Paper:

Mental Health of Managers of Small and Medium Enterprises as Seen from the Viewpoint of Risk Management

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The number of suicides per year has surpassed 30,000 over the past decade in Japan. Poor mental health constitutes the main cause of suicides, which trigger remarkable social losses. This paper reviews measures in support of mental health from the viewpoint of risk management. It introduces a new aspect into the previous studies on mental health, which have focused on middle managers and employees but not dealt with managers of small- and medium-sized enterprises as employees. This paper presents the framework of ISO 3100, the international standards for risk management issued in November 2009, and a desirable arrangement for risk management in the future. Furthermore, it discusses the state of mental health of the self-employed and managers of small- and medium-sized enterprises after suffering losses from disaster. In summary, this paper explores a new field of study on risk management study of the self-employed and managers of small- and medium-sized enterprises, people who make contribute significantly to local economies.

Keywords: managers of small- and medium-sized enterprises, mental health, risk management, ISO 31000, AMAROK

1. Mental Health Measures

"Mental health" means "health of the mind" and in Japan, this term can be narrowly defined as "any support given for a mental disorder. But its original purpose was considered to be the detection and treatment of mental illness in its early stages, and the attainment and maintenance of mental health [1]. Today, the number of the people who complain of bad physical and mental health has increased. Mental health has become a serious issue in every area of modern society [1].

According to the survey on patients conducted by the Ministry of Health, Labor and Welfare at medical facilities nationwide every three years, the number of patients suffering from mood disorders such as psychotic depression has increased from about 433,000 in 1996 to about 1,041,000 in 2008, or 2.4 fold in 12 years [2]. Meanwhile, the number of suicides in Japan exceeded 30,000 for the first time in 1998 and peaked at 34,427 in 2003 [3]. In 2009, there were 32,845 suicides, an increase of 596 over the previous year [4]. The increase in suicides of men, especially those classified as being in their working years from their thirties to their sixties, has attracted considerable attention as of late. The theme of "suicide of the generation in the prime of life" has been taken up by the mass media. Due to the global financial crisis beginning in the autumn of 2008, the entire world economy fell into recession at that time. As a result, the companies in Japan judging the number of workers on their payroll to be excessive, reduced their payrolls through restructuring. These companies raised the percentage of parttime temporary, and contract workers to lower their personnel expenses and raise their profits. A mass of unemployed workers emerged anew, and the disparities of income and financial security have enlarged between regular employees and non-regular ones. Under such unstable circumstances, it is easy to imagine that the unemployed who have lost their economic bases and the non-regular employees who cannot make ends meet are likely to be driven into despair in everyday life.

In recent years, our society has undergone drastic changes industrial restructuring, rapid progress in technological innovation, and diversification of forms of employment. Under the circumstances, according to a survey on the health of workers conducted by the Ministry of Health, Labor and Welfare, the rate of the workers who feel anxiety, worries and stress in terms of their jobs and occupations accounts for 58%, over half of all respondents [5]. There is also concern about further increases in the burdens on the minds and bodies of workers.

To trace the historical transition of occupational stress, in the early stages of the development of Japanese society, primary industries played the central role; the stress in the early period was mainly physical, and its cause could be found typically in overwork under poor labor conditions [5]. Thus, the objective of industrial health care service was the preservation of the health of employees. Industrial health care services were set up to assess the physi-

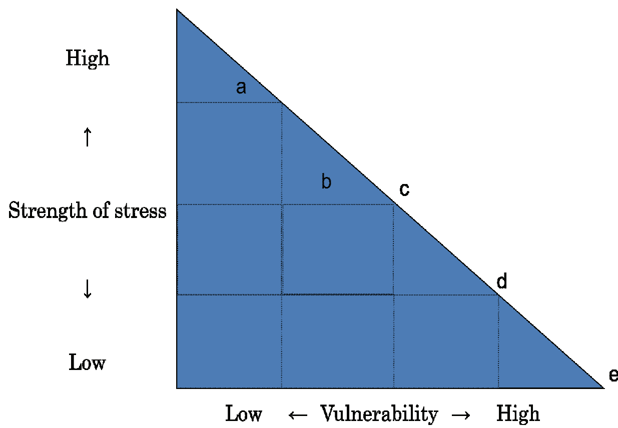
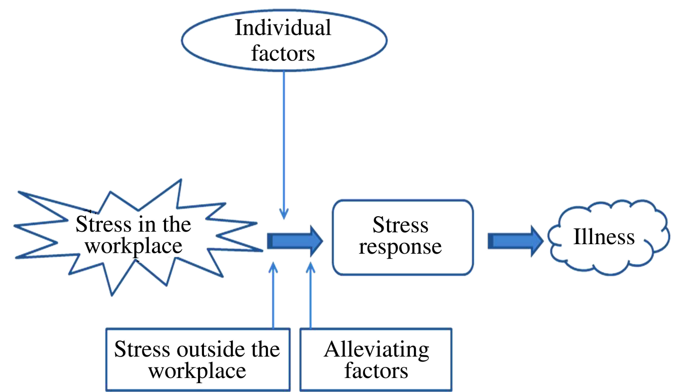


Fig. 1. Theory of stress and vulnerability.



*Revised the occupational stress model published on J. J. Hurrell Jr. and M. A. McLaney, "Exposure to job stress – a new psychometoric instrument," Scandinavian Journal of Work, Envirnment & Health, Vol.14 (Suppl.1), pp. 27-28, 1988.

Fig. 2. NIOSH occupational stress model.

cal state of health of employees and to detect and treat any illnesses in their early stage by conducting regular medical examinations for ordinary workers and special medical examinations for those engaged in hazardous work, such as working in dusty conditions, diving and working with lead or organic solvents.

After the Japanese economy entered its period of the rapid growth, while industrial accidents and occupational poisonings occurred frequently, workers who could not adapt to the introduction of new technologies, such as mechanization and automation, or the rapid change of organizational management, also emerged. Later, the situation in terms of overtime work and the occupational environment improved so that the number of cases of physical health disorder decreased. On the contrary, the problem of mental health disorders among the workers has been left as is due a combination of the low interest in this problem displayed by companies, labor unions, managers, administrators, and employees, and the negative attitudes toward and opinions of this problem in the Japanese occupational atmosphere [5].

As human health, or "the good condition of human beings in physical, mental and social aspects" as it is defined by the WHO, is desirable, the identification of the factors threatening mental health and the taking the effective measures against those factors has been sought.

The paper, "Mental Health as Risk Management – from the Viewpoint of Management Risk of the Enterprise" [1], explains the mechanism of the deficiency of mental health as follows. Various related factors have become entangled in complex ways to cause the appearance of the deficiency of mental health. The explanation in the paper "The Theory of Stress and Vulnerability" (**Fig. 1**) has been widely accepted in the fields of psychiatry and psychology. This theory aims at understanding the appearance of mental disorder as the correlation of the strength of the stress and the vulnerability of the individual. With remarkably strong stress, mental disorder can appear, even if the level of vulnerability of the individual is low. Conversely, with high levels of vulnerability mental disorder will also appear, even if the stress level is low. As the factors indicating vulnerability of the individual, anamnesis, life history of social adaptation, dependence on alcohol, personal dispositions, and family history can be given.

The "NIOSH (National Institute for Occupational Safety and Health) occupational stress model" (**Fig. 2**) in the US is useful in examining the appearance of the deficiency of mental health in the workplace. According to this model, stress outside the workplace is added to that inside; stress responses appear under the condition that there are not enough alleviating factors exemplified by social support from the family, workplace etc. and with further aggravation, illness may appear.

Mental health measures are essential to all workers. Today, according to certain data [6], about 80% of all the enterprises have already taken measures to support mental health. Typically, such measures set objectives for keeping employees mentally healthy by improving their lifestyles through health guidance and expectations of successful accomplishment of their daily tasks. However, the previous measures for mental health targeted mainly the employees, especially the salaried workers at large enterprises. In Japan, small and medium enterprises account for 99.7% of all businesses. Small and medium enterprises have weak foundations for management and are likely to be exposed to financial difficulties of financing and the risk of bankruptcy. Furthermore, the smaller the scale of the enterprise, the less measures in support of mental health are likely to have been taken, and this should be reviewed and tackled going forward. In the report "Meeting to Examine Overwork and Mental Health Measures," issued by the Ministry of Health, Labor and Welfare in August 2004, the expansion of industrial health care services into small enterprises is proclaimed, and it is anticipated that arrangements for mental health care for the workers at small and medium enterprises will gradually be improved [7].

As for measures targeting employees working at small and medium enterprises without adequate measures for mental health, some advocate the feasible option that local public health centers that are located near the workplace and home, that are familiar with the local medical facilities and institutions, and that perform social work in terms of mental health care play a central role alongside the enterprises concerned [3].

In the previous studies done on the measures for mental health, many have opted to promote the improvement of labor conditions by revealing the worsening state of mental health of the workers who are employees and therefore in a relatively weak position. However, it is large enterprises accounting for only 0.3% of all the businesses that have taken the practical measures to promote mental health, a critical element of industrial health care. Many small and medium enterprises with weak foundations for management have fallen far behind in tackling this problem in a practical way. Accordingly, taking this context into consideration, there have recently been some movements toward introducing new viewpoints into the previous studies to promote a review of the problem.

2. New Movements to Protect the Mental Health of Managers of Small and Medium Enterprises

Olivier Torres at the Universite Paul Valery Montpellier III (University of Montpellier III), who has written various reports on small and medium enterprises issued by the French Government, sounds an alarm over the increase in the number of suicides committed by the managers of small and medium enterprises, managers who have serious worries. According to Professor Katsuyuki Kamei, who is familiar with the studies by Torres and has translated his works into Japanese, Torres noticed the mental health problem of worries and agonies peculiar to managers of small and medium enterprises, while he was studying enterprises in France [8]. In Japan, the risk of the problem of mental health for employees and measures against the risk have also been studied and better understood through seminars for the managers, etc. On the contrary, studies on the problems of managers of small and medium enterprises have seldom been conducted. After comparing his own data with the increase in the number of suicides committed by the managers of small and medium enterprises who could not sustain their businesses due to the global economic crisis beginning in 2008, Torres identified the problem of "proximity." Proximity can be explained as the idea that "the relation between manager and employee is immediate and close," which applies to many small and medium enterprises. As an instance of the proximity referred to by Torres, because managers are the direct supervisors of employees, managers must directly dismiss them, and this increases the mental burden the managers feel. Torres mentions that in cases of high proximity, i.e., cases in which the manager knows well the specific economic backgrounds and family situations of employees, a sense of responsibility and worry makes managers solitary when reducing personnel. When the example of personnel cuts in companies is taken into consideration, it can be easily understood that the proximity peculiar to small and medium enterprises makes risk management and judgment more difficult for management, which in turn raises the risk of bankruptcy for the companies. Because many managers of small and medium enterprises have a lot of opportunities to listen to the thoughts and opinions of employees and have typically built close relationships with them, the worry that managers feel is truly immeasurable when they must dismiss employees. Accordingly, Torres draws the conclusion that feeling mental stress and even agony is not a special event for managers at all. Furthermore, Torres refers to the essential point that reviews of the worries of managers have been taboo for the following two reasons. The first is based on the ideological prejudice that managers are leaders, and the agonies of labor can be always recognized by the employees. "Experts on worrying" intentionally exclude managers as the objects of their studies. The second reason is based on the tendency that, generally speaking, managers of small and medium enterprises themselves are tight-lipped when it comes to their own worries and agonies. The image of the typical entrepreneur which is taught in business schools is always that of a strong, dynamic, and heroic leader. Because managers project this stereotyped image, they cannot recognize their own worries and agonies as they are. As a result, so Torres writes, "two managers who committed suicide could not bear the collapse of the companies they had spent their lives building." Moreover, Torres points out that four elements, overwork, stress, anxiety and solitude, weigh heavily on the shoulders of managers of small and medium enterprises. Even though the suicides of the managers of small and medium enterprises are reported in the local city news, they have not been recognized as a social problem, and no scientific approach to this problem has been undertaken.

Focusing on the mental crisis of managers of small and medium enterprises, Torres thought that further studies should be advanced and relief measures should be explored, and he decided to found the organization AMAROK. AMAROK stands for "observational organization for the mental health of managers of small and medium enterprises." There is a message in the name AMAROK "the entities which provide our social foundation, numerous small and medium-sized enterprises, must be protected." Torres read his report under the theme of "worries of managers of small and medium enterprises" at the International Council for Small Business (ICSB) in June 2009. He then established the head office of AMAROK in Montpellier, France, and its activities commenced in the autumn of 2009. These events attracted the attention of various elements of the mass media.

In Japan, few studies have been conducted regarding the viewpoint of Torres and focusing on the worries and agonies peculiar to managers of small and medium enter-

prises. However, Akita Prefecture in Japan has recorded a high suicide mortality rate in its prefectural demographics statistics for more than 30 years and has actively taken measures to prevent suicide over the last decade. These measures have involved the cooperation of the government, academic world, and public sector. Based on the experiences in Akita Prefecture, some have proposed the necessity of paying attention to the high risk of suicide run by the self-employed and family businesses [9-15]. Although the increase in number of suicides committed by the working generation has drawn more attention recently, higher suicide mortality rates can also be found under the category of self-employed males and family employees, as well as under that of unemployed males of working age.

Now, Kansai University has founded AMAROK Japan, a branch office in Japan of "organization of observation of the mental health of managers of small and medium enterprises" which carries out joint studies with Torres. To describe its activities concretely, it carries out epidemiological surveys on the state of health of managers of small and medium enterprises, it identifies the conditions of their lifestyles and social environments, and it establishes scientific facts, all of which leads to the establishment of "preventive medicine" as the first measure taken to protect the people from illness before "medical treatment" as the second measure taken.

Although studies focusing on the worries and agonies peculiar to managers of small and medium enterprises as Torres has advocated have rarely been carried out in Japan, the limited number of surveys on managers' stress carried out [16] have yielded the following findings.

1 Anxiety about the future is the largest cause of stress among both managers and employees.

2 No difference can be found between the ways to ease stress among managers and among employees.

3 Managers are more likely to be classified into the category of "type A behavior pattern" than employees. Accordingly, it is estimated that managers have a higher risk of neurosis and heart disease than employees.

4 More employees show physical and local subjective symptoms than managers. Conversely, it has been indicated that managers are more likely to show mental symptoms than employees, although difference is not significant.

To summarize the above findings, both managers and employees feel stress caused by anxiety over the future, and there is no difference in the ways to relieve their stress. However, as for the personal dispositions triggering mental symptoms and illnesses, managers have higher risk, and managers are more likely to show mental symptoms. Thus, so far as mental health is concerned, the above findings have brought the importance of the survey and review focusing on managers as well as employees into sharp relief.

A report on two cases of mental health of managers of small and medium enterprises describes the specific situation managers are in as follows [7]. Even though managers may live in a situation that allows them to rest quietly, final judgment and confirmation may be required of them at any time. Therefore, even if they stay home, they cannot be cut off from their companies entirely. Unlike employees, managers have no guarantee of being able to enjoy quiet mental rest at home. Furthermore, small and medium enterprises often take the form of family management, and the distinction between workplace and home becomes even more ambiguous. Thus, managers suffering from psychotic depression, for example, can easily interpret situations in terms of work and have difficulty resting mentally, although mental rest is important for the recovery process from illness. If the managers deny their own illness or will not accept any advice from others, there is higher risk of their recovery taking a longer time or of their illness worsening further. The rehabilitation plan recommended in the "Guide for the Support of Rehabilitation of Workers Absent from Work for Mental Health Reasons" (Ministry of Health, Labor and Welfare, 2004), the standardized measure to support the rehabilitation of employees, cannot easily be adopted to the situations of managers.

To take another example, according to survey carried out on 62 managers of small and medium enterprises in Gunma Prefecture [17], 61.3% of respondents experience "mental worries," and those over 50 years old show a higher rate. Among their "mental worries" are worries about management, such as financing (73.7%). However, 77.4% of all respondents know the term "mental health care," 53.4% feel the necessity to learn how to cope with stress, and 46.6% claim there has been improvement in arrangements for support, such as mental health service facilities. On the other hand, negative and passive opinions account for 67.2%. For example, some managers express that they cannot show weakness, so will not use any mental health care services.

Some managers answer that they recognize the importance of ways to cope with stress, while others express their skepticism regarding its effectiveness or answer that they cannot show any weakness, indicating an obstacle to the survey on mental health. Therefore, it is proposed that the arrangement for support for mental health of managers and the self-employed be actively improved.

3. Risk Management in the Future

As shown above through the "theory of stress and vulnerability," the mental health crisis means immeasurable risk for us. Risk can be defined as the probability that an undesirable event could occur [18].

"These are risky times. Risk has become diversified, enormous, and internationalized, but socialized at the same time. That is to say, these are times of social risk. To cope with the social risk, independent risk management carried out by individual economic actors, such as cor-

porations families, and administrations, is not sufficient. A more comprehensive idea of "social risk management," one which consolidates these separate types of risk management and introduces local risk management additionally, is inevitable" [19].

International standards in the field of safety have been already established, but the internationally unified standards for organizations such as enterprises in terms of the development of risk management have yet to be stipulated. On 11 November 2009, after many years of discussions, ISO 31000:2009 "Risk Management – Principles and Guidelines" was issued as the international standard of risk management by the ISO (International Standard Organization, Geneva). At the same time, ISO/ IEC 73:2002 "Risk Management – Vocabulary – Guidelines for Use in Standards," the international standards of terminology on risk management, was also revised. This revised edition was issued as ISO Guide 73:2009 "Risk Management – Vocabulary." JIS Q 31000 and JIS Q 0073, the Japanese editions of the two international standards, were issued on 21 September 2010.

ISO 31000:2009 provides the following process of risk management: 1. "identification of the situation" which surrounds individuals and organizations; 2. "risk assessment," the confirmation, analysis and evaluation of risk; and 3. "risk treatment," or response to risk. Because today the latent risk of deficiency of mental health is wider, deep and shrewder than ever, management to cope with this risk should be actively developed according to the above procedures of risk management.

4. Mental Health of the Self-Employed and Managers of Small and Medium Enterprises after Suffering from Large-Scale Disaster

Risk management in the present day is changing from the passive measure of avoiding all risk to the extent possible to active ones involving minimizing the losses brought on by risk and maximize the benefits [1]. However, it has been pointed out in terms of the situation of mental health that, generally speaking, the deficiency of mental health is not so well understood by the public, and, once the deficiency of mental health is diagnosed, even necessary guidance and advice can be restrained. It is therefore necessary to judge suitably whether the risk concerned should be removed as soon as possible or not before coping with it [1].

On 23 October 2004, the Chuetsu Earthquake struck in Niigata Prefecture. A year and 10 months after the disaster, a survey [20] was done on residents who had originally lived in the village of Yamakoshi. The survey confirmed that all of the respondents showed mental health issues or neurotic symptoms, and their conditions had been aggravated. Several stages are usually supposed in support of reconstruction after a large-scale disaster. This study focuses on the unprecedented problem of supporting the reconstruction of a village that had to be temporarily evacuated by all of its residents. The study aims at building an effective methodology for providing many kinds of support to disaster victims, based on their health care problems and needs in shelters and temporary housing.

The general health questionnaire (GHQ) adopted in this survey has been widely used at, for example, departments of psychosomatic medicine to grasp the medical conditions of patients. The GHQ, a combination questionnaire and screening test developed by Dr. D. P. Goldberg at the Institute of Psychiatry in Maudsley, UK to detect and evaluate the symptoms of non-organic mental disorders, neuroses, and diseases involving strain and depression. The results of the GHQ can serve as an effective index for measuring one's state of mental health [21]. The GHQ60 is the original edition with 60 questionnaire items. Several shortened versions have been also made from the original. Among them, the GHQ30, a version with 30 questionnaire items, has been favored by clinicians and researchers. The GHQ30 is said to be useful for observing the symptoms of local residents affected by their social and psychological environments, because it excludes from the GHQ60 the symptoms which would be detected among residents suffering from physical disease [22]. Accordingly, this survey has adopted the GHQ30.

The GHQ30 checks for many different symptoms such as feelings of depression, mental agony, lack of satisfaction, and difficulty in human relationships. The GHQ30 makes it possible to statistically detect each factor consisting of several symptoms, calculate the scores for the factors, and compare the scores. Factor analysis can be the objective method used to extract such qualitative information [22]. The GHQ30 consists of the sub-factors of the general tendency to become ill, physical symptoms, sleep disorders, social activity disorders, anxiety and irregular moods, and tendency to depression and thoughts of death [21]. Based on these factors, the average scores ($\pm$the standard deviation) of each factor are calculated and evaluated by the standards in the table of score division according to scale factor (**Table 1**).

A complete response to the GHQ30 was acquired from 85 respondents, 38 males and 47 females. The average age ($\pm$the standard deviation) of the respondents is 62.5$\pm$19.9 years old, males 61.9$\pm$22.9 years old and females 63.0$\pm$17.4 years old. The distribution of the scores of the responses to the GHQ30 in this survey is shown in **Fig. 3**.

The scores on the GHQ30 found clinically in medical facilities, including the outpatient clinic of the psychiatric department, are said to be considered desirable if they are within 6 [21]. After the scores were calculated, all respondents to the GHQ30 in this survey were found to have scores of 7 and over, indicating at least a "semi-healthy level," which can be regarded as displaying some mental or neurotic symptom. Among them, 22 respondents fall under the relatively light level of aggravation of mental health. 63 respondents scored 13 and over, indicating the "level in need of medical consultation." The scores of 53

Table 1. Score breakdown by scale factor.

Scale factor	Light symptoms	Medium symptoms and over
General susceptibility to disease	2	3 and over
Physical symptoms	2	3 and over
Sleep disorder	2	3 and over
Social activity disorder	1 to 2	3 and over
Anxiety and irregular moods	2 to 3	4 and over
Thoughts of death and susceptibility to depression	1	2 and over

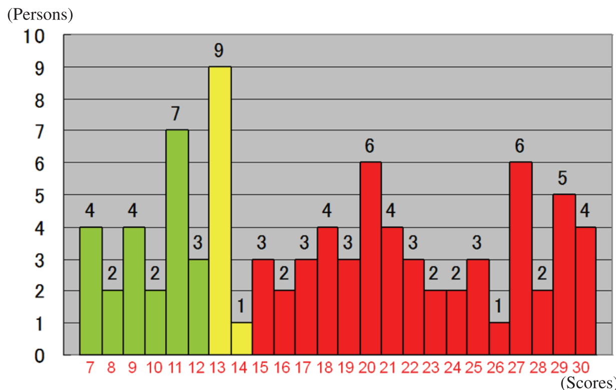


Fig. 3. Distribution of scores of GHQ30.

respondents reach 15, "the average score of neurotics."

In the previous study using the GHQ30 and targeting ordinary citizens in Japan, it is suggested that the higher the degree of stress in the environment, the higher the number of residents with high scores [22]. In the previous study, in evaluating the scores on the GHQ30, scores of 8 and over are considered problematic. Even if the evaluation in the survey on the Yamakoshi villagers follows this criterion, 81 of the 85 residents fall under the category of "problematic." This means that 95.3% have high scores, and this can be evaluated as a remarkably peculiar situation.

As of December 2004, 37.3% of the residents of the village of Yamakoshi were elderly. Although it should be taken into consideration that the survey was conducted on weekdays and some workers may have been at work at that time, 81% of all the workers in the survey were self-employed or managers of small and medium enterprises.

These workers fall into the following occupational categories. Of eight males – one was engaged in agriculture, one in stock raising, two in carp culture, one in construction, one was an employee and engaged in carp culture at the same time, one was a full-time employee, and one was a part-time employee. Of eight females, two – were engaged in agriculture, two in carp culture, one in construction, one was a hairdresser, and two were part-time employees.

Except for the one male engaging in carp culture and working at a company at the same time, most of the workers were the self-employed. While employees are covered by industrial health care services, workers other than employees, such as workers in agriculture and forestry or the self-employed and their family employees, are covered by local health care service. However, the fields which local health care service should cover are too wide, and the administrative institutions can only deliver their services within a limited range. If any enterprise violates its obligations to safety and health in terms of the mental health care of its employees at the workplace, it is liable for compensation for damages. On the other hand, arrangements to ensure mental health care for the self-employed are significantly behind.

Table 2. Average scores according to the sub-factors constituting GHQ30.

Item of sub-factor	average scores (±standard deviation)
General susceptibility to disease	3.59±1.38
Physical symptoms	2.79±1.72
Sleep disorder	3.18±1.62
Social activity disorder	4.33±1.02
Anxiety and irregular moods	2.62±2.04
Thoughts of death and susceptibility to depression	1.72±1.91

The information in **Table 2** confirms that the factors of "anxiety" and "susceptibility to depression" have a low rate of incidence, and those of "general susceptibility to disease," "sleep disorder," and "social activity disorder" have a high rate of incidence. It is estimated that at the time of the survey the respondents were busy looking for work and doing housework, and they were driving themselves relentlessly. If this is not so, the earthquake disaster had changed their living environments and deprived them of their livelihood, so the factor of "social activity disorder" had appeared.

According to the survey on the Great Hanshin-Awaji Earthquake [23], the rate of high risk was higher in respondents aged fifty and over than in respondents under fifty, and the rate of those who stated that their source of income and home life had not yet recovered was higher among respondents fifty years old and older. Therefore, the survey concludes that the mental health of the disaster victims is influenced not only by the direct damage by the earthquake disaster, but also by psychological and social factors such as their progress in recovering their work and home life.

According to another survey on the Unzen-Fugendake Eruption [22], it is indicated rather than the fact that disaster stress can trigger the psychiatric problems peculiar to evacuees, the psychological crisis related with the objective of social attainment which each individual loads with according to sex and year can be amplified and revealed by disaster. In the case of the former Yamakoshi villagers who had been affected by the Chuetsu Earthquake in Niigata Prefecture, many of whom were unemployed, self-employed, or managers of small- and medium sized enter-

prises, the factors of "sleep disorder" and "social activity disorder" show high rates of incidence in their states of mental health. It is now a concern that their feelings of psychological crises would increase if their situations in terms of their jobs, housing and home life were to remain disrupted for a long time after being directly impacted by the earthquake disaster. The cause of such results cannot be sought only in disaster stress, but such results can be considered as a process in which the psychological crisis specific to the self-employed is amplified and revealed by the event of disaster.

The findings of the survey on the former Yamakoshi villagers, many of whom are self-employed and without any assurance of preservation of mental health, reveal the inner feelings of the self-employed, feelings which would have never been revealed had they not suffered the effects of a disaster.

In the study of measures in support of mental health from the viewpoint of risk management, only middle managers and employees have been focused on so far. It was under such circumstances that Torres introduced a new viewpoint that focuses on the worries of managers of small and medium enterprises as employees. Taking the new viewpoint proposed by Torres into consideration, we proclaim the necessity of carrying out new risk studies on the stress of the self-employed and managers of small and medium enterprises, which is not covered by industrial health care service, promoting such risk assessment, and improving such risk management as soon as possible. Our claim is the same as the one found in the name AMAROK, namely that "the entities which provide us social foundation, numerous small and medium enterprises, must be protected."

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