Original article

Current status of occupational stress and its influencing factors by profession at community general support centers

Masaki Tashiro

Fujisawa-city Meiji Area Community General Support Center, Japan

Key words: occupational stress, community general support centers, public health nurses, certified social workers, chief care managers

Received: 23 April 2018/Accepted: 5 July 2018

Abstract

The aim of this study was to clarify the current status of occupational stress derived from the work environment of three types of professional staff (public health nurses etc, certified social workers, and chief care managers) in community general support centers, and to obtain suggestions for improvement through a comparative investigation of the various different questionnaire items. Three anonymous, self-administered survey forms were sent by post to 1,134 centers (378 directly managed public centers and 756 commissioned centers). The number of valid responses was 1,611 (47.4%). The results of the survey clarified the following points: (1) Work stress increased with higher intensity and experience rate of stressors with quantitative and systemic causes. Certified social workers had the lowest total score for workplace stress of the three professions. (2) Certified social workers scored higher in all items of work motivation than the other two professions. (3) The items affecting the level of workplace stress were clarified for each profession. (4) No major differences were found between the professions with respect to the care system. For workplace stress, quantitative and systemic factors were major common factors, suggesting that the work of these three professions will continue to be affected by future revisions to the long-term care insurance system. This is an unavoidable situation that individual professionals cannot control through their own endeavors. Such workplace stress cannot be readily improved or reduced.

Introduction

The system of community general support centers (support centers) was implemented in April 2006 through revision of the Long-Term Care Insurance Act the previous year. Support centers are staffed by specialists such as public health nurses etc., certified social workers, and chief care managers (chief managers), and they provide comprehensive, integrated counseling and support to elderly people in their everyday lives. The work of support centers in ascertaining individual needs and compiling them to show issues at the community level puts them at the forefront of community work. Depending on how they are managed, support centers may be either direct management-type, which are managed directly by the municipal government,

Corresponding author: Masaki Tashiro
Endo, Fujisawa-shi, Kanagawa 841-2, Japan
TEL/FAX: +81-0466-77-1670, Email:gety-masaki@ab.auone-net.jp

or contract-type, which implement community support services (comprehensive support services) through a social welfare service corporation contracted by the municipality. A support center was established in every municipality by March 2008.

However, this system has had numerous issues from the very start. These include the burden of support to prevent the need for care, insufficient number of staff relative to the workload, and insufficient cooperation between the relevant organizations [1-3]. As a result, the support center is a working environment in which occupational stress, which is the stress that occurs during a person's work, is always readily experienced [4].

Prior surveys and studies of occupational stress at support centers have been carried out by Mochizuki [5], Yamaguchi [6], and Ishikawa et al. [7], and these include quantitative and qualitative studies. In the quantitative studies, Mochizuki suggested that a high ability to cope with stress is connected to good mental health and prevention of burnout [5]. Yamaguchi suggested that professional staff go about their work with feelings of anxiety related to their duties when working under an inadequate employment pattern or long working hours [6]. Additionally, in a prior study of the relationship between occupational stress and the employee turnover rate, Sawada et al. [8] suggested that social support within the workplace has the effect of mitigating burnout in staff members.

This is the extent of prior research into occupational stress at support centers, but given the present trends in policy regarding the comprehensive community care system (the care system), there are concerns that occupational stress may increase further in the future as a result of expansion of, and changes to, the scope of responsibilities that professionals are expected to carry out. For this reason, one-size-fits-all countermeasures and preventative steps are unlikely to be sufficiently effective, and it is therefore necessary to gain an understanding of the actual status of occupational stress among professional staff. Measures to reduce occupational stress in support centers should not just address factors common to all professions; instead there is a need to clarify the differences between professions and search for measures for improvement based on comparative studies. In order to promote a care system with greater depth and to ensure sustainability of the long-term care insurance system, it is important to maintain and improve the mental health of the professionals carrying out key tasks within the system. Prior studies have not fully clarified the current status of occupational stress and mental health level in each of public health nurses, etc., certified social workers, and chief managers, or the differences between the three professions. From that perspective the present study is unique, and if it can clarify these points, it will yield major implications for actual practice in the future.

In light of the above, the purpose of the present study was to clarify the current status of occupational stress derived from the work environment of professional staff in support centers, and by means of a comparative investigation of the various different questionnaire items, to obtain suggestions for improvement.

In studies of occupational stress, the usual approaches are to give individual encouragement aimed at reducing stress or mental illness, or to improve the work environment. However, in a study of employees in the medical information technology industry, Yamazaki et al. [9] took a different approach; they defined a healthy workplace as a place in which people could continue their work in a cheerful and lively fashion, and they verified that building a healthy workplace is effective for improving stress and boosting mental health. Based on the verification that creation of a healthy workplace is effective in improving stress and boosting mental health, the present study has also taken this definition

of a healthy workplace and has established a research framework that focuses on the creation of a healthy workplace. The present study uses the same scales as those used by Yamazaki et al. [9] and this paper reports in particular the points clarified by the relationship between occupational stress and the factors that were shown to be associated with it.

Materials and Methods

1. Methods and subjects

The support centers to be surveyed were selected from the 4,328 centers excluding sub-centers and branches (1,268 direct management-type, 3,042 contract-type, 18 unknown) that existed nationwide as of April 2014. The selected centers were 378 direct management-type support centers identified from the websites of prefectural and municipal governments, and taking comparison into account, the number of contract-type support centers was set at twice this number (756) and these were selected by stratified random sampling. Thus, a total of 1,134 centers were surveyed. The survey period was February 2015, and three anonymous self-administered survey forms were sent to each center, for a total of 3,402 questionnaires.

In this paper, "public health nurses, etc." refers to public health nurses and registered nurses with experience in community health; "certified social workers" refers to certified social workers and persons with five or more years' experience as a field worker in a social welfare service or three or more years' work experience as a care support specialist, as well as three or more years' work experience in consultations and support related to the health and welfare of senior citizens.

2. Items for measurement

Individual traits were sex, age, number of years' experience, membership in a professional body, sleep time, and free time. Work traits were job type, employment pattern, personnel distribution, salary, hours of overtime, management type, and number of care prevention plans.

For measurement of occupational stress, a workplace stress scale was established, comprising 33 workplace stressors that were environmental factors causing stress conditions. This was an original scale created for the present study with reference to the workplace stress scale used in the above-mentioned study by Yamazaki et al. [9] and drawn up on the basis of the results of a preliminary study and interviews with staff from the three specialized professions at contract-type support centers. The categories of stressor were: level of qualitative demands (seven items), level of quantitative demands (five items), level of institutional demands (four items), unreasonableness of users (two items), anxiety over community activities (two items), dissatisfaction/anxiety toward career (two items), dissatisfaction toward employee evaluation rating and working conditions (six items), and degree of poor relations among staff (five items).

For each workplace stress item, the level of workplace stress was calculated for the intensity of the stress and the level of the workplace stressor was calculated for the experience rate. Intensity is the strength of the stress felt by an individual as a result of a workplace stressor. This was calculated from the scores of whether or not stress was experienced, and it indicated the strength of the stress felt by an individual from a stressor. "No experience of stress" was scored as 0, and experience of stress was scored from 1 ("Did not feel stress at all") to 5 ("Felt extremely strong stress"), and from these responses the total stress score (0–165) for 33 items was calculated. A higher score indicated that a greater degree of stress was felt.

The experience rate of stress for each of the above 33 stress items was calculated by the mean score for degree of stress (i.e. stress intensity of stressor, scored in the range 1–5) of people who had been exposed to that stressor. Stressor

items to which individuals had been exposed were scored according to the intensity of the corresponding stress, and items that had not been experienced were scored as 0, and the total score for 33 items (0–165) was calculated. The higher the total score, the higher the level of stress in the working environment.

The General Health Questionnaire (GHQ; Nakagawa and Daibo, 1985[10]) was used for the measurement of mental health level. In the present study, it was measured by 12 items, with each item scored from 0–3 on a 4-point scale, and the total was calculated (range 0–36). The scoring method adopted for the study was the Likert method. In addition, the University of Tokyo Health Sociology version of the Sense of Coherence (SOC) 3 scale [9], and the Workplace Climate Goodness 22-item scale and the Work Motivation 5-item scale developed by Mashiko et al. [9] from the above-mentioned study by Yamazaki , were compared among the three professions of support centers.

Finally, to gain an understanding of the thinking of the professionals with respect to the construction of a community comprehensive care system being promoted by the government, questions were set on whether the system was functioning or not, the approach of the local government, and the individual's duties, etc.

3. Analysis methods

The data obtained from these measurements were analyzed statistically by means of simple totaling, a chi-square test, a one-way analysis of variance (ANOVA), and a hierarchical multiple regression. Statistical analyses were carried out using IBM SPSS Statistics 23.

4. Ethical considerations

This study was carried out with the approval of the Ethics Committee of Niigata University of Health and Welfare (Approval No: 17436□131031). At the time the survey was carried out, the head of the support center and subjects from the three specialist professions were given a written explanation of the ethical considerations, including the objective of the study, the methods, and protection of privacy. Response to the survey was taken to indicate that consent was given.

Results

1. Basic attributes of respondents

A total of 1,653 responses were received (response rate = 48.6%). Of these, 1,599 (47.0%) had no missing analysis items, and these were taken as the subjects for analysis. Table 1 shows a breakdown of the basic attributes of the respondents.

In the results for sex, the total number of women (2,180, 82.1%) was greater than men. For age, the mode for subjects overall was 40–44 years (273, 17.4%), and while the majority of public health nurses, etc. were in the age range of 30s–50s, the majority of certified social workers were in the 30s age group and the majority of chief managers were in the 50 or over age group. For type of management, 63% of respondents were from contract-type support centers and 37% were from direct management-type centers. At the nationwide level, approx. 74% of support centers were contract type and approximately 26% were direct management-type; therefore, there was a high number of respondents from contract-type support centers in the present study [11]. By profession, the number and proportion of women was 554 (97.0%) public health nurses, etc., 314 (62.4%) certified social workers, and 412 (84.9%) chief managers, with the sex difference being significant in each profession. The number of years' experience showed significant differences between professions, and this was probably caused by the higher mean age of chief managers. For monthly salary, the range ¥150,000–¥250,000 accounted for approximately 70% of respondents. For membership in a professional body, half of respondents overall were members. Significant

Table 1. Basic attributes of each of the three occupations.

	Public health nurse (n = 583)	Certified social workers (n = 512)	Chief care managers (n = 504)	Total (n = 1,599)	
Sex					***
Men (%)	17 (3.0%)	189 (37.6%)	73 (15.1%)	279 (17.9%)	
Women (%)	554 (97.0%)	314 (62.4%)	412 (84.9%)	1280 (82.1%)	
Age (years)					***
< 25 (%)	9 (1.6%)	10 (2.0%)	0 (0.0%)	19 (1.2%)	
25 – 29 (%)	39 (6.8%)	77 (15.3%)	1 (0.2%)	117 (7.5%)	
30 – 34 (%)	54 (9.4%)	110 (21.8%)	5 (1.0%)	169 (10.8%)	
35 – 39 (%)	80 (13.9%)	114 (22.6%)	34 (6.9%)	228 (14.5%)	
40 – 44 (%)	104 (18.1%)	87 (17.3%)	82 (16.7%)	273 (17.4%)	
45 – 49 (%)	93 (16.2%)	42 (8.3%)	97 (19.8%)	232 (14.8%)	
50 – 54 (%)	103 (17.9%)	34 (6.7%)	126 (25.7%)	263 (16.8%)	
55 – 59 (%)	59 (10.3%)	22 (4.4%)	100 (20.4%)	181 (11.5%)	
≥ 60 (%)	33 (5.7%)	8 (1.6%)	46 (9.4%)	87 (5.5%)	
Management style					N.S.
Contract (%)	334 (59.7%)	334(65.5%)	327(65.1%)	1005(63.3%)	
Direct gov. management (core) (%)	174 (30.2%)	122(23.9%)	122(24.3%)	418(26.3%)	
Direct gov. management (non-core) (%)	58 (10.1%)	54(10.6%)	53(10.6%)	165(10.4%)	
No. of specialist occupations within Comprehensive Region					
Public health nurse (mean ± SD)	1.6 ± 1.1	1.6 ± 1.1	1.5 ± 1.1	1.1 ± 1.1	N.S.
Certified social workers (mean ± SD)	1.3 ± 0.8	1.6 ± 0.9	1.4 ± 0.8	0.9 ± 0.9	***
Chief care managers (mean ± SD)	1.1 ± 0.7	1.2 ± 0.7	1.3 ± 0.6	0.7 ± 0.7	**
No. of years of experience in other fields					
Within comprehensive region (mean ± SD)	4.0 ± 2.8	3.9 ± 2.8	5.1 ± 3.2	4.3 ± 3.0	***
Other comprehensive regions (mean ± SD)	0.4 ± 1.3	0.4 ± 1.4	0.6 ± 1.7	0.5 ± 1.5	*
Healthcare and welfare field (mean ± SD)	12.2 ± 9.8	6.4 ± 6.0	13.0 ± 8.6	10.7 ± 8.9	***
Other field (mean ± SD)	2.1 ± 6.2	2.4 ± 5.3	3.2 ± 6.2	2.6 ± 6.0	*
Total (mean ± SD)	18.7 ± 10.8	13.2 ± 8.2	22 ± 9.8	18.0 ± 10.4	***
Monthly Salary					***
< 100 thousand yen (%)	4 (0.7%)	3 (0.6%)	3 (0.7%)	10 (0.7%)	
100 – < 150 thousand yen (%)	25 (4.6%)	52 (10.8%)	14 (3.1%)	91 (6.1%)	
150 – < 200 thousand yen (%)	142 (26.2%)	205 (42.7%)	107 (23.3%)	454 (30.7%)	
200 – < 250 thousand yen (%)	226 (41.8%)	153 (31.9%)	185 (40.3%)	564 (38.1%)	
250 – < 300 thousand yen (%)	100 (18.5%)	47 (9.8%)	98 (21.4%)	245 (16.6%)	
300 – < 350 thousand yen (%)	28 (5.2%)	19 (4.0%)	41 (8.9%)	88 (5.9%)	
350 – < 400 thousand yen (%)	12 (2.2%)	1 (0.2%)	9 (2.0%)	22 (1.5%)	
≥ 400 thousand yen (%)	4 (0.7%)	0 (0.0%)	2 (0.4%)	6 (0.4%)	
Member of a professional body					***
Yes (%)	229 (39.9%)	251 (49.5%)	295 (59.1%)	775 (49.1%)	
No (%)	345 (60.1%)	256 (50.5%)	204 (40.9%)	805 (50.9%)	
No. of people for which supervised preventive care plans					*
0	80 (14.0%)	79 (15.6%)	34 (6.9%)	193 (12.3%)	
1 – 9	158 (27.7%)	127 (25.0%)	108 (22.0%)	393 (25.0%)	
10 – 19	130 (22.8%)	103 (20.3%)	116 (23.6%)	349 (22.2%)	
20 – 29	89 (15.6%)	89 (17.5%)	95 (19.3%)	273 (17.4%)	
30 – 39	55 (9.6%)	57 (11.2%)	76 (15.4%)	188 (12.0%)	
40 – 49	28 (4.9%)	27 (5.3%)	30 (6.1%)	85 (5.4%)	
50 – 59	12 (2.1%)	11 (2.2%)	14 (2.8%)	37 (2.4%)	
60 – 69	8 (1.4%)	5 (1.0%)	7 (1.4%)	20 (1.3%)	
70 – 79	3 (0.5%)	3 (0.6%)	4 (0.8%)	10 (0.6%)	
≥ 80	8 (1.4%)	7 (1.4%)	8 (1.6%)	23 (1.5%)	

*** $p < 0.001$,** $p < 0.01$, *$p < 0.05$. No. of specialist occupations within comprehensive region and No. of years of experience in other fields were verified by homoscedasticity; other parameters by Pearson's chi-squared test.

associations were seen by profession, with 60% membership among public health nurses, etc., 40% among chief managers, and certified social workers in the middle at 50%. For the number of care prevention plans the respondent was responsible for, chief managers showed the highest numbers.

2. Comparative analysis of the scale scores for each profession

The results for workplace stress, workplace climate goodness, work motivation, GHQ mental health level, and SOC ability to cope with stress were calculated for each profession, and are shown in Table 2.

The results show a significant difference in workplace stress between public health nurses, etc. and certified social workers and between chief managers and certified social workers ($p < 0.01$), and a significant difference in work motivation between public health nurses, etc. and certified social workers ($p < 0.05$).

1) Intensity and experience rate of workplace stress

A one-way ANOVA of workplace stress level was performed, and the results are shown in Table 3.

The results show that the total score for workplace stress was around 5 points higher for public health nurses, etc. (64.8) and chief managers (65.1) than certified social workers (59.1). By category, the top ranked workplace stressor intensity scores were for quantitative demands (1st, 2nd, and 5th place) and systemic demands (3rd, 4th, and 6th place). These were followed by dissatisfaction/anxiety toward career (8th place) and internal workplace factors (7th and 9th place), and dissatisfaction toward employee evaluation rating (10th place). Together, these are a measure of the characteristics of the occupational field.

In the experience rate, there were no big differences between professions for the higher ranked items, which were therefore common factors. However, differences between professions were found among the lower ranked items. Concentrating on differences of around 10%, public health nurses, etc. showed higher experience rates than certified social workers for the items “I cannot perform tasks that make use of my expertise” and “I cannot take my paid vacation.” Chief managers showed a higher experience rate than certified social workers in performing tasks from municipal governments, which are the insurers. Chief managers also showed a higher experience rate than the other two professions in guiding persons who entered the workplace later, from which it may be assumed that the position of senior manager is a leadership role within the support center. Overall, being busy at work was a strong stressor, and the stressor of problems with the long-term care

Table 2. Scores for each of the three occupations.

	Public health nurse (n = 583)	Certified social workers (n = 512)	Chief care managers (n = 504)	Total (n = 1,599)	
Workplace stress	64.8 ± 30.2	59.5 ± 27.6	65.1 ± 30.5	63.2 ± 29.6	□1
Workplace culture rating	64.7 ± 12.9	64.2 ± 13.0	64.6 ± 12.9	64.5 ± 12.9	
Work motivation	14.5 ± 3.2	15.0 ± 3.2	14.8 ± 3.2	14.8 ± 3.2	□2
Psychological well-being (GHQ)	15.5 ± 5.1	15.8 ± 5.3	15.9 ± 5.2	15.7 ± 5.2	
Sense of coherence,SOC	14.9 ± 3.0	14.8 ± 2.9	14.9 ± 3.1	14.9 ± 3.0	

□1 It is $p < 0.01$ among a community health nurse and a social worker, a chief care manager and social workers.
□2 It is $p < 0.05$ among a community health nurse and social workers.

Table 3. Intensity and experience rate of workplace stress factors for each of the three occupations.

	Total (n = 1,599)		Public health nurse (n = 583)		Certified social workers (n = 512)		Chief care managers (n = 504)	
	Intensity	Experience rate	Intensity	Experience rate	Intensity	Experience rate	Intensity	Experience rate
①The amount of work increases year by year.	3.44	92.2%	3.47	90.3%	3.26	90.3%	3.55	94.4%
②There are few assigned professionals for the amount of work.	3.34	83.4%	3.41	84.7%	3.22	80.1%	3.37	85.6%
③Every time the Long-term Care Insurance System changes, I have to adapt.	3.21	95.5%	3.30	96.0%	3.00	94.1%	3.31	96.4%
④I'm required to do administrative work relating to the Comprehensive Regional Care System.	3.20	93.4%	3.23	91.9%	2.94	92.5%	3.40	96.6%
⑤I have to manage all tasks by myself.	3.19	73.2%	3.21	74.2%	3.13	70.0%	3.23	75.4%
⑥A lot of knowledge and specialization is needed for the Long-term Care Insurance System.	2.99	96.6%	3.14	98.1%	2.80	95.9%	3.00	95.8%
⑦However hard I work, I don't feel a sense of accomplishment.	2.93	70.1%	2.93	71.4%	2.86	66.2%	3.00	71.9%
⑧There is no support organization that I can consult with.	2.91	71.8%	2.95	72.3%	2.88	70.9%	2.89	72.1%
⑨There is a lack of understanding about the work within my organization.	2.91	74.3%	3.01	74.9%	2.83	72.6%	2.85	75.4%
⑩I don't get paid enough for the work that I do.	2.89	69.2%	2.72	65.8%	3.04	71.2%	2.92	71.5%
⑪It's hard to request overtime pay.	2.83	62.4%	2.81	65.2%	2.85	59.3%	2.87	61.7%
⑫I have to work with unfriendly clients.	2.81	83.6%	2.80	83.8%	2.90	85.8%	2.74	81.1%
⑬My future career path is uncertain.	2.80	63.0%	2.80	60.0%	2.91	67.1%	2.69	62.3%
⑭Creativity and improvisation is constantly needed.	2.80	90.4%	2.84	90.3%	2.60	91.3%	2.95	89.8%
⑮Clients are subjected to unreasonable anger and attacks.	2.78	77.0%	2.74	76.3%	2.89	79.6%	2.72	75.3%
⑯Apart from core work, I also have to do administrative work for my organization.	2.77	71.8%	2.86	72.4%	2.55	71.7%	2.85	71.3%
⑰I work with self-confidence.	2.75	72.4%	2.78	74.0%	2.80	71.1%	2.69	71.8%
⑱Preventive care work has become central.	2.74	63.2%	2.81	63.4%	2.74	56.3%	2.67	69.8%
⑲My work responsibility has increased due to the retirement/resignation of more experienced employees.	2.74	40.4%	2.88	41.2%	2.64	37.6%	2.67	42.1%
⑳There are few opportunities for promotions or pay raises.	2.72	58.8%	2.57	53.3%	2.80	60.9%	2.81	62.8%
㉑I cannot make use of my specialization in my work.	2.70	66.1%	2.80	71.4%	2.51	59.4%	2.72	66.3%
㉒I am dissatisfied with the way my colleagues work.	2.60	63.8%	2.65	65.5%	2.58	59.3%	2.54	66.5%
㉓The workplace environment (noise, lighting, ventilation, etc.) is not good.	2.59	58.7%	2.68	59.9%	2.55	55.0%	2.52	61.7%
㉔I cannot take paid holidays.	2.58	51.2%	2.61	55.0%	2.50	42.3%	2.61	55.9%
㉕I cannot pursue my work using my own discretion.	2.54	69.0%	2.53	71.0%	2.41	65.2%	2.67	69.9%
㉖Accuracy is demanded; not even minor mistakes are tolerated.	2.46	65.0%	2.46	67.8%	2.30	60.3%	2.60	66.3%
㉗There are not enough opportunities for learning new work skills.	2.42	60.2%	2.57	61.4%	2.36	58.0%	2.31	61.2%
㉘We are frequently instructed to do administrative work by the local government/insurer.	2.35	51.2%	2.40	53.1%	2.16	45.2%	2.41	54.9%
㉙I cannot make use of my earlier work experience.	2.33	48.4%	2.48	54.4%	2.05	40.4%	2.36	48.9%
㉚We cannot take any initiatives in collaboration with the region.	2.33	68.9%	2.33	71.1%	2.33	66.1%	2.32	69.5%
㉛We cannot build relationships with the people from the region.	2.32	68.8%	2.23	68.2%	2.41	68.9%	2.36	69.7%
㉜I have to guide professionals who joined the workplace after me.	2.29	53.3%	2.35	49.8%	2.12	42.0%	2.36	68.3%
㉝Colleagues are concerned about their work in my field of specialization.	1.98	48.2%	2.05	47.0%	1.86	48.4%	2.04	49.0%
Workplace stress	63.2	64.8		59.5		65.1		

insurance system was experienced by many people, which was a common trend across all the professions.

By profession, public health nurses, etc. felt that they played a central role in insurance claim duties and they were in a position where small mistakes in claims would not be tolerated (26), and that they were unable to make use of their experience and expertise as nurses (21, 29). Because of this, they were unable to carry out their duties with pride (17). Certified social workers felt stress from individual support, perhaps because they were responsible for integrated consultations and protection of individual rights (12), and were intensely anxious about their futures and careers (13). Chief managers felt stress from carrying out tasks in which they led the other professions, perhaps because they often had a central role among the three professions (33).

2) Work motivation

For work motivation, five items related to attitude toward work were set and the total scores were calculated (score range 5–20), with higher scores indicating higher work motivation. A comparison among the three professions was then performed. Overall, certified social workers scored significantly higher, by 0.5 points, than public health nurses, etc. ($p < 0.05$). For the three items "I would like to continue in my present job for a long time," "I feel motivated in my present job," and "My present job is an important part of me," certified social workers scored significantly higher than public health nurses, etc.

3) Other

GHQ mental health level is a characteristic from which a person's mental state can be objectively understood. In the present study, measurement was carried out with 12 items. Each item was scored on a 4-point scale (0–3 points), and the total value was calculated (0–36 points). A higher score indicates poorer mental health, and the results showed a mean score of 15.72 (from the range 0–36). The mean for the general population is around 13, and a score over 15 is taken to indicate a need to refresh the mind. In the present study, mental health was somewhat poorer than the general population, reaching a level at which it would be desirable to refresh the mind [10, 11].

3. Analysis of relationships between variables

With degree of workplace stress taken as the dependent variable, three models were constructed: in model 1, the independent variables were the basic attributes of sex and age; in model 2, the independent variables were the workplace/work environment factors, i.e. management type, profession, mean number of hours sleep per day, monthly salary, number of overtime hours per month, number of free time hours per day, and number of cases respondent is responsible for; and in model 3, the independent variables were SOC ability to cope with stress, GHQ mental health level, workplace climate goodness, and work motivation. Sequential independent variables were then added. If, for example, the added independent variable was significantly higher in the model to which it was added, meaning that instead of having a relationship with the dependent variable, the independent variables that were significant in the model before the addition had decreased and were no longer significant, this would indicate the new finding or implication that the relationship between the independent and dependent variables in the previous model was an indirect relationship, mediated by the newly added variable. The results of this stepwise multiple regression analysis carried out by profession are shown in Tables 5–7.

1) Public health nurses, etc.

Workplace stress worsened when the management type was contract-type, there were overtime hours, the workplace climate goodness was poor, work motivation was low, and GHQ

Table 4. Work motivation.

	Public health nurse (n = 583)	Certified social workers (n = 512)	Chief care managers (n = 504)	Total (n = 1,599)	
I want to continue at my job for a long time	2.61	2.79	2.67	2.68	**
I am enthusiastic about my job	2.79	2.92	2.85	2.85	*
I'm doing socially important work in this job	3.50	3.54	3.52	3.52	
My work is an important part of my life	2.87	2.99	2.98	2.95	*
My job is interesting	2.70	2.80-	2.75	2.75	

** $p < 0.01$, * $p < 0.05$.

mental health level was poor.

2) Certified social workers

Workplace stress was reduced when free time per day was 1–2 hours or 2–3 hours, and workplace stress worsened when the number of care prevention plans for which the respondent was responsible was 40–49 persons or ≥80 persons, the workplace climate goodness was poor, work motivation was low, and GHQ mental health level was poor.

3) Chief managers

Workplace stress worsened when the management type was contract-type, the number of care prevention plans for which the respondent was responsible was 60–69 persons, the workplace climate goodness was poor, and GHQ mental health level was poor.

4. How the three professions regard the community comprehensive care system

Questions were asked about how the three professions regard the community comprehensive care system. The six questions in the first half were positive questions about the care system being promoted as a policy trend of the national government, and the six questions of the second half were negative questions. The results are shown in Table 8.

Overall, about 50% of respondents answered "Strongly agree" or "Agree" to four out of the five items in the first half that took a forward-looking attitude toward the care system. However, in response to whether they could feel it was more worthwhile than they had felt so far, approx. 50% responded "Neither agree nor disagree." Approximately 80% responded that they felt they were given new duties, over 60% expressed anxiety over the community care council and over their confidence in their own ability to work to the requirements of the Ministry of Health, Labour and Welfare, and over 50% did not know specifically what they should do.

By profession, the score for public health nurses was significantly different from the scores of chief managers and certified social workers for "I have no confidence in my ability to work to the requirements of the Ministry of Health, Labour and Welfare" ($p < 0.05$), but otherwise no differences were found. This shows a situation in which the members of the three professions collaborated with each other because they lacked self-confidence, and they approached their work through a process of trial and error.

Discussion

The purpose of this study was to clarify the current status of occupational stress derived from the workplace environment among three

Table 5. Multiple regression analysis (public health nurse).

			Dependent variable: Workplace stress		Model 1		Model 2		Model 3	
			Independent variables		Standardized coefficient β	p-value	Standardized coefficient β	p-value	Standardized coefficient β	p-value
		Model 1	Sex	Men (ref.)						
				Women	.068	.127	.070	.102	.026	.473
			Age (years)	≤ 29 (ref.)						
				30 – 34	-.035	.560	-.044	.458	-.022	.648
				35 – 39	.031	.648	-.049	.457	-.001	.988
				40 – 44	-.110	.127	-.171	.017	-.144	.016
				45 – 49	.010	.892	-.093	.186	.012	.838
				50 – 54	-.002	.977	-.110	.117	-.007	.909
				55 – 59	.032	.601	-.013	.831	.040	.433
				≥ 60	-.195	.001	-.209	.000	-.103	.026
	Model 2		Management style	Contract (ref.)						
				Direct gov.			-.100	-.028	-.116	.002
			Hours of sleep	≤ 5 (ref.)						
				5 – 6			-.054	.442	.035	.554
				6 – 7			-.132	.065	-.014	.809
				7 – 8			-.148	.014	-.038	.454
				≥ 8			-.074	.111	-.020	.603
			Free hours	0 (ref.)						
				0 – 1			-.039	.511	-.041	.407
				1 – 2			-.137	.028	-.117	.024
				2 – 3			-.099	.083	-.081	.088
				3 – 4			-.037	.446	-.074	.065
				4 – 5			-.064	.143	-.028	.441
				≥ 5			-.068	.135	-.105	.005
				Uncertain			-.115	.009	-.092	.012
			Overtime hours (per month)	0 (ref.)						
				0 – 5			.300	.001	.233	.001
				5 – 15			.311	.000	.238	.001
				15 – 25			.414	.000	.296	.000
				25 – 35			.214	.001	.171	.001
				35 – 45			.263	.000	.185	.000
				45 – 55			.238	.000	.175	.000
				≥ 55			.254	.000	-.183	.000
			No. of clients	0 (ref.)						
				1 – 9			.010	.873	.079	.127
				10 – 19			-.023	.707	-.018	.727
				20 – 29			-.027	.636	.028	.554
				30 – 39			.050	.353	.036	.418
				40 – 49			.094	.053	.109	.007
				50 – 59			.035	.431	.049	.186
				60 – 69			.024	.578	.024	.513
				70 – 79			.029	.486	.007	.843
				≥ 80			.013	.761	.030	.405
Model 3			SOC						-.015	.709
			Workplace culture rating						-.280	.000
			Work motivation						-.127	.002
			GHQ						.292	.000
			R-squared value		.427					

Table 6. Multiple regression analysis (Certified social workers).

			Dependent variable: Workplace stress		Model 1		Model 2		Model 3	
			Independent variables		Standardized coefficient β	p-value	Standardized coefficient β	p-value	Standardized coefficient β	p-value
		Model 1	Sex	Men (ref.)						
				Women	-.024	.609	-.005	.912	-.038	.290
			Age (years)	≤ 29 (ref.)						
				30 – 34	.002	.968	-.032	.605	-.013	.785
				35 – 39	.029	.646	-.027	.655	.022	.641
				40 – 44	.061	.310	.019	.750	.043	.348
				45 – 49	.095	.081	.051	.330	.051	.203
				50 – 54	-.010	.856	-.068	.190	-.024	.553
				55 – 59	.003	.955	-.011	.815	-.010	.787
				≥ 60	-.125	.009	-.108	.022	-.047	.194
		Model 2	Management style	Contract (ref.)						
				Direct gov.			-.056	.249	-.064	.085
			Hours of sleep	≤ 5 (ref.)						
				5 – 6			.016	.825	.078	.166
				6 – 7			-.095	.201	.016	.789
				7 – 8			-.140	.026	.003	.956
				≥ 8			-.034	.468	.008	.834
			Free hours	0 (ref.)						
				0 – 1			-.099	.115	-.079	.101
				1 – 2			-.078	.250	-.059	.260
				2 – 3			-.175	.005	-.143	.003
				3 – 4			-.253	.000	-.208	.000
				4 – 5			-.073	.143	-.025	.512
				≥ 5			-.029	.536	-.043	.240
				Uncertain			-.025	.597	-.030	.408
			Overtime hours (per month)	0 (ref.)						
				0 – 5			.015	.246	.098	.159
				5 – 15			.258	.005	.189	.008
				15 – 25			.247	.003	.231	.000
				25 – 35			.131	.042	.074	.135
				35 – 45			.114	.049	.086	.051
				45 – 55			.108	.031	.032	.405
				≥ 55			.105	.050	.090	.027
			No. of clients	0 (ref.)						
				1 – 9			.007	.910	.005	.917
				10 – 19			.103	.097	.068	.154
				20 – 29			.096	.113	.092	.048
				30 – 39			.054	.345	.049	.260
				40 – 49			.119	.022	.122	.002
				50 – 59			-.076	.112	-.018	.672
				60 – 69			.016	.728	.040	.252
				70 – 79			.005	.919	-.007	.838
				≥ 80			.068	.148	.071	.047
	Model 3		SOC						.022	.558
			Workplace culture rating						-.255	.000
			Work motivation						-.151	.000
			GHQ						.378	.000
			R-squared value		.490					

Table 7. Multiple regression analysis (chief care managers).

			Dependent variable: Workplace stress		Model 1		Model 2		Model 3	
			Independent variables		Standardized coefficient β	p-value	Standardized coefficient β	p-value	Standardized coefficient β	p-value
Model 3	Model 2	Model 1	Sex	Men (ref.)						
				Women	-.040	.416	-.045	.363	-.011	.785
			Age (years)	≤ 39 (ref.)						
				40 – 44	.120	.112	.136	.071	.111	.075
				45 – 49	.127	.106	.112	.151	.099	.129
				50 – 54	.202	.017	.187	.027	.122	.083
				55 – 59	.116	.147	.132	.102	.089	.182
				≥ 60	-.031	.645	-.011	.876	-.021	.708
			Management style	Contract (ref.)						
				Direct gov.			-.120	.015	-.089	.028
			Hours of sleep	≤ 5 (ref.)						
				5 – 6			-.057	.438	.006	.918
				6 – 7			-.094	.211	.002	.976
				7 – 8			-.123	.033	-.064	.184
				≥ 8			-.100	.037	-.040	.311
			Free hours	0 (ref.)						
				0 – 1			.004	.956	.050	.453
				1 – 2			-.070	.405	-.015	.834
				2 – 3			-.077	.329	-.024	.716
				3 – 4			-.086	.164	-.059	.244
				4 – 5			-.069	.186	-.057	.187
				≥ 5			.071	.167	.053	.209
				Uncertain			-.049	.338	-.010	.816
			Overtime hours (per month)	0 (ref.)						
				0 – 5			.048	.608	.016	.839
				5 – 15			.179	.073	.122	.139
				15 – 25			.222	.016	.132	.084
				25 – 35			.165	.026	.102	.098
				35 – 45			.178	.010	.094	.100
				45 – 55			.062	.244	.042	.337
				≥ 55			.144	.033	.070	.219
			No. of clients	0 (ref.)						
				1 – 9			-.007	.930	-.010	.884
				10 – 19			-.023	.788	-.046	.516
				20 – 29			.078	.343	.042	.539
				30 – 39			-.012	.883	-.014	.836
				40 – 49			-.035	.581	-.038	.466
				50 – 59			.041	.460	.037	.428
				60 – 69			-.033	.500	-.044	.295
				70 – 79			-.085	.083	-.131	.001
				≥ 80			.026	.612	-.022	.605
			SOC						.074	.077
			Workplace culture rating						-.261	.000
			Work motivation						-.066	.156
			GHQ						.382	.000
			R-squared value		.382					

Table 8. Results for each of the three occupations of the Comprehensive Regional Care System.

		Very true	True	Cannot say	Not so true	Not true at all		p-value
①Healthcare, nursing care, preventive care, housing, living support are all provided.	Public health nurse	80 (13.9%)	228 (39.7%)	185 (32.2%)	67 (11.7%)	14 (2.4%)	N.S.	.150
	Certified social worker	63 (12.6%)	162 (32.3%)	184 (36.7%)	76 (15.2%)	16 (3.2%)		
	Chief care managers	65 (13.2%)	165 (33.6%)	166 (33.8%)	81 (16.5%)	14 (2.9%)		
②Elderly can live in the communities they are used to until the end of life, with dignity and individuality.	Public health nurse	92 (15.9%)	225(38.9%)	192 (33.2%)	58 (10.0%)	11 (1.9%)	N.S.	.167
	Certified social worker	93 (18.4%)	176 (34.8%)	166 (32.8%)	62 (12.3%)	9 (1.8%)		
	Chief care managers	77 (15.5%)	160 (32.1%)	175 (35.1%)	71 (14.3%)	15 (3.0%)		
③Service can be provided with local characteristics, based on local autonomy and independence.	Public health nurse	50 (10.9%)	220 (38.3%)	203 (35.4%)	74 (12.9%)	18 (3.1%)	N.S.	.106
	Certified social worker	64 (12.6%)	168 (33.1%)	166 (32.7%)	93 (18.3%)	16 (3.2%)		
	Chief care managers	57 (11.6%)	158 (32.1%)	167 (33.9%)	95 (19.3%)	15 (3.0%)		
④The collaboration between different occupations at Community General Support Centers can be improved.	Public health nurse	61 (10.6%)	240 (41.5%)	211 (36.5%)	56 (9.7%)	10 (1.7%)	N.S.	.505
	Certified social worker	64 (12.7%)	190 (37.6%)	191 (37.8%)	47 (9.3%)	13 (2.3%)		
	Chief care managers	43 (8.6%)	216 (43.4%)	184 (36.9%)	46 (9.2%)	9 (1.8%)		
⑤My work satisfaction is likely to increase over time.	Public health nurse	29 (5.1%)	161 (28.0%)	283 (49.3%)	80 (13.9%)	21 (3.7%)	N.S.	.111
	Certified social worker	43 (8.5%)	127 (25.0%)	252 (49.7%)	64 (12.6%)	21 (4.1%)		
	Chief care managers	23 (4.6%)	113 (22.8%)	265 (53.4%)	76 (15.3%)	19 (3.8%)		
⑥Local governments have a clear vision about the Comprehensive Regional Care System	Public health nurse	39 (8.8%)	95 (16.5%)	217 (37.7%)	143 (24.8%)	82 (14.2%)	N.S.	.051
	Certified social worker	55 (10.8%)	63 (12.4%)	156 (30.7%)	150 (29.5%)	84 (16.5%)		
	Chief care managers	43 (8.6%)	73 (14.6%)	178 (35.7%)	131 (26.3%)	74 (14.8%)		
⑦Local governments have a determined approach to the Comprehensive Regional Care System.	Public health nurse	46 (8.0%)	172 (29.9%)	186 (32.3%)	110 (19.1%)	62 (10.8%)	N.S.	.109
	Certified social worker	57 (11.2%)	121 (23.8%)	149 (29.3%)	128 (25.2%)	53 (10.4%)		
	Chief care managers	45 (9.0%)	133 (26.7%)	157 (31.5%)	104 (20.8%)	60 (12.0%)		
⑧Newwork responsibilities are increasing.	Public health nurse	260 (45.3%)	230 (40.1%)	73 (12.7%)	9 (1.6%)	2 (0.3%)	N.S.	.176
	Certified social worker	201 (39.6%)	209 (41.2%)	78 (15.4%)	14 (2.8%)	5 (1.0%)		
	Chief care managers	222 (44.6%)	211 (42.4%)	52 (10.4%)	11 (2.2%)	2 (0.4%)		
⑨I doubt that local care meetings can be conducted well.	Public health nurse	165 (28.6%)	244 (42.4%)	127 (22.0%)	33 (5.7%)	7 (1.2%)	N.S.	.146
	Certified social worker	150 (29.6%)	196 (38.7%)	105 (20.8%)	41 (8.1%)	14 (2.8%)		
	Chief care managers	142 (28.5%)	202 (40.6%)	96 (19.3%)	50 (10.0%)	8 (1.6%)		
⑩For me, this job is not much different than my previous job.	Public health nurse	10 (1.7%)	70 (12.2%)	168 (29.4%)	181 (31.6%)	143 (25.0%)	N.S.	.369
	Certified social worker	7 (1.4%)	49 (9.6%)	151 (29.7%)	176 (34.6%)	125 (24.6%)		
	Chief care managers	7 (1.4%)	54 (10.8%)	173 (34.7%)	163 (32.7%)	101 (20.3%)		
⑪I am not confident in performing this work in the way that the Ministry of Health, Labour and Welfare wants.	Public health nurse	164 (28.4%)	217 (37.6%)	171 (29.6%)	21 (3.6%)	4 (0.7%)	□	.041
	Certified social worker	132 (26.0%)	183 (36.0%)	172 (33.9%)	14 (2.8%)	7 (1.4%)		
	Chief care managers	122 (24.5%)	183 (36.7%)	158 (31.7%)	33 (6.6%)	2 (0.4%)		
⑫I don't know what needs to be done precisely.	Public health nurse	137 (24.0%)	199 (34.8%)	171 (29.9%)	57 (10.0%)	8 (1.4%)	N.S.	.053
	Certified social worker	124 (24.5%)	184 (36.4%)	140 (27.7%)	44 (8.7%)	14 (2.8%)		
	Chief care managers	93 (18.8%)	176 (35.6%)	151 (30.5%)	68 (13.7%)	7 (1.4%)		

Pearson's chi-squared test. * $p < 0.05$

professions in support centers, and by means of a comparative investigation of the various different questionnaire items, to obtain suggestions for improvement.

The results of the survey clarified the following points:

(1) Work stress increased with higher intensity and experience rate of stressors with quantitative and systemic causes. In the totals, certified social workers scored the lowest.
(2) For work motivation, certified social workers scored higher than the other two professions on all items.
(3) The items that affect the level of workplace stress were clarified for each profession.
(4) For the care system, no major differences were found between the professions. This shows a situation of the three professions addressing their work as a whole.

For workplace stress, quantitative and systemic factors were major common factors. This shows the characteristic that the work will continue to be affected by future revisions to the long-term care insurance system. This is an unavoidable environment/situation that individual professionals are unable to control through their own endeavors. Such workplace stress cannot be readily improved or reduced, and is thus an issue that is very difficult to address.

By profession, public health nurses, etc. had greater experience than the other two professions in “I cannot perform tasks that make use of my expertise” and “I cannot make use of the work experience I have had so far.” It may be conjectured that this is the effect of changes in the law requiring support centers to handle care prevention and services supporting everyday life, which are areas that personnel are unable to address by leveraging their experience. Conversely, it may be conjectured that while chief managers are expected to perform comprehensive, continuous care management services from the beginning and are therefore able to construct care systems, they also have a managerial role within the support center of guiding persons who entered the workplace later. Certified social workers do not receive education that gives them the practical skills needed to carry out support center duties during the current social worker training program. Consequently, it may be conjectured that unlike the other professions, they are in an environment where they are expected to carry out community work at the front line and can only learn through practical experience.

Of interest here are the differences in the level of workplace stress between chief care managers (65.1%), public health nurses, etc. (64.8%), and certified social workers (59.5%). On the basis of the results of the present study and of experience since the establishment of support centers, the author considers the tasks carried out by the professionals at these centers to be very important, and sees a need to put in place an environment that will reduce the number of people leaving employment and ensure continued employment. The rate at which people leave employment at support centers can be estimated from the 2016 “Report on the research project into effective management of comprehensive support services and optional services in community-based support”, published by the Mitsubishi Research Institute, Inc. For the number of people leaving employment by profession, responses were received from 4,685 locations in FY 2015, and the total number of persons leaving employment for all professions, including care support specialist staff and other staff in addition to the three professions in the present study, was 4,638. By simple calculation, this works out roughly at one employee lost per support center in a single year.

Furthermore, dividing the number of persons leaving employment by the total number of persons employed in the three professions gives an employment turnover rate for support centers of 15.1%. This is roughly the same as the general

employment turnover rate for all industries in FY 2015, although it is slightly higher than the 14.7% turnover rate in the medical/welfare sector [12]. However, while the employment turnover rate in the medical/welfare sector decreased from 15.7% to 14.7% from 2014 to 2015, it rose from 14.3% to 15.1% in support centers during the same period. It may therefore be conjectured that the work environment is such that continuous employment is becoming increasingly difficult.

Looking at the ratio of turnover rate/total number of employees for different professions [13], for public health nurses, etc. the ratio was 1,140/7,123 (16.0%) in FY 2014 and 1,277/7,599 (16.8%) in FY 2015; for certified social workers the ratio was 1,032/7,105 (14.5%) in FY 2014 and 1,176/7,884 (14.9%) in FY 2015; and for chief managers the ratio was 625/5,382 (13.3%) in FY 2014 and 777/5,829 (13.3%) in FY 2015. Thus, the highest turnover rate is for public health nurses, etc. and the lowest is for chief managers.

Focusing here on workplace stress and the employment turnover rates from the present study, the figures imply that the degree of workplace stress may not affect the employment turnover rate. So what is the cause of employment turnover? One possibility is the effect of the processes and training systems to date since the establishment of the qualified professions. The qualification of senior manager has the shortest history of the three professions, but it requires a certain level of work experience as a care support specialist, and as it is a requirement for receipt of the designated service center supplement, it is directly linked to the income of the center or organization. In addition, as well as specialist training and training for renewal of qualification as a care support professional, the qualification also requires taking senior manager training for renewal of qualification as a senior manager in order to respond to revisions to the care system, etc. In other words, the senior manager is the only qualification with opportunities officially established to acquire the skills to respond to the workplace stressor of increased burden of new duties, which is a stressor that appears in the study results. With the other two professions, a person cannot receive specialist training without joining a professional body, and a system of training similar to that of the senior manager is therefore needed. It is likely that this issue of training has a major impact on stress.

Public health nurses, etc. hold national qualifications and work in numerous medical settings, the support center being a new setting for practical work. The basic attributes of the present study indicate that many public health nurses, etc. have long working experience in other jobs, and they carry out their duties in various different institutions and facilities. They therefore have opportunities to demonstrate their potential outside the support center.

In the case of certified social workers, however, the support center is the only institution with a mandatory requirement under the present system to have a social welfare worker. This means that the social welfare worker differs greatly from other professions in that these others have opportunities to demonstrate their expertise without working at a support center. As a result of the establishment of support centers, certified social workers gained fields, albeit rather limited, in which to use their expertise, such as application of the adult guardianship system or responding to abuse. With regard to responding to new duties, there is the problem of the training system, whereby a person cannot receive specialist training without joining a professional body. Also, many professionals are relatively young, and work motivation is high. It is likely that these factors affect the employment turnover.

Creating a work environment that allows continuous employment of professionals is also important from the perspective of building a care system. This is because the resignation of professionals hinders the accumulation

of expertise, and as the community is built on interpersonal and inter-organizational relationships, resignation of professionals erodes mutual trust between the community and the support center. Just as building interpersonal relations of trust requires time, building the relationship of trust between the community and the support center involves various different factors, such as the trust between individuals and the support center and the cooperation of the support center's parent body, and cannot be done in a day. A support center with a repeated pattern of professionals soon resigning cannot gain the trust of the community, and in this sense, continuous employment is essential.

From this perspective, it is necessary to ensure an appropriate personnel system suited to the workload and the working roles. However, in the present study the workplace stressor "The number of professional staff is low in comparison to the workload" was felt strongly overall, and showed a high experience rate. If the work consisted only of tasks such as creating care prevention plans, in which workload can be measured in terms of the number of cases, then the workload could be decreased simply by increasing the number of staff. However, the care system has aspects that are greatly influenced by the character and quality of the professionals themselves, and by the relationship of trust with the community. Therefore, it is not necessarily the case that increasing the number of people will reduce the workload. The provision of a high quality service requires improvements in securing and dealing with human resources in support centers, and depends on revisions to the system to guarantee specific financial resources.

In conclusion, while policy measures are needed, the insurers, or the contracting organizations in the case of contract-type support centers, must have a clear awareness of the problems. In the case of contract-type support centers in particular, some aspects of the official responsibilities are vague. This can lead to situations in which it is not clear who has the responsibility to reduce the workplace stress of professionals, and whether this is the responsibility of the site itself or not. However, it is not the purpose of the present study to pin responsibility onto the insurer. The desire of the present study is to act as a basic reference for the current situation that policy measures are required, and as such to advocate the need for a solution to this problem.

The premise of this study was that the subjects would be individual professionals, with one to three responses received from each site. Thus, care needs to be taken in interpreting the results, as they do not represent one response per site. In addition, an issue for future work is that a quantitative survey on a single occasion is not sufficient, and there is a need for follow-up surveys. The results of the comparative investigation between management types based on the data obtained in this study are to be published in a separate paper.

Conclusion

1. The status of workplace stress in the three professions was specifically and objectively clarified.
2. It was clarified that workplace stress, which is a cause of occupational stress, is strongly regulated by workplace stressors and there are numerous systemic and quantitative causes.
3. No association was found between the amount of workplace stress and the actual employment turnover by profession. This was believed to be due to the effects of the qualification and training systems for each profession.

Acknowledgements

The author would like to thank Professor Toyoharu Yokoyama of the Niigata University of Health and Welfare Graduate School, and all of

the subjects who participated in this study.

Conflicts of interest

There are no potential conflicts of interest to disclose.

References

1. Protracted-life society development center. Basic working papers about the way of the local inclusion support center(Subsidy business such as old man health promotion books). 2006;14□71. (in Japanese)
2. Ministry of Health, Labour and Welfare. Rearranging of the argument by the nursing care insurance sectional meeting. Council for the 35th social security nursing care insurance sectional meeting document.2010;7 - 8. (in Japanese)
3. Mitsubishi Research Institute. Business such as Mr. subsidy health health increases such as 2014 old man health business promotion costs Research business report about the duties actual situation in the local inclusion support center. 2013;147-154. (in Japanese)
4. Makita K, Sakai S, Kato Y. Study about works Torres of the local inclusion support center employment staff.Psychological trauma study. 2008;4:49-60. (in Japanese)
5. Mochizuki S. The actual situation of the occupational stress to be seen in the employment of the local inclusion support center. Yamanashi University nursing science bulletin 2011;9-2:33-40. (in Japanese)
6. Yamaguchi Y. Association between present conditions of the duties in the local inclusion support center and personal characteristic, labor circumstances and occupation stress. Industrial hygiene magazine.2010;52:111□122. (in Japanese)
7. Ishikawa H, Matuoka K,Yamato M, Sawada Y. Study on burning actual situation with it of the employment of the local inclusion support center. Old age social science. 2012; 34(2):209. (in Japanese)
8. Sawada Y , Ishikawa H , Oowa M , Matuoka K. if "is with the burning of the employment of the local inclusion support center study on social support" of "the public welfare, in index" Vol. 61 sixth, June.2014;26-32. (in Japanese)
9. Yamazaki K , Togari T , Tokyo University health sociology. healthy pedagogy net from the same school Medical IT industry worker research group. It is working papers for the making of labor workplace environmental research - health workplace of the medical IT industry worker. 2012;3. (in Japanese)
10. Nakagawa Y, Daibo I. GHQ mind health questionnaire for Japan. Japanese culture science company. 2013. (in Japanese)
11. Yamazaki K, Asakura T edition. Health science (the fifth edition) as the way of life. Yushindo. 2011;6-7. (in Japanese)
12. Ministry of Health.Summary of the 2015 employment pulse-taking result. Available from : http://www.mhlw.go.jp/toukei/itiran/roudou/koyou/doukou/16-2/dl/gaikyou.pdf. (accessed April 18, 2018)
13. Mitsubishi Research Institute. Research business report about effective administration in the inclusion support project of the local support project and the arbitrary business. 2016;162. (in Japanese)