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# Statistics on Suicides of Japanese Workers

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## I. Introduction

In Japan, suicides increased sharply in 1998, passing the 30,000 mark. Over the next 14 years until 2011, the number remained at a high level in excess of 30,000 each year. In the meantime, measures to prevent suicides were promoted at national level through the Basic Act on Suicide Prevention (enforced from October 2006) and the Outline of Comprehensive Suicide Measures (formulated in June 2007). The FY 2012 draft budget for suicide prevention measures was around 18.7 billion yen, including sums for measures to “Clarify the facts concerning suicide,” “Encourage public vigilance,” “Train personnel to play a central role in early countermeasures,” “Promote mental health,” “Make appropriate psychiatric care available,” “Prevent suicides as a social initiative,” “Prevent repeated suicide attempts,” “Ease the distress of surviving family members,” and “Strengthen cooperation with private organizations.” According to the latest statistical data released by the National Police Agency (“Monthly Suicide Statistics for 2012 [Provisional Figures as of December 31],” Jan. 17th, 2013), there were 27,766 suicides in 2012. This was the first time since 1998 that the number had fallen below 30,000. The reasons behind the decrease in suicides will doubtless be discussed from various angles as time goes on. There is a suggestion, however, that enhanced public awareness and increased knowledge of suicide resulting from these nationwide measures, via practical activities by local authorities, private organizations and others, could have been one factor in helping to prevent suicides.

In Japan, there are several forms of statistical data on the subject of suicide. The most representative of these are *Jisatsu no Gaiyo Shiryo* [Overview data on suicides] published by the National Police Agency every year (co-published with the Cabinet Office as *Jisatsu no Jokyo* [The state of suicides] since 2011) and *Jinko Dotai Tokei* (Vital Statistics) published monthly by the Ministry of Health, Labour and Welfare. There are also some independent survey data produced by private organizations and others. These statistical data differ in various ways (for example, in their survey method and definition of terms), leading to discrepancies in figures such as the total number of deaths by suicide.

In view of these points, this paper will provide a commentary on interpreting the various statistical data on suicide in Japan, differences between the various data, and other issues, focusing mainly on workers.

## II. Differences in Suicide Statistics Published by NPA and MHLW

Figure 1 and Figure 2 show trends in total deaths by suicide as published by the

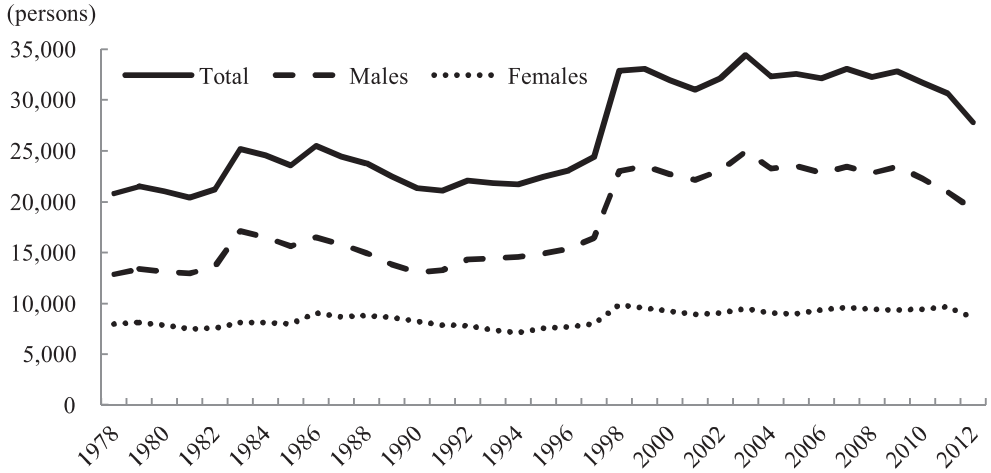


Figure 1. Trends in Deaths by Suicide According to NPA Suicide Statistics

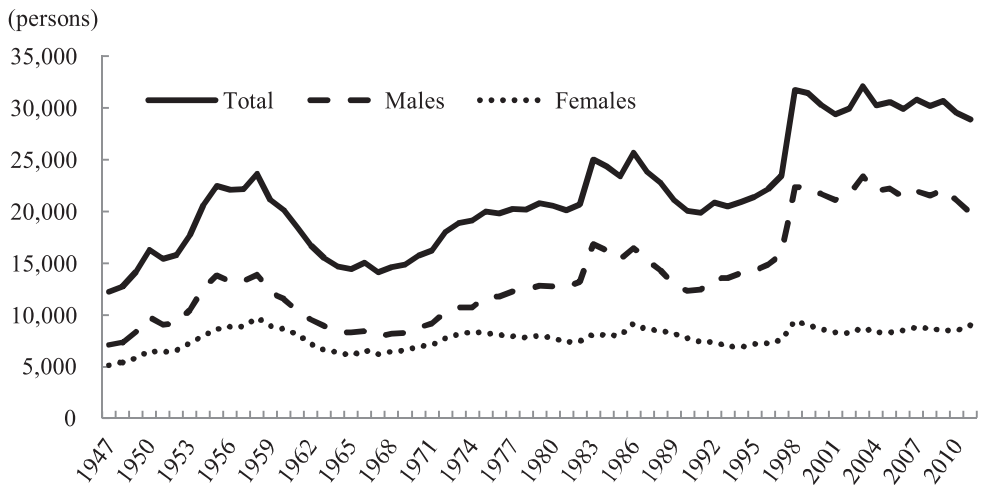


Figure 2. Trends in Deaths by Suicide According to MHLW Vital Statistics

National Police Agency (NPA) and the Ministry of Health, Labour and Welfare (MHLW), respectively. As noted above, suicides in Japan increased sharply in 1998, remaining on a par thereafter. Although this trend can be observed in both figures, overall, the MHLW data indicate fewer deaths by suicide than those published by the NPA. Two reasons may be given for this (Cabinet Office 2012).

The first is the difference in survey targets. For while the MHLW's Vital Statistics are concerned with Japanese nationals in Japan, the NPA suicide data cover the whole population, including foreign nationals in Japan. Since the MHLW statistics do not include foreigners, they inevitably record fewer deaths by suicide than the NPA statistics do.

Table 1. Comparison of Total Deaths by Suicide According to the WHO Mortality Database and MHLW Vital Statistics

|      | A. WHO Mortality Database | B. MHLW Vital Statistics | Difference (A-B) |
|------|---------------------------|--------------------------|------------------|
| 2005 | 30,557                    | 30,553                   | 4                |
| 2006 | 29,923                    | 29,921                   | 2                |
| 2007 | 30,829                    | 30,827                   | 2                |
| 2008 | 30,236                    | 30,229                   | 7                |
| 2009 | 30,714                    | 30,707                   | 7                |

The second reason is the difference in administrative procedures. In the MHLW’s Vital Statistics, cases are processed as “other than suicide” if it is unknown whether the cause of death was suicide, homicide or accidental death. These are not counted as suicide unless the person writing the death certificate makes an amended report to the effect that the cause was suicide. In the NPA suicide statistics, conversely, a suicide statistics form is created as soon as the cause is known to have been suicide mainly as a result of police investigation. The cause is thereafter counted as suicide. This leads to a greater probability that the cause of death will be judged as suicide in the NPA statistics, making the number of deaths by suicide larger than in the MHLW statistics.

### III. Comparison of Suicide Statistics by International Agencies

International suicide statistics are published by the OECD and WHO. The former publishes numbers of Japanese deaths by suicide in its OECD Health Data: Health Status. The figures given there are the same as those in the MHLW Vital Statistics. Meanwhile, WHO publishes numbers of Japanese deaths by suicide in the WHO Mortality Database. Although the figures published there are more or less the same as the MHLW Vital Statistics, the figures are slightly different, as shown in Table 1. This is because, in the MHLW Vital Statistics, deaths by suicide are counted only when falling under ICD-10 codes X60-X84 (Intentional self-harm), while the WHO data also include Y87.0 (Sequelae of intentional self-harm) as well as ICD-10 codes X60-X84 in their totals.

### IV. Difference in Numbers of Worker Suicides According to NPA and MHLW

Similarly, when limiting deaths by suicide to those of workers, the figures published by NPA and MHLW differ, for the reasons given in II above. Differences between the two statistical data can also be found in their methods of classifying occupations.

In the MHLW Vital Statistics, occupations are classified as “Specialist and technical workers,” “Administrative and managerial workers,” “Clerical workers,” “Sales workers,” “Service workers,” “Security workers,” “Agriculture, forestry and fishery workers,”

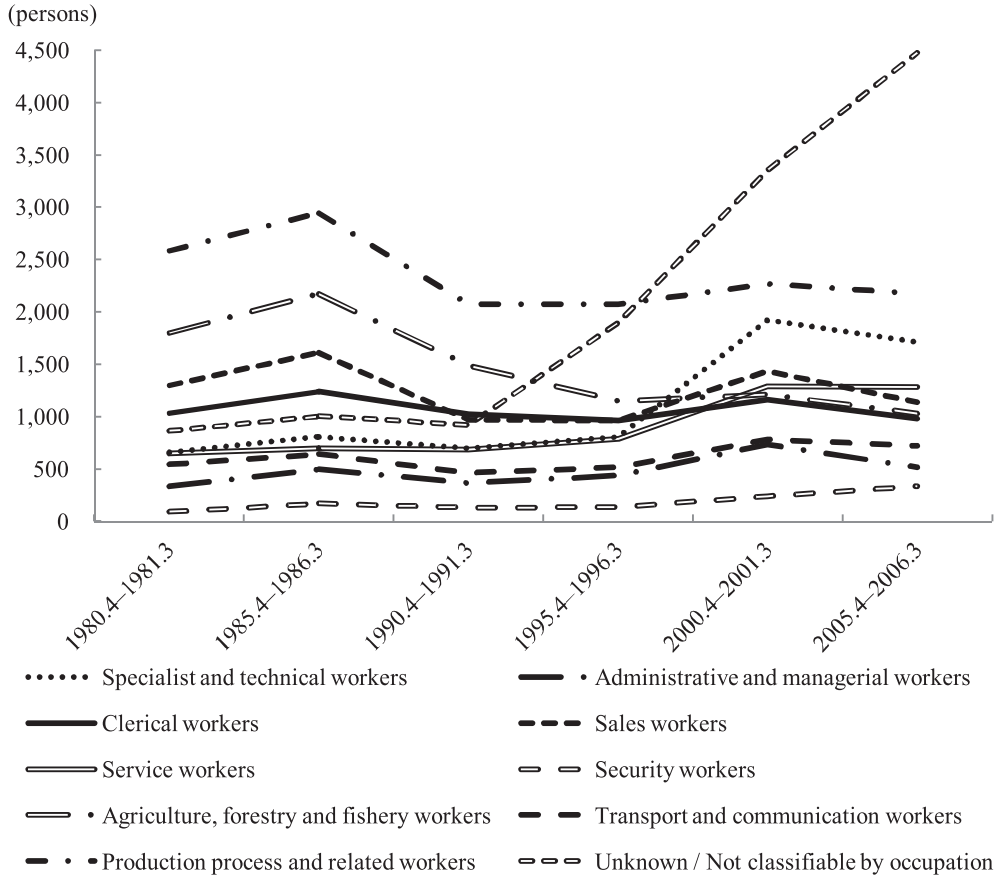


Figure 3. Trends in Deaths by Suicide among Workers According to MHLW Vital Statistics

“Transport and communication workers,” “Production process and related workers,” and “Workers not classifiable by occupation.” However, since persons of unknown employment status are included among “Workers not classifiable by occupation,” this could also include people who have no job. Figure 3 shows trends in worker suicides by occupation, according to the MHLW Vital Statistics.

Until 2006, the NPA suicide statistics only divided occupations into two categories, namely “Management workers” and “Employees.” However, subcategories were given for each of these; specific occupations for “Employees,” for example, included “Agriculture, forestry and fishery workers,” “Factory workers” and “Vehicle operators.” In 2007, the NPA revised its suicide statistics forms, changing its occupation categories to “Specialist and technical workers,” “Administrative and managerial workers,” “Clerical workers,” “Sales workers,” “Service workers,” “Skilled workers,” “Security workers,” “Communication and transport workers,” “Laborers” and “Others.” There are also subcategories for each of these.

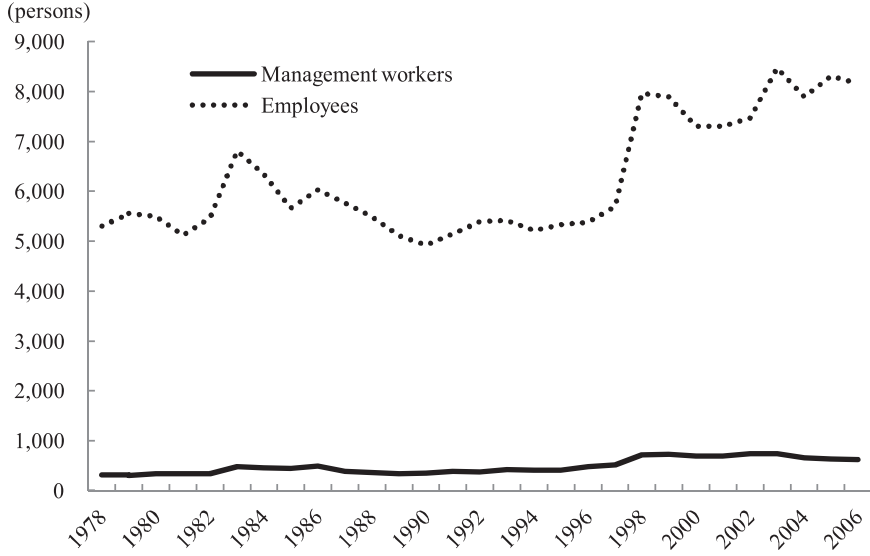


Figure 4. Trends in Deaths by Suicide among Workers According to NPA Suicide Statistics (up to 2006)

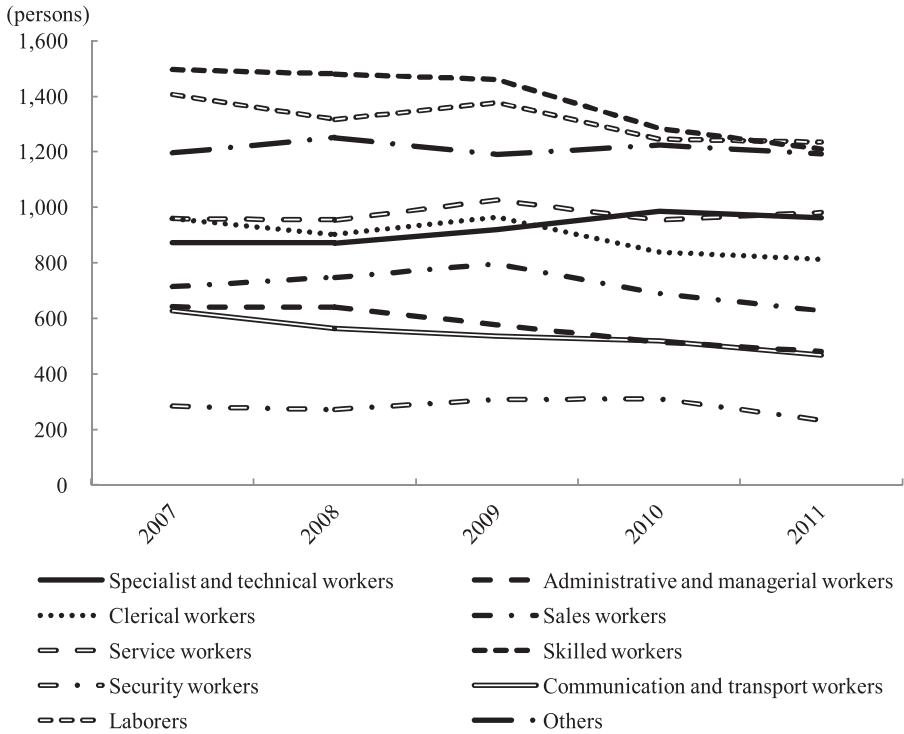


Figure 5. Trends in Deaths by Suicide among Workers According to NPA Suicide Statistics (2007 onwards)

For example, the occupation classified as “Management workers” up to 2006 included “Elected representatives,” “Civil servants and others in management positions,” “Officers of companies and organizations,” and “Management workers other than officers of companies and organizations.” By contrast, “Administrative and managerial workers” after 2007 included “Civil servants at elected representative, governor or division manager level and above,” “Officers of companies, public corporations, etc.,” and “Department and division managers of companies and public corporations.” Thus, it should be borne in mind that a simple comparison cannot be made between the NPA occupation categories up to 2006 and after 2007. Figure 4 shows trends in suicides among workers by occupation up to 2006, as reported by the NPA, while Figure 5 shows trends after 2007.

## V. Workers’ Accident Compensation for Mental Disorders

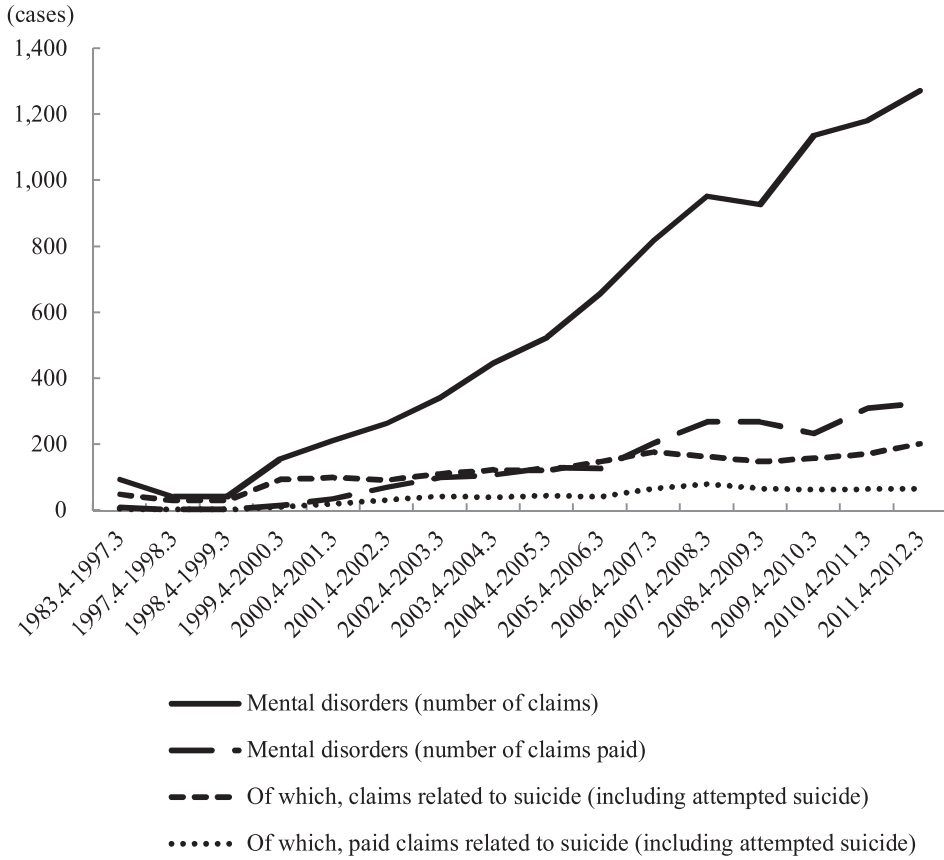
In Japan’s system of certifying occupational injury related to mental disorders, “Judgment Guidelines on Work-Related and Non-Work-Related Mental Disorders Caused by Psychological Stress” were published in 1999. The severity of psychological stress caused by work used to be evaluated by referring to “Workplace Psychological Stress Evaluation Table” in the Guidelines, which was also used to judge whether a disorder was work-related or not. Before these Guidelines were published, there was hardly any certification of workers’ accidents related to mental disorders, as Figure 6 shows.

The Guidelines were partially revised in 2009, when new events were added to the Workplace Psychological Stress Evaluation Table, among other changes. Then, in December 2011, “Certification Criteria for Mental Disorders Caused by Psychological Stress” were published, whereupon the Guidelines were abolished. The Certification Criteria differ from the Guidelines in a number of respects. For example, specific cases illustrating the severity of psychological stress are given in a “Work-Related Psychological Stress Evaluation Table,” and specific evaluation methods are stated for cases with multiple events. For certain events such as sexual harassment, moreover, the Certification Criteria made it possible to backdate the evaluation by six months or more.

Viewing trends in workers’ accident compensation for mental disorders as shown in Figure 6, the “Number of Claims” for workers’ accident compensation is generally increasing year by year; these include around 100 to 200 cases of suicide each year. However, since “suicide” in Figure 6 includes cases of attempted suicide, the latter are not included in statistical data on deaths by suicide published by the NPA and MHLW.

## VI. Causes of Suicide

The primary source of statistical survey data on causes of suicide is the “Overview Data on Suicides” published every year by the NPA. Until 2006, a single cause or motive was registered for each suicide. Causes or motives were categorized as “Domestic

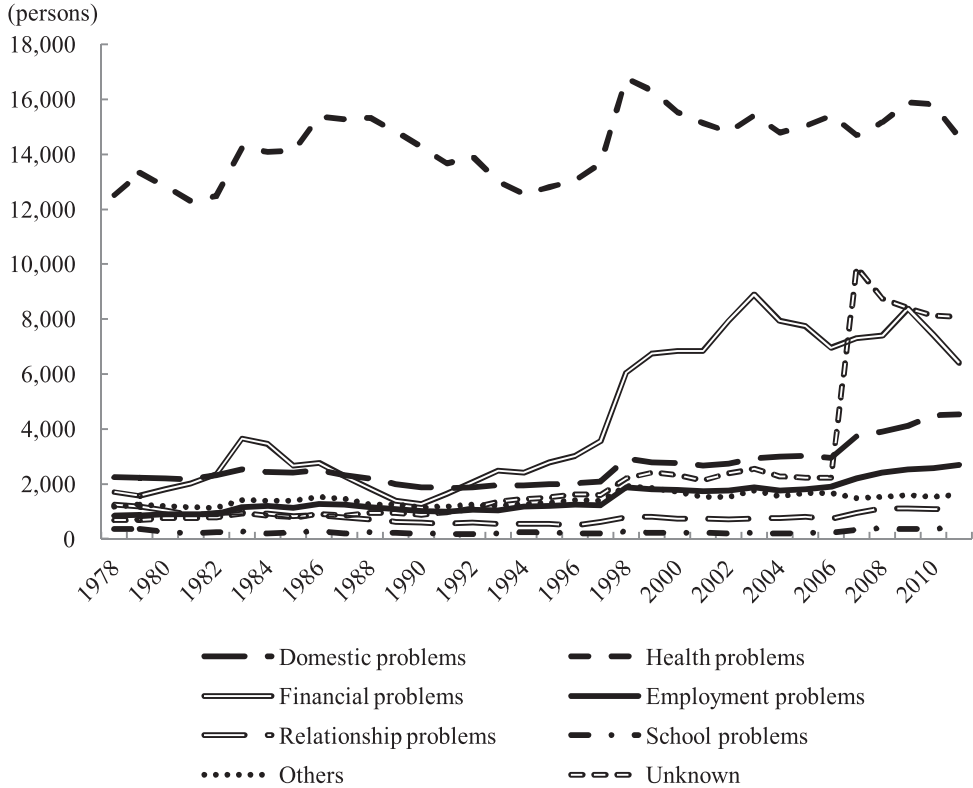


Note: For 1983–1996, the total figures are shown.

Figure 6. Trends in Workers' Accident Compensation for Mental Disorders According to MHLW's "State of Workers' Accident Compensation for Brain and Heart Disease and Mental Disorders"

problems," "Health problems," "Financial problems," "Employment problems," "Relationship problems," "School problems," "Others" or "Unknown." After the revision of suicide statistics forms in 2007, it is now possible to register up to three causes or motives that can be clearly surmised from evidence supporting a single suicide (e.g. suicide notes). This change included the introduction of more detailed subcategories. It should therefore be borne in mind that, since 2007, the total number of deaths by suicide does not tally with the total number of causes or motives.

Figure 7 shows trends in deaths by suicide by cause or motive, according to the NPA. Despite the difference in aggregation method between pre- and post-2007, the most commonly cited cause is "Health problems." Also, ever since deaths by suicide passed the 30,000 mark in 1998, "Financial problems" have been an increasing cause of suicide.



Note: Following a revision of suicide statistics forms, up to three causes or motives per suicide have been counted from 2007 onwards.

Figure 7. Trends in Deaths by Suicide Categorized by Cause or Motive According to NPA Suicide Statistics

“Employment problems” have also been in an increasing trend since 2007. This is thought to reflect the change whereby up to three causes or motives can be registered per suicide, following the revision of suicide statistics forms mentioned above.

The “Suicide Analysis Project Team,” formed by an initiative between the NPO corporation Lifelink and the University of Tokyo, conducted an interview survey with 305 relatives of suicide victims between July 2007 and June 2008. For the survey, 56 “risk factors” were selected, through reference to the 52 factors used by the NPA when compiling the “Overview Data on Suicides.” The results of the survey are reported in *Jisatsu Jittai Hakusho 2008* [White paper on suicides 2008] (Suicide Analysis Project Team 2008). This includes the statement that “risk factors were certified by members of the Suicide Analysis Project Team, based on the results of the interview survey with surviving family members.” All conceivable causes of the suicide were counted, rather than counting a single risk factor per suicide. Among other facts clarified after aggregating the data, it was proved that each victim had been troubled by an average of four risk factors at the time of the suicide; the



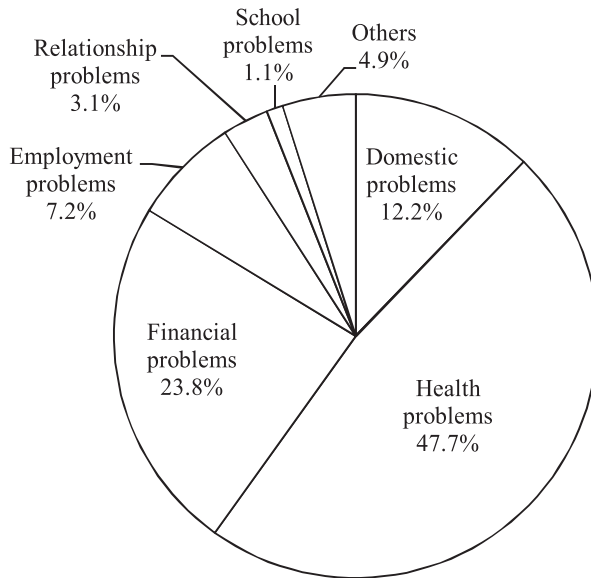


Figure 8. Ratios of Suicides by Cause and Motive According to NPA Suicide Statistics (2007)

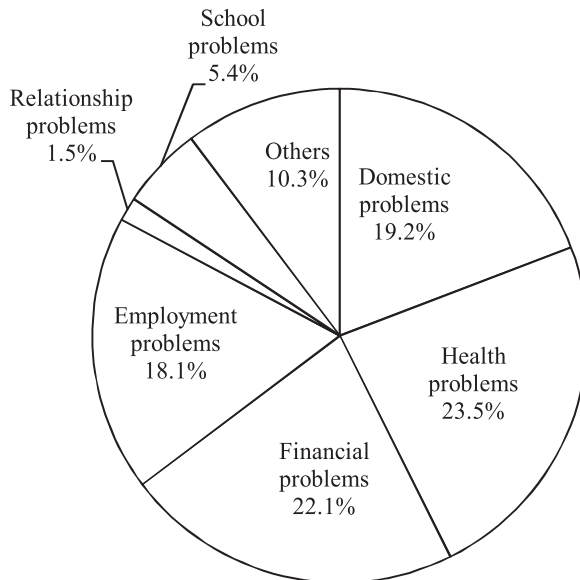


Figure 9. Ratios of Suicide Risk Factors According to the Suicide Analysis Project Team (July 2007 – June 2008)

more common risk factors included depression, domestic discord, debts, physical illness, financial difficulties, human relations in the workplace, changes in the workplace environment, unemployment, business troubles, and overwork.

Figure 8 shows ratios of suicides by cause or motive in 2007 according to NPA statistical data, and Figure 9 ratios of suicide risk factors according to the Suicide Analysis Project Team, for each type of problem. Comparing the two, “Health problems” account for around half of the total in the NPA statistical data, while the ratios of “Domestic problems,” “Employment problems” and “School problems” are higher in the data presented by the Suicide Analysis Project Team. This divergence in ratios is thought to arise from differences in the timing and targets of the survey, the person evaluating the cause, and the number of causes available for evaluation.

## VII. Conclusion

This paper has mainly discussed statistical data on suicide in Japan. The most representative of such data are those published by the National Police Agency (NPA) and the Ministry of Health, Labour and Welfare (MHLW). However, these do not provide consistent figures, as differences can be seen in their survey method, definition of terms and other features. Moreover, since neither of these statistical data are limited only to workers, the data first need to be processed within the range available in order to study the characteristics and trends of suicides among workers. In the survey results on causes of suicide according to the NPA and Lifelink, the possibility is suggested that employment-related problems have a significant impact on suicide. It is not possible, at the present time, to consult the raw data for the statistics of either the NPA or MHLW, making it difficult to extract and analyze data limited to workers only. In future, however, it will surely be necessary to analyze the backgrounds and characteristics of deaths by suicide limited to workers only, in order to devise more effective countermeasures for suicides and mental health among workers. In the report by the Suicide Analysis Project Team (2008), moreover, psychiatrist Dr Satoru Shima conducted “An analysis of risk paths related to suicide.” Though the quotation is rather long, Dr Shima makes the following observation. “It has already been pointed out that a number of factors are involved in suicide. The existence of numerous factors has necessitated a diversity of initiatives to combat them. Often, however, such factors do not exist randomly, but are mutually interrelated. That is, a negative spiral can be seen, whereby one factor gives rise to others. This would seem to suggest that suicide prevention measures should not be implemented piecemeal, but in “linked” fashion as far as possible, going beyond the realms of “cooperation.” Not only that, but as in the example of multiple debts, as the negative spiral continues, the force of negative factors seems to increase like a snowball. And once a vicious cycle has started, it develops into a bottomless pit, and it is often difficult for the sufferer to escape from the spiral independently. . . . In many cases, a variety of factors accumulate, until finally depression or some other mental illness occurs. Some of those who

suffer this mental illness contemplate suicide; sometimes, sadly enough, they go as far actually committing suicide. . . . Because the degree of risk complexity in depression is high, this means that a realistic response against the accumulated factors is also required, in addition to drug therapy, mental therapy (psychotherapy, counseling) and other psychiatric treatments. Multi-faceted, multi-dimensional countermeasures also need to be implemented. These include a response to home and workplace environments, financial support, support for multiple debts, appropriate treatment of physical ailments, and employment or re-employment support. At the same time, the use of diverse social resources is also required. To this end, it is thought very important to carry out case work activities, not only by psychiatrists and other doctors, nurses, public health practitioners and counselors, but also by psychiatric social workers (PSW) and others.”

This paper has discussed the diversity and cumulative nature of causes of suicide in Japan. Strict psychological autopsies of suicide are still hardly ever conducted in Japan, as they are in other countries. This perpetuates a situation in which it is difficult to narrow down the focus of countermeasures. In future, however, it will be imperative to reduce the number of deaths by suicide, and to that end, as posited by Dr Shima, a need is also seen to focus on the synergistic effects of diverse factors.

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