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Characteristics of suicide completers presenting to
an emergency care centre in Japan:
A comparison with suicide survivors

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Abstract

To identify the characteristics of suicide completers, we examined a total of 1,193 suicide attempters presenting to Iwate Prefectural Advanced Critical Care and Emergency Centre during the 8 years from April 1, 2002. Investigational indices were compared between the completer group of 114 subjects and the survivor group of 1079 subjects. To identify factors associated with the outcomes of suicide attempts, a multivariate logistic regression analysis was performed. In the completer group, males accounted for a higher percentage, and the age distribution was bimodal, in the 50s and 20s age deciles. As for diagnoses, mood disorders and unknown diagnoses

were prevalent. Individuals with no past suicide attempts were the majority. The individuals in this group tended to use serious methods of attempt such as hanging or jumping from heights and die in their initial suicide attempt. Cases of unknown motive predominated, and the most prevalent reason for suicide in cases with a known motive was pain due to illness. Unknown motives and low global assessment scale (GAS) scores were identified as factors associated with suicide commitment. It is important to assess the global severity ratings for individuals from their standard of living status and social adaptation and to estimate their risk of suicide.

Key words : *suicide, completed suicide, attempted suicide, emergency medical care, suicide prevention measures*

I. Introduction

In Japan the number of suicide completers increased abruptly in 1998. Since then, more than 30,000 people have committed suicide every year. According to international

comparative data on suicidal mortality rates published by the World Health Organization (WHO), Japan, at a high level of 24.4, ranks 8th highest in the world (10th for males and 3rd for females) and 2nd among developed

countries, behind only Russia.

In response to this situation, the Japanese government enacted the Basic Act on Suicide Prevention in 2006 and made in 2007 a cabinet decision to take comprehensive measures to prevent suicide. Although the basic policy is to clarify the actual status of suicides in the nation, other than police statistics, no extensive surveys on suicide completers have been conducted to date, with only isolated reports from emergency care centres. Asukai has also noted that suicide survivors using serious means in their attempt have characteristics similar to those of suicide completers¹⁾, and suicide prevention measures based on investigations of the former population are being implemented. However, it is of course the case that Japan today clearly requires detailed studies of suicide completers themselves.

We compared suicide completers and survivors transported to an emergency care centre to characterize the former population and to identify factors associated with suicide completion.

II. Materials and methods

The subjects of the present study were selected from among 1,934 patients in psychiatric emergencies transported to the Iwate Prefectural Advanced Critical Care and Emergency Centre during the 8 years from April 1, 2002 to March 31, 2010. Among this group, 1,193 cases fulfilling at least one of four diagnostic criteria for suicide according to Kishi et al. (Kishi et al., 2000)²⁾ were extracted for the study population, specifically³⁾: the patient's own statement¹⁾, a suicide note or advance notice from the patient⁴⁾,

existence of an eyewitness of the suicide event⁵⁾, determination by a legal authority or by autopsy²⁾.

The investigational indices examined included age group, gender, "mental and behavioural disorders" as identified in the International Statistical Classification of Diseases and Related Health Problems 10th Revision ("ICD-10 diagnosis"), lifetime history of prior suicide attempts, history of within-1-year suicide attempts, method of attempt, attempt motive, availability of ambulatory psychiatric treatment, availability of adviser, cohabitation status, employment status, number of educational years, global assessment scale scores (GAS)⁶⁾, and life change units (LCU) on the Holmes social readjustment rating scale (Holmes, 1978)⁷⁾.

Evaluations and diagnoses concerning the various investigational indices were conducted under the supervision of a senior psychiatrist (designated psychiatrist) by eight emergency psychiatrists or on-call psychiatrists in the Department of Psychiatry of Iwate Medical University Hospital.

The study population was divided into two groups: those who committed suicide (completer group of 114 subjects) and those who survived (survivor group of 1,079 subjects). Data on the indices mentioned above were compared between the two groups. To determine the statistical significance of differences, the chi-square test was used for ratio data and the t-test for numerical figures. To identify factors associated with the outcomes of suicide attempts, a multivariate logistic regression analysis was performed with the outcome of suicide attempt as a dependent variable (1 assigned

to completed suicide, 0 for survival) and the investigational indices as explanatory variables. In determining the ICD-10 diagnosis, F5 (behavioural syndromes associated with physiological disturbances and physical factors), F7 (mental retardation), F8 (disorders of psychological development), F9 (behavioural and emotional disorders with onset usually occurring in childhood and adolescence), physical disease, and unknown diagnoses were all treated as "other." Statistical analyses were performed using SPSS 20.0 J for Windows. In all statistical tests, the significance level was set at less than 5%, and significance levels were indicated as numerical figures.

Data allowing personal identification were omitted. Care was also taken to protect personal information in the processes of data management and processing. The present study was approved by the Institutional Review Board of Iwate Medical University.

III. Results

1. Background factors (Table 1, Table 4)

In the completer group, the male ratio and the mean age were significantly higher than in the survivor group. A significant difference was also found in age group distribution, with the completer group predominated by cases in the 50s, 20s, and 70s age cohorts in that order, and a bimodal distribution in the 50s and 20s age cohorts. The number of educational years was significantly lower in the completer group than in the survivor group. Significant differences were also found in the distributions of lifetime suicide attempts and history of within-1-year suicide attempts, with a higher proportion of history-positive cases in the survivor group.

2. Method, motive, LCU score, ICD-10 diagnosis, GAS score, etc. (Table 2, Table 4)

A significant difference between the two groups was found in the distribution of methods of suicide attempts. In the completer group, the proportion of serious methods such as hanging, jumping from heights, poison, gas, and burning was higher than in the survivor group. A significant difference was also observed in the distribution of suicide motives between the two groups, with higher proportions of unknown motives and disease pain in the completer group, and higher proportions of domestic and family problems, multifaceted problems, and personal relationship issues in the survivor group. A significant difference was also found between the two groups in the distribution of ICD-10 diagnoses at the time of examination, with higher proportions of F3 (mood disorders), unknown diagnoses, and F2 (schizophrenia) in that order in the completer group, and higher proportions of F3, F4 (neurotic disorders/stress-related disorders and somatoform disorders), and F2 in that order in the survivor group. In the mean score on the global assessment scale (GAS), the completer group had a significantly lower value.

3. Factors associated with the outcomes of suicide attempts (Table 3, Table 4)

To identify factors associated with suicide commitment in patients with suicide attempts transferred to the emergency care centre, a logistic regression analysis was performed with suicide commitment as a dependent variable and the various investigational indices as explanatory variables. Regarding the method of suicide attempt, the odds ratio of

Table 1. Comparative background data on suicide attempters presenting to the Iwate Prefectural Advanced Critical Care and Emergency Centre

		All attempters N=1193	Completers N=114	Survivors N=1079	p-value
Gender	Male (%)	478(40.1%)	74(64.9%)	404(37.4%)	<0.001
	Female (%)	715(59.9%)	40(35.1%)	675(62.6%)	
Mean age ± SD	(years)	40.74 ± 17.91	48.61 ± 19.28	39.91 ± 17.56	<0.001
Age group	10s (%)	89(7.5%)	4(3.5%)	85(7.9%)	<0.001
	20s (%)	318(26.7%)	20(17.5%)	298(27.6%)	
	30s (%)	245(20.5%)	16(14.0%)	229(21.2%)	
	40s (%)	166(13.9%)	16(14.0%)	150(13.9%)	
	50s (%)	189(15.8%)	25(21.9%)	164(15.2%)	
	60s (%)	81(6.8%)	14(12.3%)	67(6.2%)	
	70s (%)	105(8.8%)	19(16.7%)	86(8.0%)	
Number of educational years ± SD	(years)	11.57 ± 2.44	11.12 ± 2.92	11.61 ± 2.39	0.042
Lifetime history of suicide attempts	Yes (%)	488(40.9%)	28(24.6%)	460(42.6%)	<0.001
	No (%)	653(54.7%)	52(45.6%)	601(55.7%)	
	Unknown (%)	52(4.4%)	34(29.8%)	18(1.7%)	
History of within-1-year suicide attempts	Yes (%)	281(23.6%)	17(14.9%)	264(24.5%)	<0.001
	No (%)	866(64.9%)	74(64.4%)	797(73.4%)	
	Unknown (%)	46(3.9%)	22(20.2%)	17(2.1%)	
Psychiatric treatment	Ambulatory (%)	592(49.6%)	51(44.7%)	541(50.1%)	0.336
	Interrupted (%)	6(0.5%)	0(0%)	6(0.6%)	
	Hospitalized (%)	5(0.4%)	0(0%)	5(0.5%)	
	No (%)	582(48.8%)	61(53.5%)	521(48.3%)	
	Unknown (%)	8(0.7%)	2(1.8%)	6(0.6%)	
Advisor	Yes (%)	423(35.5%)	35(30.7%)	388(36.0%)	0.515
	No (%)	708(59.3%)	72(63.2%)	636(58.9%)	
	Unknown (%)	62(5.2%)	7(6.1%)	55(5.1%)	
Cohabitation	Yes (%)	958(80.3%)	88(77.2%)	870(80.6%)	0.752
	No (%)	221(18.5%)	24(21.1%)	197(18.3%)	
	Unknown (%)	13(1.1%)	2(1.8%)	11(1.0%)	
	Other (stay in care facility) (%)	1(0.1%)	0(0%)	1(0.1%)	
Employment	Yes (%)	429(36.0%)	42(36.8%)	387(35.9%)	0.935
	No (%)	737(61.8%)	69(60.5%)	668(61.9%)	
	Unknown (%)	27(2.3%)	3(2.6%)	24(2.2%)	

χ^2 test: $p < 0.05$

suicide commitment was 0.012 for the use of a drug compared with other methods ($p=0.045$), and 20.033 for unknown motive compared with other motives ($p=0.001$). The odds ratio of suicide commitment was 0.899 for an increment of 1 point in GAS score ($p < 0.001$).

IV. Discussion

1. Background factors

The higher percentage of males in the completer group reflects recent trends in Japan as a whole. According to the Status of Suicides in 2011 announced by the National Police Agency of the Cabinet Office of Japan,

Table 2. Methods of attempt, motives, LCU scores, ICD-10 diagnoses, and GAS scores

		All attempters N=1193	Completers N=114	Survivors N=1079	p-value
Method	Drug (%)	566(47.4%)	4(3.5%)	562(52.1%)	
	Poison (%)	116(9.7%)	17(14.9%)	99(9.2%)	
	Gas (%)	76(6.4%)	11(9.6%)	65(6.0%)	
	Jumping from high places (%)	77(6.5%)	24(21.1%)	53(4.9%)	
	Throwing oneself in front of ongoing train (%)	5(0.4%)	1(0.9%)	4(0.4%)	
	Self-mutilation with edged tools (%)	147(12.3%)	3(2.6%)	144(13.3%)	
	Burning (%)	33(2.8%)	9(7.9%)	24(2.2%)	
	Drowning oneself (%)	19(1.6%)	3(2.6%)	16(1.5%)	
	Hanging (%)	82(6.9%)	40(35.1%)	42(3.9%)	
	Combined (%)	66(5.5%)	1(0.9%)	65(6.0%)	
	Others (%)	6(0.5%)	1(0.9%)	5(0.5%)	<0.001
	Motive	Family (%)	249(20.9%)	10(8.8%)	239(22.2%)
Economic status (%)		80(6.7%)	7(6.1%)	73(6.8%)	
Pain of illness (%)		142(11.9%)	22(19.3%)	120(11.1%)	
Hallucination-delusion (%)		99(8.3%)	8(7.0%)	91(8.4%)	
Job (%)		104(8.7%)	7(6.1%)	97(9.0%)	
Personal relationship (%)		169(14.2%)	2(1.8%)	167(15.5%)	
Others (%)		42(3.5%)	3(2.6%)	39(3.6%)	
Combined (%)		189(15.8%)	8(7.0%)	181(16.8%)	
Unknown (%)		107(9.0%)	47(41.2%)	60(5.6%)	
School issues (%)		12(1.0%)	0(0%)	12(1.1%)	<0.001
LCU score		40.84 ± 29.95	43.65 ± 21.70	40.55 ± 30.68	0.293
ICD diagnosis at time of arrival	F0 (%)	32(2.7%)	5(4.4%)	27(2.5%)	
	F1 (%)	40(3.4%)	3(2.6%)	37(3.4%)	
	F2 (%)	153(12.8%)	13(11.4%)	140(13.0%)	
	F3 (%)	454(38.1%)	43(37.7%)	411(38.1%)	
	F4 (%)	350(29.3%)	5(4.4%)	345(32.0%)	
	F5 (%)	4(0.3%)	1(0.9%)	3(0.3%)	
	F6 (%)	71(6.0%)	5(4.4%)	66(6.1%)	
	F7 (%)	17(1.4%)	0(0%)	17(1.6%)	
	F8 (%)	2(0.2%)	0(0%)	2(0.2%)	
	F9 (%)	3(0.3%)	0(0%)	3(0.3%)	
	Physical disease (%)	2(0.2%)	2(1.8%)	0(0%)	
Diagnosis unknown (%)	65(5.5%)	37(32.9%)	28(2.7%)	<0.001	
Mean GAS score		33.79 ± 19.68	7.61 ± 14.64	36.56 ± 18.05	<0.001

χ^2 test: $p < 0.05$

20,955 males and 9,696 females committed suicide in Japan in 2011, the number of males roughly doubling the number of females⁸⁾. An epidemiological survey in Japan reported a higher suicide attempt ratio for females⁹⁾. In the present study as well, females, at 59.9%, accounted for a higher percentage of the

entire study population of suicide attempters. However, the completer group had a higher male percentage, at 64.9%, and the survivor group had a higher female percentage, at 62.6%; the difference between the two groups was statistically significant. The higher suicide completion rate for males is attributable to the

Table 3. Analysis of factors associated with outcomes of suicide attempts

	B	Standard error	Wald	Degree of freedom
Age	0.002	0.011	0.028	1
Female (male)	- 0.635	0.381	2.771	1
Number of educational years	- 0.066	0.065	1.047	1
History of within-1-year suicide attempts, Yes (No)	- 0.006	0.633	0.000	1
Lifetime history of suicide attempts, Yes (No)	0.071	0.562	0.016	1
Adviser, No (Yes/Unknown)	- 0.062	0.333	0.035	1
Cohabitation, Yes (No/Unknown)	- 0.173	0.412	0.176	1
Employment, Yes (No)	- 0.454	0.396	1.311	1
History of ambulatory treatment, Yes (No)	0.318	0.350	0.828	1
F0 (others)	0.366	0.784	0.218	1
F1 (others)	- 1.088	0.977	1.240	1
F2 (others)	- 1.237	0.649	3.632	1
F3 (others)	0.023	0.408	0.003	1
F6 (others)	- 0.388	0.875	0.196	1
Drug (others)	- 4.416	2.207	4.003	1
Poison (others)	- 2.072	2.136	0.941	1
Gas (others)	- 1.670	2.161	0.597	1
Jumping from high places (others)	- 0.379	2.149	0.031	1
Throwing oneself in front of ongoing train (others)	- 1.844	3.007	0.376	1
Self-mutilation with edged tools (others)	- 3.817	2.212	2.977	1
Burning (others)	- 1.698	2.178	0.608	1
Drowning oneself (others)	- 0.914	2.367	0.149	1
Hanging (others)	- 0.259	2.136	0.015	1
Combined (others)	- 4.030	2.368	2.897	1
Family (others)	0.118	0.966	0.015	1
Economic status (others)	0.569	1.058	0.290	1
Pain of illness (others)	1.324	0.962	1.895	1
Hallucination-delusion (others)	0.248	1.058	0.055	1
Job (others)	0.778	1.070	0.529	1
Personal relationship (others)	- 0.444	1.185	0.140	1
Motive unknown (others)	2.997	0.932	10.339	1
Motives combined (others)	- 0.533	0.995	0.287	1
GAS score	- 0.106	0.012	72.453	1
LCU score	- 0.004	0.006	0.530	1
Constant	2.489	2.461	1.023	1

fact that they are more likely to be exposed to social stress than females, and that females are thought to have a biological background for better impulse control.

As for age group distribution, the 50s have traditionally been considered an important age group, but the present study demonstrated

that suicides in the 20s group, are not negligible. The survivor group, on the other hand, had high percentages of women in their 20s or 30s, which is consistent with relevant results that have been reported so far.

To date, study results have been presented showing that more than 40% of suicide com-

Exp (B)	Confidence interval		p-value
	Lower	Upper	
1.002	0.981	1.023	0.866
0.530	0.251	1.119	0.096
0.936	0.824	1.063	0.306
0.994	0.287	3.436	0.992
1.073	0.356	3.231	0.900
0.940	0.489	1.807	0.853
0.841	0.375	1.887	0.675
0.635	0.292	1.381	0.252
1.375	0.692	2.730	0.363
1.442	0.310	6.700	0.641
0.337	0.050	2.286	0.265
0.290	0.081	1.036	0.057
1.024	0.460	2.277	0.954
0.679	0.122	3.774	0.658
0.012	0.000	0.914	0.045
0.126	0.002	8.282	0.332
0.188	0.003	12.999	0.440
0.685	0.010	46.168	0.860
0.158	0.000	57.423	0.540
0.022	0.000	1.681	0.084
0.183	0.003	13.080	0.436
0.401	0.004	41.482	0.699
0.772	0.012	50.775	0.903
0.018	0.000	1.842	0.089
1.125	0.169	7.466	0.903
1.767	0.222	14.042	0.591
3.758	0.570	24.761	0.169
1.281	0.161	10.200	0.815
2.178	0.268	17.724	0.467
0.641	0.063	6.548	0.708
20.033	3.223	124.519	0.001
0.587	0.083	4.124	0.592
0.899	0.878	0.922	<0.001
0.996	0.984	1.008	0.467
12.049			0.312

p<0.05

pleters had a history of suicide attempts^{10, 11}. In contrast, the present study revealed a higher prevalence of a history of suicide attempts in the survivor group. However, individuals with a history of suicide attempts have been suggested to be likely to repeat attempts; a report is available showing that

10-20% of individuals with a past history of suicide attempts would commit suicide in the future, accounting for about 50% of all suicide completions¹². Another report showed that more than 80% of individuals who died after repeated, incomplete suicide attempts died after changing their means of attempt¹³. A survivor group is of course a population of likely suicide completers. Prudent clinical care is required for the survivor group in the present study.

Years of education was lower for the completer group. A prior study comparing suicide attempters using severe methods and those using mild methods revealed a slightly longer educational history in the mild method group¹⁴. These findings suggest that skills acquired through education may be important for mental health-related issues and appropriate stress coping.

2. Methods

A significant difference was observed in the distribution of methods of suicide attempt between the completer group and the survivor group: 52.1% of the subjects in the survivor group attempted suicide using a drug. The relevant literature includes a report that half of suicide attempt survivors transferred to emergency care centres used overdoses of psychotropics for their attempts¹⁵. In our study, multivariate analysis also identified attempted suicide by drug as a variable that distinguished suicide completion and non-completion.

In other words, the previously mentioned sex discrepancy in the completer group may be regarded as a lower level of suicide completion due to selection of non-lethal methods¹⁶. Conversely, another report showed

Table 4. Comparison of suicide completers and survivors

	Completers	Survivors
Gender	Male	Female
Age groups	50s, 20s	20s, 30s
Number of educational years	Low	High
ICD diagnosis	F3, unknown	F3, F4
Motive	Unknown, pain of illness	Family, personal relationship
Method	Hanging, jumping from high places	Drug, self-mutilation with edged tools
Lifetime history of suicide attempts	A few	Many
History of within-1-year suicide attempts	A few	Many
GAS score	Low	High
LCU score	High	Low

that males and elderly subjects tended to use more serious methods to attempt suicide¹⁷⁾.

Males are reportedly more likely to behave oppositionally, impulsively, and aggressively in the face of problems to be solved¹⁸⁾. Depending on circumstances, females can be susceptible to repeated depressive states from various, sometimes minor life events in daily life¹⁹⁾. There are apparently many cases where repeated exposure to life events combined with weak stress-coping mechanisms leads to repetitive suicidal behaviour²⁰⁾.

3. Motives

According to the Japanese National Police Agency statistical survey on suicides⁴⁾, 30% of suicide completers leave a suicide note, and the cause/motive was stated in 73.4% (in 2011).

In the completer group, "unknown" was the most prevalent motive (41.2%), followed by pain of illness (19.3%) and family problems (8.8%). In the case of a suicide completer, no information is available from the completer, with his or her family or accompanying persons being the only source of information. Therefore, if the patient has no history of ambulatory treatment in a department of

psychiatry, and the family is also unaware of the situation of the patient, the investigator can only depend on the limited information available at the time of examination at the emergency care centre, with a diagnosis and suicide motive remaining unknown in many cases. The current situation is also one of unavoidable major difficulty in collecting information in an emergency setting immediately after arrival at an emergency care centre.

However, at the emergency care facility where the present study took place, psychiatrists are involved in the patient care from the outset and converse with persons close to the patient in almost all cases of suicide attempts. Therefore, the mode of data collection in the present study was similar to the psychological autopsy approach in its broader sense, covering the psychosocial background and details of the psychiatric treatment the patient was receiving. Therefore, the relatively large group with unknown motives might include a considerable number of cases where it was actually difficult to identify the cause and motive. If this is true, we might also conclude that this opacity

of motives is an essential element in the phenomenon of suicide completion.

In any case, the problem of unknown motive cannot be solved without an extensive approach to psychological autopsy by interview to hear details of the daily life of the suicide completer from persons with some relation to the individual during their life (family, acquaintances, colleagues, etc.). In Japan, a pilot study of psychological autopsy by Kawakami et al. showed that the incidence of depression at the time of death and the frequency of past suicide attempts were high among suicide completers²¹.

4. Diagnoses

In the completer group, F3 was the most frequent diagnosis, followed by "unknown", each of which accounted for more than 30%. In the survivor group, F3 accounted for more than 30%, followed by F4 and F2 in that order. In both groups, individuals with an established diagnosis accounted for the majority. In the entire study population of suicide attempters, F2, F3, and F4 together accounted for more than 50%.

The finding that F3 was the most prevalent diagnosis for the suicide completers studied is consistent with past reports. Also, a prior study pointed out that depression and other psychiatric disorder represented a risk factor for suicide²². Other studies showed that more than 90% of suicide completers were suffering from some psychiatric disorder at the time of attempted suicide², and that psychiatric disorders were present in more than 80% of attempted suicide survivors transferred to emergency care centres²³. A WHO survey on psychological autopsy of suicide completers in Europe and the US revealed mood

disorders (30.2%) to be the most prevalent of psychiatric diagnoses, followed by substance-related disorders (17.6%), schizophrenia (14.1%), personality disorders (13.0%), organic psychiatric disorders (6.3%), anxiety disorders/somatoform disorders (4.8%), and adjustment disorders (2.3%)²⁴. A study of psychological autopsy in the US also identified mood disorders as the most prevalent diagnosis among both males and females⁹. Barraclough et al. investigated the families of 100 suicide completers, reporting 93% of the completers to be sufferers of psychiatric disorders and 85% to have depression or alcohol dependence³.

In Japan, Cho (1996) performed psychological autopsy on 93 suicide completers transferred to an emergency medical centre and reported on their diagnoses. Depressive disorders were diagnosed in 48%, schizophrenic disorders in 26%, disorders due to use of psychogenic agents in 6%, no psychiatric disorders in 2%, and unknown diagnosis in 20%²⁵. Our previous study of suicide survivors also investigated a total of 1,348 suicide survivors transported to Iwate Medical University Hospital. Established diagnoses were mood disorders (31.0%), stress-related disorders (34.6%), schizophrenia (12.5%), personality disorders (10.2%), symptomatic/organic psychiatric disorders (2.6%), psychiatric disorders due to psychogenic agents (3.5%), and others (5.6%)²⁰.

In the current study, however, the percentage of unknown diagnoses was high, at 32.9%, and the report of Cho also showed that 20% of subjects had an unknown diagnosis. In this regard, the same difficulty exists as in

the identification of a suicide motive. In the Japanese forensic system for postmortem autopsy, matters such as the outpatient psychiatric treatment status and diagnosis of the deceased are determined by police and medical examiners on the basis of information obtained from persons close to the deceased. In addition, no adequate system exists allowing for subsequent extensive psychological autopsy. No unified management is available for consultation at medical institutions, and there are limitations on acquiring information on, for example, the history of outpatient treatment. There are also cases in which family or other persons accompanying the patient at the time of transport are not fully aware of the status of the individual. These facts should also be reflected as unknown aspects of other investigational indices.

5. Predictors of suicide and global severity ratings

To date many authors have pointed out the difficulty in predicting suicide. For example, Heinirich²⁶⁾ studied 351 suicide completers at 10 state hospitals in Rhineland-Palatinate, Germany between 1971 and 1983, and their report conspicuously demonstrates the difficulty in suicide prediction. Past history of suicide attempts was regarded as a predictor of suicidal behavior since it was found in 61% of the subjects, but the report stated that it was extremely difficult to predict individual cases of suicide reliably.

Jarosz has sounded the alarm on efforts to categorize the causes of suicides using a statistical table of suicide-related factors (family problems, personal relationships, disease, etc.) because of the lack of uniformity of sources of suicidal information due to

cultural differences and the disparate nature of personal motives for self-destruction in advanced society. The author concluded that self-destruction involves multifactorial reasons, and that it is impossible to predict the effects of different associations²⁷⁾.

However, global severity ratings, typically those on the GAS, used in the present study, may play a key role in the assessment of suicidal risk. Michel interviewed the families of suicide completers and individuals close to suicide survivors and reported that suicide completers and suicide survivors using severe methods of attempt had severer depressive symptoms than did suicide attempters using mild methods²⁸⁾. Assuming even that the psychological status of such individuals was unknown or that it was difficult for people around them to realize their condition, it seems possible to some extent to understand the suicidal risk of the individual on the basis of their standard of living and social adjustment level.

Our previous studies of suicide attempts had shown that irrespective of sex and age group, the incidence of suicide attempts using dangerous methods tended to decrease with increasing GAS score, demonstrating social adjustment level to be a factor associated with occurrence of suicide. It was also found that in addition to sex and age, overall mental health and social adjustment levels that transcend disease entity and other categorizations can be predictors of occurrence of dangerous suicide attempts¹³⁾. These tendencies were supported by the present study in that the risk for becoming a suicide completer was found to increase with decreasing GAS score.

With these findings in mind, it is of

paramount importance to assess global severity ratings appropriately and to estimate suicide completion risk on the basis of the ratings.

Deterioration of mental health is intimately associated with the development of psychiatric disorders. It has also been reported that many subjects with some psychiatric disorder did not receive psychiatric treatment^{4, 29)}. In the present study, it is estimated that a small but non-negligible number of suicide completers had not consulted a psychiatrist. In Japan, promotion of suicide prevention measures is led by the Cabinet Office and the Ministry of Health, Labour and Welfare, including efforts for nurturing gatekeepers, awareness-raising education for primary care physicians, and limitation on access to methods of suicide attempt³⁰⁾. Future suicide prevention efforts must focus on preventing suicide attempts in

the young, as well as on drug abuse (overdose use of psychotropics), the major cause of suicide attempts.

6. Limitation

This study is not a comparative study of suicide completers as a whole; the study population excludes suicide completers who were not transported to any emergency care centre.

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日本における救急搬送された自殺既遂者の特質について：
自殺未遂者との比較に基づく考察

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要旨

本研究では自殺既遂者群の特性を明らかにすることを目的として, 2002 年 4 月 1 日から 8 年間に岩手県高度救命救急センターに搬送された自殺企図者 1193 名を自殺既遂群 (114 名) と未遂群 (1079 名) に区分し, 調査項目を 2 群間で比較検討した。また, 自殺企図の転帰に関連する因子を抽出する目的で多重ロジスティック回帰分析を行った。

既遂群では男性が多く, 年齢は 50 代と 20 代の二峰性であり, 診断分布では気分障害と不明が多く, 自殺

企図の既往のない者が多くを占め, 縊頸・飛び降りなどの重篤な手段を用いて初回の自殺企図で死に至るという傾向が認められた。動機が不明な例が最多で, 理由の判明しているものの中では病苦が最も多かった。既遂と関連する因子は不明な動機, GAS の低値であった。

生活水準や社会的適応のレベルから全般的重症度を評価し, 本人の自殺リスクを類推することが重要と考えられた。
