

Job Stress and Mental Health of Child-Counseling Office Workers

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Abstract: Job Stress and Mental Health of Child-Counseling Office Workers: Nobuaki MORITA, et al. Graduate School of Comprehensive Human Sciences, Doctoral Program in Human Sciences, University of Tsukuba—In Japan, consultations concerning child abuse cases are increasing rapidly, and the mental health of child-counseling office workers, who must deal with them, has emerged as an issue. To measure the state of mental health of these workers, and to clarify the characteristics of their job-related stress, we sent a questionnaire to 69 workers of child-counseling offices in Ibaraki Prefecture and obtained responses from 45. (1) Their job environment was characterized as high demand/low control/low reward. (2) The mean score of GHQ-12 of the subjects was 5.9 ± 3.6 , indicating a very poor state of mental health. (3) Stress due to physical and verbal assaults by the parties involved in the cases and the psychological burden of intervention were found to be related to their poor mental health. Along with measures to prevent such assaults, training in intervention techniques, supervision, and care for psychological trauma are needed for child-counseling office workers.

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Key words: Child abuse, Child-counseling office, Job stress, Mental health

It has been reported in Western countries that Child Protection Services workers tend to burn out or change jobs due to intense stress caused by an unmanageable workload and hostile responses from the parents of the children^{1–3}. Similarly, in Japan the number of consultation cases accepted at child-counseling offices (CCOs) increased 20-fold between 1990 and 2001⁴, child protection workers became overloaded, and the deterioration of their mental health has become an issue⁵.

Takahashi *et al.*⁶ performed MBI (Maslach's Burnout Inventory)⁷ in child protection workers at CCOs across Japan and reported that many of them were burned out.

Japanese studies concerning job-related stress have been carried out primarily in hospital nurses, and the reports to date have been generally consistent in that many nurses were psychologically exhausted⁸. In addition, a job demand-control model⁹, an effort-reward imbalance model¹⁰, and the NIOSH (National Institute for Occupational Safety and Health) model¹¹ have been used to clarify the characteristics of job-related stress in various occupational groups, and factors of stress have been analyzed^{12,13}. Unlike Western countries, studies of job-related stress in child welfare organizations have just begun in Japan, and detailed evaluations have not been carried out. We previously investigated and reported the difficulties and needs of CCO workers that might be stressors¹⁴. In this study, we analyzed job stress and mental health using psychological tests and analyzed the relationship among practical needs, job stress and mental health in order to clarify the characteristics of the job environment of CCOs, and how they affect the mental health of child protection workers.

Methods

Subjects and procedure

As a preliminary study, we conducted interviews of the needs concerning workers at all CCOs in Ibaraki Prefecture from August to October, 2001, and a questionnaire was prepared based on the results obtained. This questionnaire was mailed to the 5 CCO facilities in Ibaraki Prefecture and was distributed to all workers, excluding those on leaves of absence from work and those employed on a part-time basis, at each facility. The total number of workers who received the questionnaire was 69. We knew the number of workers in each facility based on the previous interview, but did not obtain their personal details at that time. In the questionnaire, all the subjects remained anonymous. Along with the objectives of the survey, it was stated on the questionnaire that the respondents' privacy would be protected. The

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Table 1. Sample characteristics

		Case worker		Psychologist		Clerk		Total	
		N	%	N	%	N	%	N	%
Sex	Male	17	85	2	33.3	8	42.1	27	60.0
	Female	3	15	4	66.7	11	57.9	18	40.0
Age	20–29	0	0	2	33.3	5	26.3	7	15.6
	30–39	7	35	2	33.3	0	0.0	9	20.0
	40–49	9	45	1	16.7	7	36.8	17	37.8
	50+	4	20	1	16.7	7	36.8	12	26.7
School education	High school	4	20	0	0.0	5	26.3	9	20.0
	University	14	70	5	83.3	9	47.4	28	62.2
	Graduate school	1	5	1	16.7	2	10.5	4	8.9
	Others	1	5	0	0.0	3	15.8	4	8.9
Marital status	Single	4	20	2	33.3	4	21.1	10	22.2
	Married	16	80	4	66.7	15	78.9	35	77.8
Number of years with the CCO (without previous career)	0–1yr	8	40.0	2	33.3	11	57.9	21	46.7
	2–3 yr	8	40.0	2	33.3	3	15.8	13	28.9
	4–5 yr	3	15.0	1	16.7	2	10.5	6	13.3
	6–7 yr	1	5.0	1	16.7	2	10.5	4	8.9
	7+ yr	0	0.0	0	0.0	1	5.3	1	2.2
Number of years with the CCO (including previous career)	0–1yr	7	35.0	1	16.7	10	52.6	18	40.0
	2–3 yr	6	30.0	1	16.7	2	10.5	9	20.0
	4–5 yr	5	25.0	1	16.7	3	15.8	9	20.0
	6–7 yr	2	10.0	1	16.7	3	15.8	6	13.3
	7+ yr	0	0.0	2	33.3	1	5.3	3	6.7

questionnaire was completed, and sent back by the subjects who consented to the survey in writing. The survey period was March 10–31, 2002.

Responses were obtained from 45 workers with a recovery rate of 65.2%. The sample characteristics are summarized in Table 1. The subjects consisted of 27 males and 18 females. The subjects' ages were most frequently in the 40's, followed by the 50's; most had attended college. Most of the subjects had worked at a CCO for one or less years, regardless of whether past work history was included or not.

Measurements

(1) Job stress

The perceived job stress was assessed by the 20-item job stress questionnaire developed by Nishikido *et al.*¹⁵⁾ This questionnaire consists of questions that are appropriate for white-collar workers in general. Answers to each question are scored 1–4, and the mean score is calculated for each of the 6 scales of “workload”, “mental workload”, “job control”, “problem in personal relationship”, “support from colleagues and superiors”, and “reward from work”. It has been reported that these

scales have a high level of internal consistency and validity¹⁵⁾.

(2) State of mental health

In this study, the state of mental health of the subjects was measured using a 12-item version of the General Health Questionnaire (GHQ-12) developed by Goldberg¹⁶⁾. Its Japanese version was prepared and standardized by Nakagawa¹⁷⁾. For screening of psychiatric disorders using the Japanese version of GHQ-12, three of four has been reported to be appropriate as the cut-off point, a score of 4 or above indicating a problematic state of mental health¹⁸⁾. The reliability and validity of the Japanese version of GHQ-12 has been confirmed¹⁹⁾.

(3) Job environment

i) Contents of work: The job category was characterized. The subjects were divided into two groups: those involved in intervention and assessment of cases, and those who were mainly engaged in counter services and deskwork.

ii) Number and types of cases handled by the workers:

The caseload and the experience of being physically and verbally abused were examined. A caseworker takes charge of a case for various problems, such as delinquency, developmental disorder or child abuse. Recently, some workers have begun working as specialists in child abuse. Psychologists take charge of the children who need psychological assessment and psychotherapy. Clerks do not work directly with cases, but they do work with abusive parents or children through windows or telephones.

(4) Difficulties and needs that the workers felt

We prepared questions concerning perceived difficulties and needs of CCOs workers. The subjects were asked to answer each question by choosing one response from among “false”, “relatively false”, “relatively true”, and “true”. The questions include the sense of burden, needs for increasing the staff, management of the facility, training and supervision, collaboration with related organizations, equipment, and workplace motivation.

Data analysis

The mean \pm s.d. of the scores of the job stress questionnaire and GHQ-12 were calculated. The mean value of each scale was compared between the subgroups established according to demographic data and the job environment using one-way ANOVA. Correlation analysis between these two scales and among the subscales of the job stress questionnaire was carried out using Pearson's r . In addition, Spearman's correlation coefficients between the answers concerning difficulties/needs at the workplace and the GHQ-12 score and the scores of the job stress questionnaire were calculated. Multiple logistic regression analysis was performed using the 2 groups established according to the GHQ-12 score as the dependent variables. Statistical analyses were carried out using SPSS11.0J for Windows.

Results

Job stress questionnaire score

Table 2 shows the job stress scores of the subjects (mean \pm SD) and the scores of past studies as references^{8, 15, 21}. The result of the job stress scores for “workload” and “mental workload” of all subjects in this study were higher than the scores obtained using the same questionnaire in male employees of an information processing company¹⁵, researchers, technicians, and clerical workers at Tsukuba Research Park City^{20, 22}, and were comparable to the scores in hospital nurses working on triple shifts⁸. In contrast, the scores for “job control” and “reward from work” were the lowest among the above occupational groups.

The correlation among the scales of job stress was examined by Pearson's r . Significant positive correlations were observed between “workload” and “mental workload” ($r=0.357$, $p<0.05$), between “support from colleagues and superiors” and “job control” ($r=0.325$, $p<0.05$), and between “reward from work” and “job control” ($r=0.498$, $p<0.01$). In addition, a significant negative correlation was observed between “support from colleagues and superiors” and “problems in personal relationship” (-0.413 , $p<0.05$).

The job stress scores were compared among the subgroups established according to demographic data and the job factors (Table 3). A significant difference was observed between males and females only in “mental workload”, the score of which was significantly higher in males than in females (ANOVA, $p<0.01$). No significant difference was observed according to age, educational background, or marital status. The scores of “workload” and “mental workload” were significantly higher in the intervention/assessment group than in the counter/desk work group (ANOVA, $p<0.01$). In the group with experience of physical or verbal abuse by a party to a case, the scores of “workload” and “problems in personal relationship” were significantly higher than in the group with no experience of physical or verbal abuse

Table 2. Scores of job stress questionnaire

	Subjects N=45		Ref. 1 N=178		Ref. 2 N=223		Ref. 3 N=5,385	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Workload	2.6	0.8	2.6	0.6	2.3	0.8	2.5	0.8
Mental workload	2.9	0.8	2.9	0.7	2.3	0.7	2.4	0.6
Job control	2.2	0.7	2.4	0.5	2.6	0.6	2.7	0.7
Problem in personal relationship	1.9	0.7	3.0	0.7	1.9	0.6	2.1	0.8
Support from colleague and superiors	2.7	0.5	2.2	0.6	2.7	0.6	2.6	0.8
Reward from work	2.3	0.8	2.4	0.6	2.3	0.7	2.7	0.7

Ref. 1: Nurses of a hospital in Japan⁸. Ref. 2: Male workers of an information company¹⁵. Ref. 3: Workers of a research institute at a research park in Japan²⁰.

Table 3. Comparison of mean job stress scores among subgroups classified by demographic and job factors

	Workload		Mental workload		Job control		Problem in personal relationship		Support from colleague and superiors		Reward from work					
	N	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
Sex	27	2.7	0.8	3.2	0.7	**	2.2	0.7	1.9	0.6	2.7	0.6	2.3	0.8		
	18	2.5	0.8	2.5	0.8		2.2	0.7	2.0	0.8	2.7	0.6	2.4	0.7		
Age group	7	2.4	1.0	2.8	0.8		1.9	0.7	2.5	0.9	2.6	0.5	2.2	0.8		
	9	2.9	0.7	3.6	0.6		2.2	0.6	2.0	0.7	2.8	0.6	2.2	0.8		
	17	2.9	0.8	2.7	0.9		2.2	0.7	1.9	0.6	2.7	0.6	2.5	0.8		
	12	2.3	0.7	2.8	0.8		2.4	0.6	1.6	0.5	2.8	0.5	2.3	0.8		
School education	9	2.9	0.6	2.7	1.0		2.3	0.7	1.7	0.7	2.9	0.7	2.3	0.6		
	28	2.6	0.8	3.1	0.7		2.2	0.7	2.0	0.7	2.7	0.5	2.3	0.8		
	4	3.1	0.8	3.3	0.3		2.1	0.7	2.4	0.5	2.5	0.4	2.3	1.1		
	4	2.3	0.7	2.1	0.9		2.5	0.6	1.8	0.4	2.7	0.7	2.7	0.5		
Marital status	10	2.5	0.6	3.0	0.7		1.9	0.5	2.3	0.6	2.5	0.5	2.1	0.9		
	35	2.7	0.8	2.9	0.9		2.3	0.7	1.8	0.7	2.8	0.6	2.4	0.7		
Job group	20	3.0	0.6	**	3.4	0.7	**	2.3	0.6	1.9	0.6	2.8	0.6	2.2	0.9	
	6	3.2	0.7		3.1	0.7		2.0	1.1	2.5	0.9	2.6	0.3	2.4	0.9	
	19	2.1	0.7		2.4	0.8		2.2	0.6	1.8	0.6	2.7	0.6	2.4	0.7	
Contents of work	19	2.1	0.7	**	2.4	0.8	**	2.2	0.6	1.8	0.6	2.7	0.6	2.4	0.7	
	26	3.0	0.7		3.3	0.7		2.2	0.7	2.0	0.7	2.8	0.6	2.2	0.9	
Physical/Verbal abuse by cases	22	3.0	0.6	**	3.1	0.8		2.2	0.6	2.2	0.7	*	2.6	0.5	2.2	0.8
	23	2.3	0.8		2.7	0.8		2.2	0.7	1.7	0.6	2.8	0.6	2.5	0.8	
Violence	7	2.8	0.5		3.0	0.9		2.0	0.5	2.4	0.7	2.5	0.6	1.7	0.6	
	38	2.6	0.8		2.9	0.8		2.3	0.7	1.8	0.7	2.8	0.5	2.4	0.8	
Threat	9	2.9	0.7		3.0	0.7		2.1	0.6	1.9	0.7	2.6	0.6	2.1	0.8	
	36	2.6	0.8		2.9	0.9		2.3	0.7	1.9	0.7	2.8	0.5	2.4	0.8	
Verbal abuse	17	2.8	0.6		3.0	0.9		2.3	0.6	2.0	0.6	2.7	0.5	2.2	0.8	
	28	2.5	0.9		2.9	0.8		2.1	0.7	1.9	0.7	2.7	0.6	2.4	0.8	
Intimidation of suicide	5	2.7	0.5		2.9	0.8		2.2	0.6	2.1	0.7	2.9	0.6	2.2	0.8	
	40	2.6	0.8		2.9	0.9		2.2	0.7	1.9	0.7	2.7	0.5	2.3	0.8	
Caseload ^{a)}	13	3.1	0.7		3.2	0.8		2.2	0.8	2.1	0.9	2.9	0.5	2.4	0.9	
	13	2.9	0.6		3.5	0.6		2.3	0.7	2.0	0.5	2.6	0.6	2.1	0.9	
Caseload of child abuse ^{b)}	13	3.0	0.6		3.3	0.6		2.1	0.8	2.2	0.8	2.8	0.5	2.1	0.8	
	13	3.0	0.7		3.3	0.7		2.4	0.7	1.8	0.7	2.7	0.6	2.4	0.9	

Significance level by ANOVA, *: $p < 0.05$, **: $p < 0.01$, ^{a)}: Subjects of the analysis are the 26 people who had caseload.

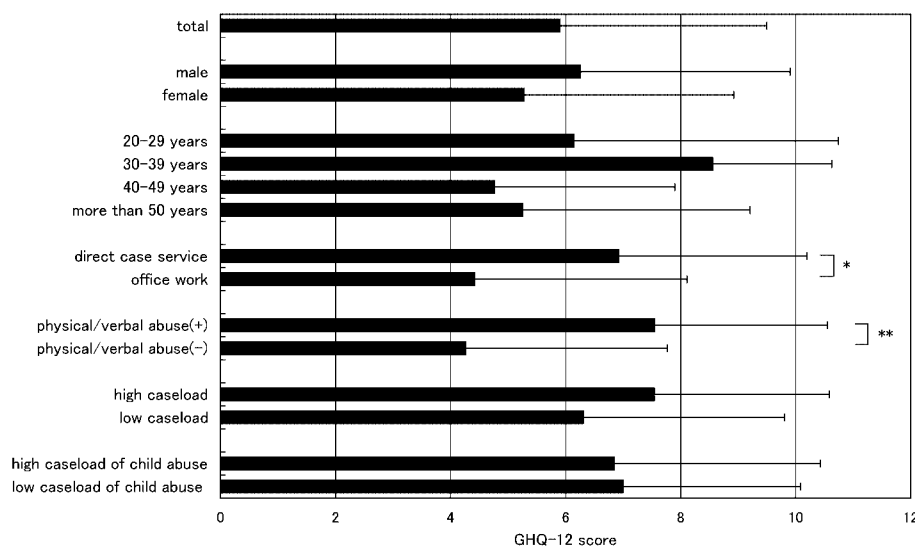


Fig. 1. Comparison of mean GHQ-12 scores among subgroups classified by demographic and job factors. Significance level by ANOVA, * : $p < 0.05$, ** : $p < 0.01$. Comparison of caseload and caseload of child abuse. The subjects of the analysis were the 26 people who had caseload.

(ANOVA; $p < 0.01$ for physical abuse, $p < 0.05$ for verbal abuse). Concerning the 26 workers in charge of cases, no significant difference was observed in the job stress scores between those with a caseload above average and those with a caseload below average either when all cases were included or when only child abuse cases were included.

GHQ-12 score

The mean GHQ-12 score was 5.9 ± 3.6 . The score was 4 or above, indicating intense stress, in 29 workers (64.4%).

The GHQ-12 scores were compared among the subgroups classified by demographic and job factors (Fig. 1). The GHQ-12 score was significantly higher in the office work group than in the direct case service group (ANOVA, $p < 0.05$) and the group with experience of physical or verbal abuse and the group with no experience of being abused (ANOVA, $p < 0.01$). No significant difference was observed according to age, sex, educational background, marital status, all caseload and caseload of child abuse.

Correlation between job stress score and GHQ-12 score

Pearson’s correlation coefficients between job stress scores and GHQ-12 score were calculated. The scores of “workload”, “mental workload”, and “problems in personal relationship” showed significant positive correlations with the GHQ-12 score ($r = 0.315, p < 0.05$; $r = 0.579, p < 0.01$; $r = 0.308, p < 0.05$).

Correlation analysis between difficulties and needs in work and the job stress and GHQ-12 scores

Table 4 shows Spearman’s correlation coefficients between the answers concerning difficulties and needs in work (a 4-point ranked variable) and, GHQ-12 scores and job stress. Significant correlations with both the GHQ score and the score of “mental workload” were observed in the answers to items concerning “recruitment from the public”, “nervous feeling about the job even while off duty”, “troubles about cases”, “inadequate rewards”, and “hope for post change”.

The answers of “needs about technical knowledge” were significantly correlated with only the GHQ-12 score. The answers of “law amendment” were significantly correlated with only “mental workload”.

“Workload” was significantly correlated with the answers about the items of “increase of workers”, “nervous feeling about the job even while off duty”, “troubles about cases”, and “inadequate reward”.

Multiple logistic regression analysis using the state of mental health as the dependent variable

Individuals with a GHQ-12 score of 4 or above are considered to belong to a poor mental health group¹⁸⁾. To evaluate the influence of factors related to the state of mental health, multiple logistic regression analysis was performed with state of mental health as the dependent variable. In this analysis, the dependent variable was regarded as “1” when the GHQ-12 score was 4 or above and as “0” when it was less than 4. Three job stress scales that showed significant correlations with the GHQ-

Table 4. Correlation coefficients between opinions and difficulties about CCO, and GHQ-12/Job Stress scores

N=45

Categories	Item no.	Items	GHQ-12 score	Mental workload	Workload
Increase of workers	1	experts in the management of child abuse must be increased	0.150	0.033	0.313 *
	2	nurses must be increased	-0.001	-0.112	0.294 *
	3	psychiatrists must be increased	-0.013	0.014	0.354 *
	4	lawyers must be posted at child-counseling offices	0.080	0.181	0.378 *
Recruitment from the general public	5	persons who occupy my position should be openly recruited from the general public	0.324 *	0.300 *	0.123
Law amendment	6	Improvements in laws related to the work of child -counseling offices are necessary	0.250	0.300 *	0.241
Nervous feeling about the job even while duty-off	7	I cannot dismiss thoughts about work even off duty	0.501 **	0.625 **	0.383 **
	8	I am sensitive to the telephone ringing even off duty	0.548 **	0.419 **	0.278
Troubles about cases	9	I am made to feel uncomfortable by parties involved during work	0.330 *	0.411 **	0.175
	10	I am very worried about the cases I am working with	0.382 **	0.685 **	0.513 **
	11	I am uncertain whether I am properly handling the cases (work) or not	0.316 *	0.653 **	0.453 **
Inadequate reward	12	I am rarely thanked by parties involved for my work	0.470 **	0.424 **	0.044
	13	my wages are reasonable for my work	-0.306 *	-0.298 *	-0.369 *
Needs about technical knowledge	14	I had no time to be taught about work from my predecessors	0.357 *	0.133	0.091
Hope for post change	15	I want to be transferred to another place	0.401 **	0.512 **	0.168

Spearman's correlation coefficients, *: $p < 0.05$, **: $p < 0.01$

12 score, i.e. "workload", "mental workload", and "problem in personal relationship", two of the job factors that showed significant effects, i.e. "physical/verbal abuse by cases" and "office work or direct case service", and two personal attributes, i.e. sex and age, were used as the independent variables of the first model of stepwise regression (backward elimination). The final model of the stepwise regression analysis had only two independent variables, i.e. "mental workload" and "physical/verbal abuse by cases". In addition to these two variables, sex, age and job group were selected as independent factors to control confounding background factors, and multiple logistic regression for these variables were done using the forced entry method. Table 5 shows the results. Significant effects were observed at the 5% level in "mental workload" and "physical/verbal abuse". The odds ratio for "physical/verbal abuse" was 37.0, and that for "mental workload" was 8.2.

Discussion

The results of the job stress scores confirmed that workers at CCOs were working in a high demand/low control/low reward situation. According to earlier studies concerning the relationship between the demand and control of work, high demand/high control work brings about good stress outcomes and may promote the development of high motivation, new learning behavior, and new coping patterns. However high demand/low control work is likely to cause stress that exerts undesirable effects on mental health²². Therefore, such a job environment may be damaging to the mental health of workers at CCOs.

The mean score of GHQ-12 in all the subjects of this study was 5.9 ± 3.6 , which was markedly higher than 4, a cut-off point of the test, and the mean scores of other high stress populations such as hospital nurses⁸) and mothers with infants²³). This result shows that CCO

Table 5. Odds ratios of risk factors for poor mental health status

Variables	Categories	N	Odds Ratio	95.0% confidence interval	p-value	
Sex		45				
	Male	18	2.6	0.1	-46.7	0.509
	Female	27	1.0			
Age		45				0.287
	≤39	16	13.9	0.5	-404.0	0.125
	40-49	17	1.8	0.2	-19.8	0.641
	≥50	12	1.0			
Workload		45	8.2	1.4	-48.8	0.021
Physical/Verbal attack by cases		45				
	Yes	22	37.0	2.3	-592.5	0.011
	No	23	1.0			
Job category		45				0.342
	Case worker	20	0.1	0.0	-2.6	0.165
	Psychologist	6	2.5	0.1	-100.8	0.629
	Clerk	19	1.0			
Constant			0.0			0.008

Multiple logistic regressions. The dependent variable was regarded as “1” when the GHQ-12 score was 4 or above, and as “0” when it was less than 4.

workers are in a very poor state of mental health and some of them may need psychiatric care.

Factors that were significantly related to a high GHQ-12 score suggest that the poor state of mental health is attributable mainly to 4 issues, i.e. “quantitative burden”, “burden due to the difficulty of direct handling of cases”, “problem in personal relationship”, and “lack of reward”. Each of these is explained in more detail as follows.

Quantitative burden

The job stress score for “workload” showed a high mean value for all subjects and was significantly correlated with the GHQ-12 score and the wishes for supplementation of the staff. From these results, the burden due to the quantity of work may be related to the poor state of mental health.

Burden due to the difficulty of direct handling of cases

The state of mental health was markedly lower for workers that were engaged in intervention and assessment of cases, and who had difficulty handling these cases, although the caseload was not correlated with the state of mental health. From these results, the qualitative burden rather than quantitative burden is considered the greater problem. This is also supported by the results of multiple logistic regression analysis, which indicate that the job stress score for “mental workload” and damage due to physical or verbal abuse by parties involved were independently related to the state of mental health. It suggests that there are two kinds of primary quantitative burdens of casework: the mental burden of having to

handle cases, and the mental burden of being abused by parties involved in the cases. Each stressor is discussed in detail below.

Findings related to the mental burden of having to handle cases include the positive correlations of the complaints “I am uncertain whether I am properly handling the cases (work) or not”, “I had no time to be taught about the work by my predecessors”, and “I cannot stop thinking about work even off-duty” with the GHQ-12 score. It is hypothesized that this type of burden is attributable to inadequacy of information and skill for working with difficult cases. In fact, general civil servants who have not been trained as experts often start working as caseworkers immediately after they are assigned to CCOs in Japan²⁴.

Findings that indicate mental damage due to abuse by parties involved in the cases include (i) the significantly higher GHQ-12 score in the group with an experience of being physically or verbally abused, as compared to the group with no such experience, and (ii) the significant correlation of the statement “I am sensitive to telephone rings even off duty” and “I am made to feel uncomfortable by parties involved during work” and the GHQ-12 score. These results suggest that the behaviors and violence of parties involved in the cases cause trauma responses in the workers themselves. However GHQ is used to assess non-specific psychological distress^{16, 17, 25} and does not contain trauma-specific symptoms (e.g intrusion, avoidance). Therefore, further study to measure trauma, such as by using the Impact of Event Scale Revised (IES-R)²⁶, is needed in order to confirm trauma symptoms in

CCO workers.

Problems in personal relationship

The score for “problems in personal relationship” was not higher than in other occupational groups but was significantly correlated with the GHQ-12 score. Therefore, conflicts through interpersonal relationships at the workplace are related to the mental health of the workers to some extent. It was noted that the score for “problems in personal relationship” was significantly higher in the group that had experienced physical or verbal abuse than in the group that had no such experience. This suggests that workers that have developed trauma responses are likely to have problems with interpersonal relationships in the CCO. This result may be explained as follows: workers who have developed trauma responses are likely to feel anger and anxiety due to hypervigilance symptoms, and they tend to become isolated in the workplace due to affective paralysis and avoidance.

Lack of reward

The GHQ-12 score correlated positively with “I am rarely thanked by parties involved in work” and negatively with “my wages are reasonable for my work”. These results indicate that inadequate emotional and economic rewards are related to a poor state of mental health.

What support is needed for CCO workers to manage the factors of their poor mental health revealed above? First, measures to prevent attacks and support recovery of trauma caused by them are needed. Recently, intervention programs have been developed to help victimized employees who work in high-risk occupations and are likely to encounter large-scale disasters, such as firefighters or police officers^{27–29}. The introduction of such a support system to Japanese CCOs may be useful.

Second, it is necessary to compensate shortage of staff and skills for handling increasing and difficult cases. If possible, CCOs should recruit more skilled professionals for child abuse. Even if immediate change in the staffing system is difficult, at least sufficient transmission of information and training must be given when workers take up new posts, and case supervision must be made routinely thereafter³⁰.

The limitations of the research are as follows. (i) The evaluation of the job environments and the status of mental health of the CCO staff is based on subjective data. Therefore, the findings in Tables 4 and 5 might be affected by some common factors, such as personal cognitive style of stress events and symptoms. (ii) The number of subjects was small and the stability of the results are limited. Moreover, the results of this study are based on an investigation of CCOs in Ibaraki Prefecture. A nationwide survey is needed to clarify more

accurately the state of CCOs all over Japan. (iii) This study involved cross-sectional research, and therefore, longitudinal research is needed to confirm that the poor mental health of the CCO workers was caused by the job stress of CCOs, and not by other factors such as private stress events or their personalities.

Conclusions

This study showed that the job environment of workers at CCOs was high demand/low control/low reward, a typically stressful situation. In this environment, the state of mental health of the workers at CCOs was among the worst of all occupation groups evaluated to date, including hospital nurses, and this poor mental health was reflected directly by the workers' wishes to change jobs. Our study revealed stress due to physical and verbal assaults by the parties to cases and the psychological burden of intervention were related to poor mental health. In order to improve CCO workers' mental health, measures to prevent assaults, care for psychological trauma, and technical and/or physical support for handling cases are needed.

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