstrate features of stigma related to suicide. According to a guideline for suicide prevention[1], given the widespread stigma around suicide, most people who are contemplating suicide do not know who to speak to ; and talking openly can give an individual other options or time to rethink his/her decision, thereby preventing suicide. More actively, talking about suicide increases the likelihood that suicidal individuals will meet with accepting responses in the community[32]. Therefore, community members including health workers, educators, police and other gatekeepers must endeavor to reduce such stigma against talking about suicide.

Fifty-five percent of the subjects in this study reported that at least one of their acquaintances (a family member and/or friend) had committed suicide, which is similar to the rate (52.6%) of another report in Japan[33]. In Tables 2 and 3, perceived stigma against talking about suicide was associated with both bereavement experiences from suicide of a family member and of a friend, and the personal stigma was associated with bereavement experience of only a friend. Two possible explanations for the difference between the perceived and personal stigma in relation to bereavement experience are as follows : people with greater exposure to anxiety disorders and people reporting a previous anxiety diagnosis had lower personal stigma toward anxiety in a community of Australian adults[31] ; by contrast, higher exposure to anxiety disorders was significantly associated with higher perceived anxiety stigma. Next, identification with deceased friends and awareness of shared vulnerabilities to suicide[34] could readily build various attitudes to suicide (*i.e.*, both perceived and personal stigma). Since relatives are concerned about genetic vulnerabilities to mental illness and suicide, feeling powerless to escape inherited traits[35], it is likely that people who tend to hide genetic or inherited characteristics may not hold the personal stigma. In either case, stigma against talking about suicide appears to be affected by who died due to suicide. Further study is required to gather evidence of the link between stigma and bereavement experience in relation to suicide.

Approximately 9% of the participants employed in this study answered that they had thought about suicide within the past one month. Such suicidal ideation was shown to exist in 31.3% of female college students in Japan[36] and in 6.7% of undergraduate and graduate students from US universities[13]. Regarding suicidal ideation, although there was no significant difference between those with and without personal or perceived stigma against talking about suicide (Table 2), it was significantly associated with the perceived stigma after adjusting for other factors (Table 3). Apart from talking about suicide, one study using college students reported that the majority of respondents with past year suicidal ideation (81.8%) perceived the need for help for emotional or mental health problems as compared to 35.3% of nonsuicidal peers, though there was no significant difference in the personal stigma score between the two groups[13]. Also, persons labeled "mentally ill" reported significantly higher frequencies of suicidal ideation and feeling of hopelessness, and more perceived stigma was associated with suicidal ideation among such persons[23]. Thus, since it is possible that people with perceived stigma have stronger suicidal ideation than people with personal stigma, the target population for preventing suicide may be mainly those with perceived stigma.

Our results indicated that the residents who thought it

possible to prevent suicide had personal and perceived stigma against talking about suicide more frequently than those who did not think so. Abbott and Zakriski reported that preventability of suicidal behavior was positively correlated with perceived social support from friends and family, and also that perceived social support from friends and family was negatively correlated with resignation or tabooing against talking about suicide[21], such as "Suicide is an easy escape, one that cowards use," "Suicide is an act of anger, aggression, or revenge," and "If people want to die by suicide, we cannot stop them." Taken together, it is suggested that people with the personal and/or perceived stigma tended to believe that suicidal behavior was preventable. The implication is, paradoxically, that social support from community member including close friends and family is one form of various effective measures for suicide prevention.

In the present study, although the proportion of distressed state (K6 score > 9) was significantly higher in the persons with suicidal ideation (62.0%) than those without it (16.5%), neither distressed state nor help-seeking from others was significantly associated with stigma against talking about suicide. There are some reports supporting links between them. For instance, one research reported that global psychological distress, measured by the Global Severity Index score, was significantly related to the Stigma of Suicide Survivor Scale score[37]. Another demonstrated that low suicide stigma and high suicide literacy were significantly associated with more positive help-seeking attitudes[14]. The difference of results from these two reports and ours may have been due to study subjects, *i.e.*, suicide survivors, adults recruited via Facebook, and community-based population, respectively. Nevertheless, since these are factors possibly affecting stigma around suicide, further studies with subjects residing in other rural and urban communities are necessary to identify such associations.

The current study may have some limitations that should be highlighted. First, this study was cross-sectional in nature, which means that temporal relationships between personal and perceived stigma against talking about suicide and related factors cannot be drawn. Longitudinal studies would need to be conducted to identify and understand temporal relationships, and should be considered in future studies. Second, approximately 500 respondents giving written informed consent were excluded from this study due to incomplete data in the questionnaire, but there were no significant differences in the background data, shown in Table 1, between the 1,442 participants with complete information and all participants including incomplete data, and also, age and sex distributions of the participants were similar to those of the population in the rural town. Third, comparison of self-reported rates across groups may have been problematic[1], because most of questions used in this study were dichotomous and subjective ; however, we employed a large number of community-based subjects to mitigate such problems. In addition, age and sex were considered in the data analysis. Therefore, it is suggested that our data were not heavily influenced by selection or measurement bias or confounders. Population to which our findings are applied, though, should be considered carefully, because the suicide death rate in this town was extremely high, even in Akita prefecture.

Conclusions

In a rural Japanese community with a considerably high suicide death rate, the proportion of residents with perceived stigma against talking about suicide (62.2%) was significantly higher than that with the personal stigma (59.1%). The perceived stigma was associated with both bereavement experiences from suicide of a family member and of a friend, preventability of suicidal behavior, and suicidal ideation within one month, together with those of middle age and elderly and females. The personal stigma was associated with bereavement experience from suicide of a friend and preventability of suicidal behavior, as well as for the middle aged, elderly and females. In light of preceding and our studies, these data suggest that persons with the perceived stigma may have stronger suicidal ideation than those with the personal stigma. Social support from community member including close friends and family appears to be one of the most effective suicide prevention measures for such persons. Concurrently, community-based education is needed to reduce prejudicial attitudes toward suicide.

Conflicts of Interest

The authors declare no conflict of interest.

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