Volumen 63, Broj 6

ORIGINAL ARTICLE



Strana 575

UDC: 616.89–008.441.44–036.22 (52)

A perspective in epidemiology of suicide in Japan

Perspektiva epidemije samoubistava u Japanu

Takehiko Yamamura, Hiroshi Kinoshita, Minori Nishiguchi, Shigeru Hishida

Hyogo College of Medicine, Department of Legal Medicine, Hyogo, Japan

Abstract

Background/Aim. According to the information about deaths from any causes, provided by the vital statistics based on the WHO Member Countries mortality and morbidity, suicide rate in Japan has been ranking high among the causes of death. The number of suicides goes on increasing every year in Japan. In fact, suicide rates per 100 000 population have already reached the sixth place among the leading causes of death. The aim of this study was to perform epidemiological surveys of suicide rates, obtained from the official vital statistics provided by the WHO on mortality and morbidity during several past decades in Japan. Methods. Completed suicide data were collected via the vital statistics by the Health, Labor and Welfare Ministry (MHLW), Japan and the attempted suicide data were extracted from the Annual Report of the Ambulance and Rescue Activities by the Fire Prevention and Control Office (FPCO) in Kobe City. The data were examined on the basis of social factors including economic trends, gender differences, modus operandi of suicide, age group, and physical and mental disorders in suicidal behavior and compared to international data. Results. Male suicide rates have gradually increased with the four temporal steep risings during the 20th century, while those of females have generally reached the stabilisation with no fluctuations. Suicides are not always under the influence of economic trends in Japan. Suicide rate was the highest in the Akita and Iwate prefectures, known for the low population density. Suicide rate increases with aging, reaching a peak in the age of 80 and over. The trends of completed suicide rates are elevating by males about twice the suicide rate of females which keeps on stable. On the other hand, female attempted suicide rates greatly increase from two to five times more than those in males which are generally close to the constant. The majority of suicides are caused by their physical and/or mental disorders including typical depressive states. Suffocations/hangings are the most common methods used to commit suicide by both sexes. Utilities and interactions among these several components were considered, as well as a perspective of suicidal behavior. Conclusion. In order to prevent suicide and avoid the worst tragedy for a family, it is an essential requirement to collect and analyze any information concerning suicide victims.

Key words:

suicide; suicide, attempted; japan; men; women; mental disorders; population groups; epidemiologic studies.

Apstrakt

Uvod/Cili. Prema podacima o smrti od različitih uzroka iz vitalne statistike koja se bazira na mortalitetu i morbiditetu u zemljama članicama Svetske zdravstvene organizacije (SZO), stopa samoubistava u Japanu rangira se visoko među uzrocima smrti. Broj samoubistava se povećava svake godine u Japanu. U stvari, stopa samoubistava na 100 000 stanovnika već je dostigla šesto mesto među vodećim uzrocima smrti. Cilj ove studije bio je da se izvrši epidemiološka analiza stope samoubistava koja je dobijena iz vitalne statistike od SZO o mortalitetu i morbiditetu tokom nekoliko zadnjih dekada u Japanu. Metode. Sakupljeni su podaci o izvršenim samoubistvima preko vitalne statistike Ministarstva za zdravlje, rad i zaštitu od katastrofa, Japan, kao i o pokušajima samoubistava iz godišnjeg izveštaja hitne pomoći i spasilačkih delatnosti Ureda za sprečavanje i kontrolu požara u gradu Kobe. Podaci su analizovani na bazi socijalnih faktora uključujući ekonomska kretanja, polne razlike, način izvršenja samoubistva, starosne grupe i fizičke i psihičke poremećaje, a zatim upoređeni sa međunarodnim podacima. Rezultati. Stopa samoubistava muškaraca je postepeno porasla sa četiri vremenska skoka tokom 20. veka, dok je kod žena ova stopa bila stabilna bez kolebanja. Samoubistva u Japanu nisu uvek pod uticajem ekonomskih kretanja. Stopa samoubistava bila je najviša u prefekturama Akita i Iwate koje su poznate po niskoj naseljenosti. Stopa samoubistava raste sa starošću, dostižući vrh sa 80 i preko. Stopa izvršenih samoubistava muškaraca raste dva puta brže nego kod žena kod kojih je stabilna. S druge strane, stopa pokušaja samoubistava žena postepeno raste od dva na pet puta više nego kod muškaraca kod kojih je skoro konstantna. Većina samoubistava je izazvana fizičkim i/ili mentalnim poremećajima, uključujući tipična depresivna stanja. Gušenje/vešanje su najčešći načini kojim oba pola izvršavaju samoubistvo. Razmotreni su primena i uzajamna zavisnost ovih nekoliko komponenti, kao i perspektiva suicidnog ponašanja. Zaključak. U cilju sprečavanja samoubistva i najteže tragedije za porodicu, od suštinske je važnosti prikupljanje i analiza podataka o žrtvama samoubistva.

Ključne reči:

samoubistvo; samoubistvo, pokušaj; japan; muškarci; žene; psihički poremećaji; populacija, epidemiološko ispitivanje grupa.

Correspondence to: Takehiko Yamamura, Hyogo College of Medicine, Department of Legal Medicine, Nishinomiya, Japan. Tel.: +81 798 45 6578, Fax: +81 798 49 3279. E-mail: tycrime@hyo-med.ac.jp, Uta654@aol.com

Introduction

According to the information about deaths from any causes, provided by the vital statistics based on the WHO Member Countries mortality and morbidity, suicide rate in Japan has been ranking high among the causes of death. The number of suicides goes on increasing every year in Japan. In fact, suicide rates per 100 000 population have already reached the sixth place among the leading causes of death. In the last two decades, malignant neoplasms, heart disease, cerebrovascular disease, pneumonia and accidents are the top five leading causes of death, respectively.

Suicide is not only a shock for the famliy of a suicide victim, but it also incurs most severe social problems frequently equal to the significant physical and mental health problems. The number of suicides is significantly higher than the number of deaths due to traffic accidents. Although these alarming suicide affaires prevail within the country, there is a little awareness of general considerations and countermeasures for suicide prevention. In spite of great increases in suicidal behavior, it is considered to be caused only by moral crises in most of the countries. Indeed, suicide used to be regarded only as a criminal act from the religious point of view for very long. Besides, most countries including Japan have already decriminalized suicidal acts. Fatalism also gives an additional blow to this characterization. In Japan suicidal acts should not be considered a resource of punishable illegality or equipped with a matter for exemption from liability, although it is illicit perpetration. Reprehensing of suicides is regarded inhuman. Besides, whenever the figures regarding suicide are presented or discussed, it always raises the question of their reliability, since in some instances for some reasons a suicide can be camouflaged in accordance with the wishes of the involved, and a distorted view of it through arbitrary decision by the judicial system including the police authorities. Therefore, true figures of suicides might be almost impossible to obtain. In the similar way, various approaches to suicidal behavior of psychiatric, sociological and nonmaterial aspects lead to a sort of misconception of suicides ¹. In fact, suicide has been regarded historically to be committed by a mentally disabled person who agonizes depersonalization imposed by alienation from the society or isolation through serious problems with the near neighbors. Mental disorder, particularly, schizophrenia, alcohol and/or drug abuse has been frequently described as being associated with the context of suicidal behavior. Also, in the late 19th century, an approach through the statistical techniques applied to the analysis of suicide and various social contexts including age, gender, regional climates, economic circumstances and other social circumstances might be understood as having a decisive influence on suicide². Subsequently, the suicide findings show a close connection with the social contexts and mental disorder plays a certain role in the explaination of suicidal acts. Although the validity of these considerations of suicides might be confirmed by several researchers ^{3, 4}, it is questionable to conceptualize the whole suicide phenomena, because suicidal acts might be affected by a cultural diversity.

Here we described the results of vital statistics concerning suicides obtained mainly from the Annual Reports of the Ministry of Health, Labor and Welfare. Our aims were to see what kind of figures in suicides had been connected with "social circumstances", "geographical conditions", "age distribution", "gender gap", "mental and/or physical disorder", and "suicide method"; to reconfirm the previous findings; to discover the relationship between these factors, etc. Our other objectives were first to see if social factors had been related to the acts, second to see what individual characters were inclined to suicide, and third to find out the peculiar features of suicidal behavior in Japan.

Methods

Completed suicide data were collected via the vital statistics by the Health, Labor and Welfare Ministry (MHLW)⁵, Japan and the attempted suicide data were extracted from the Annual Report of the Ambulance and Rescue Activities by the Fire Prevention and Control Office (FPCO)⁶ in Kobe City. The data were examined with regards to social factors including economic trends, gender differences, *modus operandi* of suicide, ages groups, and physical and mental disorders in suicidal behavior, and compared to international data.

Results

Comprehensive figures for suicide

In Figure 1 the suicide rates (per 100 000 population) were calculated starting from 1900 to 2000 in Japan. During the 20th century, there were about 1 300 000 suicides in Japan (more than 800 000 males and less than 500 000 females). Over the last few years, the total number of the Japanese suicides was not less than 30 000 per year. The global average of the total suicide rates is 18.3 during this century. The average suicide rate is 22.8 for male and 13.9 for female during the period. Japan's suicide rates can be best characterized by a great tendency toward a gradually slight, but stable increase of approximately 102% from 1900 to 2000. In 2003 (the latest year for which we have the national statistics), there were 34 427 suicides in Japan (94 suicides per day; 1 suicide every 15 minutes), with 27.0 per every 100 000 Japanese killing themselves.

Including that Japan is now approaching the fourth infestation of suicides in 2005, the four temporary rising rates of suicides were roughly observed during the 20th century. Suicide rates are usually put into connection with the economic recession. This opinion was expressed at the time of the Showa Panic in 1930, the Second Oil Crisis in 1980, and the Protracted Economic Slump in 1995. An increase in suicide rate at the Jinmu Boom in 1955 and the Bubble Boom in 1985, inside the period of prosperous economic setting imposed the need to disclaim the relationship between economic conditions and suicide. The slight increase in suicide rates after the end of the Second World War in 1945 was also conflicted with all the merciful climates. The postwar rueful predicament might, however, incite suicide. In addition, no change in suicide rate at the First Oil Shock in 1975, and the Collapse of Bubble Economy in 1990 showed a sign of weakness of the significance of economic conditions for committing suicide, though a decrease of suicide rate was observed during the Second World War in 1941–1945, and at the beginning of the High Growth of Economy in 1960.

It is a fact that social circumstances including socioeconomic situation have certain effect on the incidence of suicide, but not a decisive one. An economic slump does exert pressure on personal life, but does not necessarily lead directly to suicide. Individuals might be instead more affected by a sense of stagnation of the society derived from a change in the political climate, or a degradation of life opportunities. rates less than 20, including 18.9 in Kinki, 18.1 in Chubu and 17.3 in Kantou.

Based on the current suicide statistics in Japan, rates of suicide tend to be high in the mountain areas with the low population density in general, but it is not known exactly why an urban area seems to deter suicide behavior. It seems that socially isolated individuals are generally at a higher risk for suicide, and that the feeling of hopelessness more often stimulates to commit suicide. Since these factors are unique for an urban environment, more significant instigation to kill oneself should be presented for explaining the regional epidemics of suicide.

> Age distributions of suicides

Table 1 shows the age distribution of averaged male and female suicide rates and male-tofemale ratios by each age group for the period from 1970 to 2000 per 100 000 population. Aging ranked the suicide rate by both genders.

Suicide rates for each age group for the period from 1970 to 2000 in Japan is shown in Figure 3. Com-

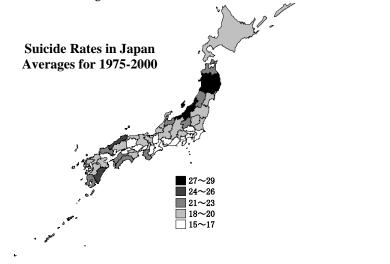
Fig. 1 – Male (solid with black circle) and female (dotted wit white circle) suicide rates per 100 000 population in Japan, for the period 1900–2000.

Regional differences

Figure 2 shows the geographic circumstances of the averaged suicide rates for the period from 1975 to 2000 in Japan per 100 000 population. The average suicide rates by every prefecture range from 15.7 in Kanagawa to 29.4 in Akita and the total average was 20.3. During the last quarter century in Japan, the highest suicide rate was recorded in the Tohoku area (23.6), and more than 20 of suicide rates was observed in the Hokuriku (22.4), and Chugoku (21.2), Shikoku (20.8), Kyushu (20.8) and Hokkaido (20.1) area. The remaining area showed suicide

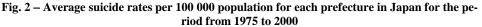
pleted suicide rates in Japan are characteristic for getting into age. The rates of completed suicide are highest among the elderly (age 80 and over) over the recent three decades with a gradual decrease. In 1998, the trend of suicide rates by both genders of all the ages groups turned into temporal rising and the male suicide rate for the age of 40–59 surpassed that for the age of 60–79.

For all the age groups, the completed suicide rates among males were higher than that among females (Figure 4). The male-to-female ratio was 2.05 for the age 0-14, 1.86 for 15–19, 2.11 for 20–39, 2.50 for 40–59, 1.48 for



60–79, 1.56 for 80- and 1.87 for the total average. Though males had a higher risk for suicide than females for all the ages groups, females over the age of 60 started to face more risks for suicide than younger females.

The rates of completed suicide were highest among the elderly (age, 80 and over). The increase of risk to commit suicide in older age might mean that the Japanese commit suicide as a kind of a dignified death.



Yamamura T, et al. Vojnosanit Pregl 2006; 63(6): 575-583.

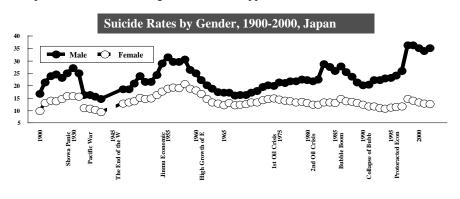


Table 1

Age distribution of male and female suicide rates (per 100 000 population) and male-to-female ratios, averaged for the period from 1970 to 2000

| Age (years) | M/F | Male | Female | Total |
|----------------|-------|-------|--------|-------|
| 0~14 | 0.42 | 0.20 | 0.31 | 2.05 |
| 15~19 | 8.54 | 4.60 | 6.61 | 1.86 |
| 20~39 | 22.87 | 10.84 | 16.91 | 2.11 |
| 40~59 | 36.51 | 14.62 | 25.42 | 2.50 |
| 60 ~7 9 | 42.85 | 29.00 | 35.18 | 1.48 |
| 80~ | 89.96 | 57.71 | 69.34 | 1.56 |
| Total | 24.44 | 13.07 | 18.65 | 1.87 |

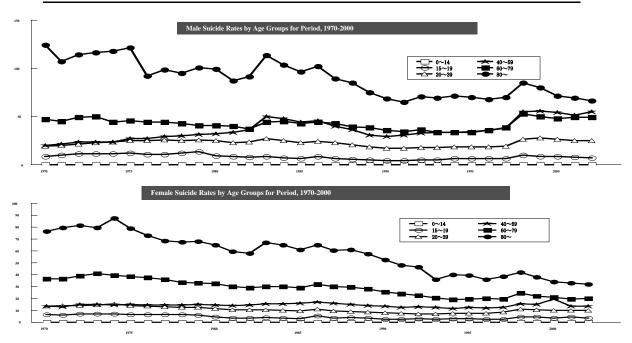


Fig. 3 – Male (upper) and female (bottom) suicide rates per 100 000 population in different age groups for the period from 1970 to 2000 in Japan

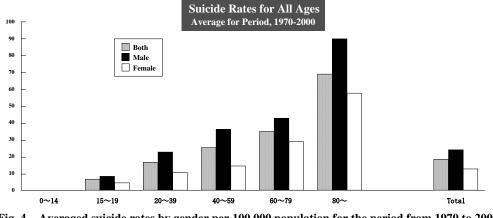


Fig. 4 – Averaged suicide rates by gender per 100 000 population for the period from 1970 to 2000

Gender specificity in suicide

Although the literature usually presents the rates of suicide for both men and women together (the so-called total suicide rates), it should be noted that the current general epidemiological practice is to present the rates according to gender, particularly when there are some important differences (in terms of figures or risk factors) within the gender. It is widely accepted that male complete suicide rates are greatly higher than female ones. The gap between a male and a female in a suicide rate is reported to result from a finding that females attempt nonfatal suicide several times more often than males. Figure 5. shows the attempted-to-completed suicide ratios by genders per 100 000 population for the period from 1980–2000. Since there is no an official statistics on at-

which were obtained from attempted plus completed suicide rates. Higher attempted suicide by females, approximately one and a half times more often than by males, might make a

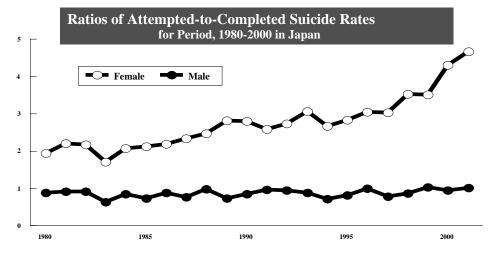


Fig. 5 – Ratios of attempted-to-completed suicide rates (RAC) by gender per 100 000 population for the period 1980-2000 in Japan. Female RACs were gradually rising from 2 times to 5 times, while male RACs were stable

tempted suicides (e. g., non-fatal actions), attempted suicide rates rank high according to the number of emergency selfinjurious cases in the Annual Report of the FPCO in Kobe city, which includes the number of the DOA (dead on arrival) cases. The complete suicide rates were calculated from the vital statistics data by the MHLW.

According to the findings based on the current statistics of the American Association of Suicidology, females attempt suicide three times more often than males. However, males complete suicide at a rate four times that of females. A finding in Japan also reflects the prevalence of attempted suicides in females which are rapidly increasing from two to five times of completed suicides in females within the current decades, while the ratios of attempted-to-completed suicide rate in males were finally stable, being almost even as 1:1.

During these two decades for the period 1980–2000, the average attempted suicide rate was estimated as 29.5 by the total, 23.3 by males and 35.2 by females, and 0.6 for their male-to-female ratio. The average completed suicide rate was 19.5 by the total, 26.6 by males and 12.7 by females, and 2.0 for male-to-female ratio.

The ratio of attempted to completed average suicide rate was computed to 1.5 for the total, 0.8 for males and 2.7 for females.

Thus, it might be a fact that there is no difference between males and females in the aggregate suicidal actions, point of showing that the feminity has an native capability to distinguish between completed and attempted suicides (Figure 6).

Incidentally, there is little difference in suicide rate between males and females considering that suicides consist of the sum of completed and attempted suicides.

Physical and mental disorder to suicide

Suicidal behavior includes a major public and mental health problem and a considerable drain on resources in both primary and secondary health care settings. Physical and mental health diagnoses are generally associated with a higher rate of suicide. Psychological autopsy studies have revealed that more than 90% of completed suicides had one or more mental disorders including physical disability. Diagnosis groups that are at a particular risk including: depression, schizophrenia, drug and/or chemical substance abuse. A link between depression and suicides is strongly suggested.

Also, different psychological states are implicated with suicidal behavior. The feeling of hopelessness (e. g., "there is no solution to my problem") is found to be more predictive of suicide risk than diagnosis of depression per se. Socially isolated individuals are also generally at a higher risk for suicide than those who are not isolated. There is no doubt that these physical and mental conditions are strongly involved in committing suicide.

Table 2

| The average suicide rate by gender per 100 000 population for the period, 1980-2000 | | | | | |
|---|-------|-------|--------|------|--|
| | Total | Male | Female | M/F | |
| Attempted | 29.52 | 23.30 | 35.28 | 0.66 | |
| Completed | 19.57 | 26.63 | 12.76 | 2.08 | |
| Aggregate (A+C) | 49.09 | 49.93 | 48.04 | 1.04 | |
| A/C | 1.51 | 0.87 | 2.76 | | |

Note: M; Male, F; Female, A; Attempted, C; Completed suicide rate.

Yamamura T, et al. Vojnosanit Pregl 2006; 63(6): 575-583.

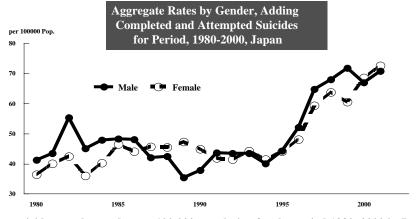


Fig. 6 – The aggregate suicide rates by gender per 100 000 population for the period 1980–2000 in Japan, adding attempted to completed suicide acts

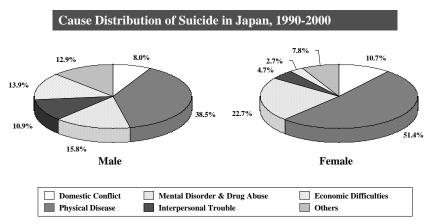


Fig. 7 – The cause distribution of suicide by gender in Japan for the period from 1990 to 2000

Figure 7 indicates the cause distribution of suicide in Japan for the period from 1990 to 2000 by gender. Physical disease showed to be a maximal cause of suicide by both genders (38.5% for males and 51.4% for females). Mental disorder and drug abuse make the second-highest cause of suicide (15.8% for male and 22.7% for female). When bonding both causes of suicide, physical and mental disorders showed the most influential component of suicide by the Japanese. They have been associated with more than half of

male suicides (54.3%) and almost three-quarter of female suicides (74.1%).

Suicide methods

Figure 8 shows the choice of methods for committing suicide by the Japanese for the period from 1970 to 2000, while Figure 9 indicates their trends by each gender.

"Suffocation/hanging" were overwhelmingly the most frequently used methods for committing suicide by the Japa-

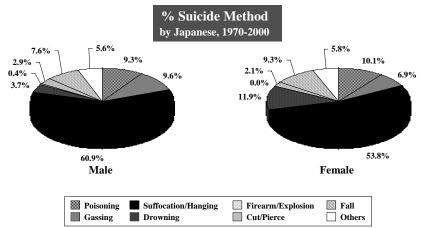


Fig. 8 – The distribution of suicide methods utilized by the Japanese in the period from 1970 to 2000

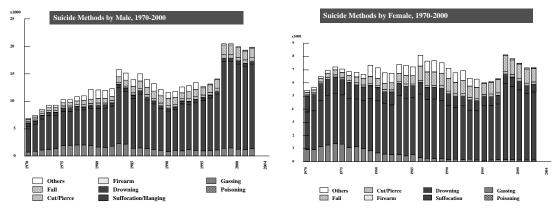


Fig. 9 – Suicide methods by males (Left) and females (Right) for the period from 1970 to 2000

nese considering both sexes (60.9% for male, 53.8% for female). The ranking order of the utilized methods for committing suicide scarcely varies between males and females. "Poisoning" kept the third ranking method of suicide by males (9.3%) and females (10.1%). The fourth among the methods chosen for suicide was "fall" (7.6% for male and 9.3% for female). Also, "cut/pierce" was the sixth (2.9% for males and 2.1% for females) and "firearm/explosion" was the seventh (0.4% for male and 0.01% for femal. Aside from these, the second epidemic suicide method is "gassing" for male (9.6%) and "drowning" for females (11.9%). "Gassing" by females was the fifth rank (6.9%). "Drowning" by male was the sixth rank (3.7%).

When considering the frequency of the utilized method for suicide, the greatest gender gap among the suicide methods was revealed in "gassing" and "drowning" . "Gassing" was more performed by males than by females. On the contrary, "drowning" was the dominant method used by females. This trend has been continuing over the past several decades (Figure 9).

Discussion

Suicidal behavior is understood or explained from different perspectives, since the vast majority of suicidal individuals often overstretch a lot of equations tied closely with each other. According to the findings by the American Association of Suicidology, the individuals who lapse into suicide often display clues and warning signs. Some of the potential factors for the risk for suicide are the presence of a psychiatric disorder, the expression/ communication of thoughts of suicide, death, dying or afterlife in a context of sadness, boredom, hopelessness or negative feelings, impulsive and aggressive behavior, frequent expression of rage, increased use of alcohol or drugs, a recent severe stressor (e. g., difficulties in dealing with sexual orientation; unplanned pregnancy, significant real or anticipated loss; etc.), and family instability; significant family conflict. These significant "ringing-bell" events with considerable feelings have presented a large variety of interpretations about suicide behaviors. When taking notice to an affair regarding a suicide, a plausible solution would be a cause of suicide. Focusing on other sides of suicide might generate a separate explanation. Multiple approaches to suicide shall certainly contribute to a different etiology of suicide. Conflicting findings about suicide have already been released.

In this article, several factors accepted as having an influence on suicidal behavior, were covered to form an opinion of their significance. They include "social circumstances", "geographical conditions", "age distribution", "gender gap", "mental and/or physical disorder", and "suicide method". These six parameters have been considered as the essential component of suicide to determine its epidemics ^{7–11}. Some of them have co-dependent relationship with each other, but the rest remain of inconsistent independency to argue suicide. There is no doubt suicidal behavior is complex.

In general, the hypothesis that the economic trends influence suicide rate was not always approved during the 20th century in Japan. Suicide seems to be influenced by some economic fluctuations, but not at all stages of the economic variation. To explain the temporal changes in the rates of suicides shown in the 20th century in Japan, numerous other influential economic factors should be considered. It is essential that more detailed analysis of economic trends should be run to sort out the compatible parameters for assessing suicidal behavior. At this point, however, there are no clues to when or how suicidal acts might be a response to an economic condition. It might take either a good amount of time or just a short time. It is not known which phases of economic trends challenge a suicide. The state of economy causes suicide by the multiple levels of problems; financial issues, loss of job or problems at home. These are the problems that make any quick and simple solution impossible.

Rates of suicide are highest among the elderly, relative to those younger as differences among age groups lessen gradually for the last two or three decades. When accepting unstintingly these epidemic data, suicides have the same rate as death from the natural causes. An unhealthy person regards suicide the substitution for death in old age. Suicide is recognized as a type of death with dignity.

Males complete suicide at a rate two times that of females, while females attempt suicide three times more than males. Thus, the total suicide actions by each sex are similar in frequency. In order to interprete the fact that females attempt nonfatal suicide more than males, a description based on femininity was applied. Since females attempt suicide only for displaying clues and warning signs to their own sufferings, they often select a nonfatal method for suicide. However, there is no substantial evidence to maintain this argument through the epidemiological survey in this article. Females are not naturally equipped for measuring the efficacy of a method for suicide. It seems possible to predict the fatality of some methods for committing suicide. Although "cut/pierce" and/or "falling" might show an inclination to adjust the degree of risk, they could not be frequently elected by the female suicides. The situation differs considerably only by "gassing" for males and "drowning" for females, of which both seem to be passive for suicide, but not so fluid to control the fatality. The high frequency of attempted suicide by females would be considered by the possibilities of much further gender related mechanisms of suicide.

The gap between males and females in the ranking order of the utilized suicide methods was indicated at "gassing" by males and "drowning" by females. Both of the suicide methods are very common ways to kill oneself, but difficult to control their fatality. They remain as a very passive method for suicide. The attempted suicide by females is construed as their own warning signal to overcome their emergency situation. Since females more often attempt suicide than males, they seem to be sure in choosing less dangerous (nonfatal) suicidal methods. According to the statistical results of suicides, the reliability of this interpretation remains to be reconsidered. The female attempted suicide may play another unique role in suicidal behavior aside from the opinion that an attempted suicide displays clues and warning signs to complete suicide.

Up to now, no convincing and satisfactory explanations for higher rates in the completed suicide by males and in the attempted suicide by females have been presented. Aside from no official and in-depth information about the attempted suicides, it might be not exactly validated that the vast majority of individuals who attempt suicide often display clues and warning signs to complete suicide, and the risk of the attempted (nonfatal) suicides is greatest among females, who would fulfill their functions to avoid the fatal suicidal methods. But there is little evidence that females have native capacities to assess nonfatal methods for suicide. When the utilized method for completing suicide could be elective by a suicide committer, poisoning/gassing and/or cut/pierce would be commonly selected in the female attempted suicide, because they are very suitable for the completed suicide act. On the contrary, suffocation/hanging, falls/jump, and/or drowning are suitable for the male completed suicide. It is necessary to consider the epidemic fact about the methods for suicide. The relationship between suicide methods and gender should be more reconsidered.

Physical and/or mental illness are an essential component of suicide in Japan according to epidemics. It can be also said that a healthy person rarely commits suicide. Conceivably, they might arise from some special characteristics of illness, the symptom pattern and length of illness, or from the type of personality and its response to illness, or from the suicide's social setting, especially isolation, or the stresses one encounters. Only because of these findings, it is probable that almost every suicide commiter suffers from mental trouble, admitting the unstable condition of nerves. Several clinical studies about suicides have strongly supported that most people who kill themselves suffer from diagnosable mental disorders. The most important diagnostic groups always have depressive disorders and substance abuse, but more detailed retrospective diagnostic figure varies according to the age and gender distribution of the suicide victims and the diagnostic criteria, and the secular context of a study ⁷. Moreover, since the life of a patient himself might be vital to confirm a diagnosis of mental disorders including depression, the diagnosis with no victim of completed suicide is not only by no means free from doubts, but also not much credible. The prevalence and comorbidity of mental disorder among suicide victims should be reinvestigated through tracing the transition of diagnostic criteria.

The majority of individuals insists that the most essential reason for mankind's existence keeps a control and evolution on surviving. Some predominant religious parties have a ban on committing suicide. Regardless several rejection symptoms of suicide from cultural awareness, suicides have been rampant in the world at this stage. They have been universally persisting around the world though their incidences among countries differ widely. Japan ranks high for suicide rates next, to the new Russian, Baltic States and Hungary. The male completed suicide rates are, with one exception (China) in all countries even the countries with very low rates, higher than the female rates⁸. When racial differences in committing suicides raise a sensitive issue, more careful analysis should be applied for the interpretation of suicidal behavior.

There is no doubt that committing suicide results from a number of different conditions or factors. Some conditions may be interdependent of each other and a factor might be decisive for triggering suicide. Social or environmental components are moderately inductive, but inconclusive to drag a victim into suicide. Although physical conditions including mental disorders have a strong impact to set up a suicide, they do not function only by themselves. A climate has little direct relationship with committing suicide, but holds its own atmospheric quality. Adversely, a financial isolation or an affective hopelessness becomes often the serious drive for suicide ⁹. Methods for suicides seem to subject to their personal traits. Their trends, however, would somewhat be under the control of their attached culture.

On another front, various possible prevention strategies for suicide have been suggested through crisis services, educational approaches and professional training ¹⁰. However, most of these programs lack efficacy to reduce risk factors for suicide-seeking behavior by the victims ¹¹. Since a suicidal behavior has very profound meaning, it is important to be especially careful with any individual cases. In addition, more attention should be payed to the specific personal characteristics of the victim's of suicidal behavior to prevent suicides. Unfortunately, suicides have just been a kind of unaccountable behavior in both men and women. Suicides were considered acts of insanity in ancient times. They have been no claims for serious studies. The low level of attention payed to suicide implies the lack of wider knowledge regarding personal traits of the character of a victim of suicide. No detailed examination has been conducted by the judicial system in a legal proceeding, except a crime helping someone to commit suicide. Little utilities of the existing programs for preventing suicide might be derived from insufficient information about personal trait of a victim of suicide.

Conclusion

In order to prevent suicide and avoid the worst tragedy of a family, it is an essential requirement to collect and analyze any information concerning the victims of suicides.

REFERENCES

- 1. *Isihi T*. Review of reserach on suicide in Japan. Journal of National Institute of Public Health 2003; 52(4): 261–71.
- 2. Inamura H. Suicidiology: Treatment and prevention. Tokyo: Tokyo University Press; 1977. (Japanese)
- Robins E, Murphy GE, Wilkinson RH Jr, Gassner S, Kayes J. Some clinical considerations in the prevention of suicide based on a study of 134 successful suicides. Am J Public Health 1959; 49(7): 888–99.
- Barraclough B, Bunch J, Nelson B, Sainsbyry P. A hundred cases of suicide: Clinical aspects. Br J Psychiatry 1974; 125: 355–73.
- Ministry of Health, Labor and Welfare. Vital Statistics of Japan, Statistics & Information Department, Minister's Secretariat, 1975–2000. Tokyo: MHLW; 2001.
- 6. *Fire Prevention and Control Office in Kobe City.* The Annual Report of the Amburances and Rescue Activities, 1980–2000. Kobe: FPCO; 2001.

- Henriksson MM, Aro HM, Marttunen MJ, Heikkinen ME, Isomettsa ET, Kuoppassalmi KI, et al. Mental disorders and comorbidity in suicide. Am J Psychiatry 1993; 150(6): 935–40.
- 8. Schmidtke A, Weinacker B, Apter A, Batt A, Berman A, Bille-Brahe U, et al. Suicide rates in the world (Update). Available from: http://www.uni-wuerzburg.de/IASR/suicide-rates.htm
- Motohashi Y, Kaneko Y. Regional differences in suicide rate and prevalence of depression. Japanese Journal of Stress Sciences 2004; 19(1): 53–60. (Japanese).
- Motohashi Y, Sasaki H. Community diagnosis by the geographical information system and suicide prevention in a community. Nippon Eiseigaku Zasshi 2002; 57(1): 454. (Japanese)
- Shaffer D, Greenberg T. Teen Suicide Fact Sheet. Departmental paper describing epidemiology, risk factors and suicide prevention. Available from: <u>http://www.teenscreen.org/cms/content/view/73/102/</u>

The paper was received on April 1, 2006.

Yamamura T, et al. Vojnosanit Pregl 2006; 63(6): 575-583.