

Relationship between Burnout and Occupational Factors in Staff of Facilities for Mentally Retarded Children

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Abstract: Relationship between Burnout and Occupational Factors in Staff of Facilities for Mentally Retarded Children: Fumi TAKEDA, *et al.* Department of Health Sciences, Institute of Health & Sports Sciences, University of Tsukuba—Based on the data for 382 nursery teachers and instructors in 71 facilities for mentally retarded children, we studied occupational factors related to burnout in staff of facilities for mentally retarded children. As the result of stepwise multiple regression analysis, burnout scores were significantly related to “work burden”, “work satisfaction”, “dissatisfaction with effectiveness of treatment/instruction”, “emotional support”, and “aversion to dealing with children”. The lower scores in “work satisfaction” and “emotional support” and the higher scores in “work burden”, “aversion to dealing with children”, and “dissatisfaction with effectiveness of treatment/instructions” resulted in the higher burnout scores. These results suggest that it is important to improve the organizational working, support, and training systems.

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It has been reported that burnout is a negative characteristic of human services professions and is related to “individual factors” (attributes and personality^{1–5}), “occupational factors”^{1, 2, 6–11}, and “social support”^{2, 6, 12–14} in previous literature. “Occupational factors” were classified into “general job factors” including excessive workloads, interpersonal relationships in the workplace, working environment, and rewards for work, common to other professions^{2, 7, 11} and “distinctive job factors of

human services professions”^{1, 6, 7–11}.

Staff in facilities for children with mental retardation have reported “distinctive job factors in human services professions” related to burnout as follows: 1) status of children (staff- child ratio¹⁰ and degree of handicap²), 2) duties peculiar to the profession (child protection and administration⁶, preparation of programs for individual children, meetings, training, and counseling⁹), 3) perception of work (dissatisfaction with children’s recovery, emotional distress in dealing with the children⁷, lack of sense of professional accomplishment^{6, 9}, complicated assignments, and ambiguity of role¹¹). All of these studies, however, were conducted in countries other than Japan. On occupational factors related to burnout, there have been many surveys of doctors, nurses, school teachers, and helpers at homes for the elderly, but few surveys of staff working with mentally retarded individuals³ in Japan. Moreover, on the relationship between the mental health of staff working with mentally retarded individuals and occupational factors including distinctive job factors, only depression¹⁵ and neurosis¹⁶ have been studied in Japan.

Direct-care staff in facilities for mentally retarded children are required to provide nursing care for maintaining health, covering spasms, medication, bulimia, hyperactivity, refusal to eat, autism, and basic living style needs, etc. They also have to spend some of their own time playing with children, washing, cleaning, cooking, preparing of instruction materials and recording, planning, and holding meetings, etc. Accordingly, it is necessary to examine their burnout syndrome which is regarded as a negative characteristic of the human services professions. In this study, we examined burnout and related occupational factors in the staff of facilities for mentally retarded children in Japan.

Subjects and Methods

1. Subjects

The subjects of this study were 1,179 nursery teachers

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and instructors working in 71 facilities for children with mental retardation in Tokyo, Saitama, Chiba, and Kanagawa prefectures. The subjects filled out the self-report questionnaire and returned it in the envelope provided for the purpose. The questionnaire was returned by 653 (response rate 55.4%).

2. Measurements

The self-report questionnaire consisted of five parts, (1) burnout measures, (2) demographics, (3) distinctive job factors for direct-care staff in facilities for mentally retarded children, (4) general job factors, and (5) social support.

Part 1 consisted of 20 questions from the Japanese translation and Revised-version¹⁷⁾ of the Pines' Burnout Measure, which has been widely used in Japan for surveys on medical nurses, school teachers, and helpers at elderly homes. In this version¹⁷⁾, each response to the items numbered 3, 6, and 18 was scored 1 ("I never have, I rarely have, I seldom have") and 0 ("I sometimes have, I often have, I usually have, I always have") and responses to other items were 1 ("I always have, I usually have, I often have") and 0 ("I sometimes have, I seldom have, I rarely have, I never have"). Responses to the items were summed, and scores were converted to a 0–20 scale. A burnout score of 5 points or higher indicates a high burnout state¹⁷⁾. The Cronbach ' α ' coefficient of this sample was 0.85.

Part 2 consisted of 7 items on demographics: age, sex, education, years of service, type of facility, type of job, and marital status. The responses for quantitative variables were scored as follows: 0 ("male") and 1 ("female") on sex, 0 ("college or under") and 1 ("beyond university") on education, 0 ("inpatient facility") and 1 ("outpatient facility") on type of facility, 0 ("nursery teacher") and 1 ("instructor") on type of job, and 0 ("married") and 1 ("not married") on marital status.

Part 3 consisted of the distinctive job factors for direct-care staff for mentally retarded children, which were referred from past studies¹⁵⁾:

1) "Status of children" with the 6 following items: a) the number of children, b) average age, c) degree of handicap, d) nursing care for basic living style needs, e) nursing care for medical treatment (e.g.; maintaining health, spasms, and medication, etc.), and f) nursing care for behavioral problems (e.g.; bulimia, hyperactivity, refusal to eat, and autism, etc.). Item c) was answered by "severe: $IQ \leq 34$ ", "moderate: $35 \leq IQ \leq 50$ ", or "light: $51 \leq IQ$ ". Items d) e) f) were answered respectively by "constant nursing care required", "some nursing care required", or "almost independent".

2) "Burden on special work" in the 5 following items: a) helping children to dress/undress, eat, bathe, use the toilet, and keep neat, b) playing with children, c) washing, cleaning, cooking, and other work, d) preparation of

instruction materials and records, and e) program planning and meetings. Response for each item was scored 1 ("would like to decrease") or 0 ("all right at present, would like to increase") to determine whether staff feel the workload or not for each particular job.

3) "Feelings toward children" in the 3 following items: a) stereotyped treatment/instructions, b) dissatisfaction with effectiveness of treatment/instructions, and c) aversion to dealing with children. Response for each item was scored 4 ("I have"), 3 ("I sometimes have"), 2 ("I cannot say either way"), 1 ("I seldom have"), and 0 ("I never have"). Only one factor was extracted by the factor analysis, but the Cronbach ' α ' coefficient was low (0.47), so we used raw scores (0 to 4 points) for each of three items.

Part 4 consisted of 9 items on feeling concerning work and night duty. We revised the items used in the study on depression of staff in facilities for mentally retarded individuals¹⁵⁾. First, eight questions on general job factors were asked and scored 4 ("I have"), 3 ("I sometime have"), 2 ("I cannot say either way"), 1 ("I seldom have"), and 0 ("I never have") for each response. When the factor analysis was carried out by valimax rotation on factors in which the eigenvalue of the principal component was 1 or more, three factors were noted (Table 1). The loading of each factor was high and the Cronbach ' α ' coefficient for each factor was 0.75, 0.71, and 0.63, respectively. Therefore, the total score for each of them as "work satisfaction" (0 to 12 points), "work burden" (0 to 12 points), and "work environment satisfaction" (0 to 8 points) was calculated. Next, if there was night duty the subject was asked to select "yes"=1 or "no"=0.

Part 5 consisted of 2 elements of social support in the revised version used in surveys on burnout in domestic medical nurses and school teachers¹⁷⁾.

Questions on 1) "work support and expectations" from a) children, b) children's families, c) superiors, and d) colleagues, were asked. Responses for the 4 items were scored 2 ("expected"), 1 ("cannot say either way"), and 0 ("not expected"). Only one factor was extracted by the factor analysis and the Cronbach ' α ' coefficient was 0.75. Therefore the total points for the four items (0 to 8 point) were taken as the work support and expectations score.

2) "Emotional support" included 6 questions: a) "person who gives you a sense of calm and relief", b) "person who always sensitively understands your feelings", c) "person who shares your growth and success as if they were his own personal concern", d) "person in whom you can confide your personal feelings and secrets", e) "person with whom you can share mutual thoughts and talk about the future", and f) "person who agrees with and supports your actions and thinking". Response for each item was scored 1 ("I have") or 0 ("I never have"). Only one factor was extracted by the factor analysis, and the Cronbach ' α ' coefficient was 0.81, so that the total point score for the six items (0 to 6 points) was taken as

Table 1. Factor analysis of feeling concerning work

Variables	Factor 1	Factor 2	Factor 3
I feel my current work is worthwhile	0.808	- 0.126	0.014
I am satisfied with working in the present workplace	0.796	- 0.242	0.245
I believe teamwork and communication in the workplace are good	0.756	- 0.008	0.215
I feel the workload is heavy	- 0.040	0.822	- 0.095
I feel the working hours are long	- 0.043	0.817	- 0.119
I feel my current work is burdensome	- 0.296	0.701	0.019
I believe the facilities and environment of the workplace are good	0.184	0.022	0.838
I believe recreation and welfare for the staff are good	0.139	- 0.170	0.815
Eigen value	2.93	1.45	1.06
Cumulative contribution	36.6	54.7	68.0

Factor 1: “work satisfaction”. Factor 2: “work burden”. Factor 3: “work environment satisfaction”.

the emotional support score.

3. Statistical analysis

The number of persons who had answered all the questions was 382 (effective response rate 32.4%). There were statistically significant differences between the effective and non-effective responses regarding age, type of facility, and type of job (Table 2). With respect to the effective responses compared with the non-effective responses, the average age was younger and the percentages of inpatient facilities and of instructors were higher.

The burnout-related factors were analyzed by the following procedure on the data from 382 effective responses. Because the standard deviation of the burnout score was large (the average of the burnout score was 4.5 \pm 3.9), both Pearson’s product moment correlation coefficients and Spearman’s rank correlation coefficients were calculated for the burnout score and each independent variable. After no large differences between two correlation coefficients were found, correlation among independent variables which were significantly related to the burnout score in either of two correlation coefficients with age and sex added as demographic variables were examined. Because no close correlation among independent variables was confirmed, the stepwise multiple regression analysis was carried out on the burnout score. All of the statistical analysis were performed by SPSS 7.5.

Results

The average age of the subjects was 30.7 \pm 7.2 yr, and their average years of service was 5.7 \pm 5.3 yr. The breakdown by sex was 133 males and 249 females. The breakdown by type of facility they worked at was 250 persons in inpatient facilities and 132 persons in outpatient facilities. There were 160 nursery teachers

Table 2. Demographics of samples

	Effective response	Non-effective response
Age	30.7 \pm 7.2	33.1 \pm 8.7***
Sex	n (%)	n (%)
Male	133 (34.8)	82 (30.5)
Female	249 (65.2)	187 (69.5)
Education		
College or under	195 (51.0)	149 (57.1)
Beyond University	187 (49.0)	112 (42.9)
Type of facility		
Inpatient facility	250 (65.4)	149 (56.0)
Outpatient facility	132 (34.6)	117 (44.0)*
Type of job		
Nursery teacher	160 (41.9)	128 (50.6)
Instructor	222 (58.1)	125 (49.4) *
Marital Status		
Married	207 (54.2)	128 (48.3)
Not married	175 (45.8)	137 (51.7)

Figures for age are mean and standard deviations. t-test / χ^2 -test: * p <0.05 *** p <0.001.

and 222 instructors. The subjects in a high burnout state with a burnout score of 5 points or more were 144 persons (37.7%).

The results of the Pearson’s product moment correlation coefficients or the Spearman’s rank correlation coefficients showed the burnout score was significantly related to 12 variables, which were “rate of children requiring constant nursing care for behavioral problems”, “burden on washing, cleaning, cooking and other work”, “burden on preparation of instruction materials and

Table 3. Correlation coefficient of burnout scores and independent variables

Variables	Pearson's product moment correlation coefficients	Spearman's rank correlation coefficients
Demographics		
Age	-.074	-.031
Sex (Male=0, Female=1)	.047	.040
Education (College or under=0, Beyond University=1)	-.092	-.079
Marital Status (Not married=0, Married=1)	-.072	-.074
Type of facility (Inpatient facility=0, Outpatient facility=1)	-.076	-.062
Type of job (Nursery teacher=0, Instructor=1)	-.087	-.093
Years of service	-.054	-.024
Status of children		
Number of children	-.013	.000
Average age of children	.001	.018
Rate of severely handicapped children	-.031	-.026
Rate of children requiring constant nursing care for basic living style needs	.008	.032
Rate of children requiring constant nursing care for medical treatment	-.045	-.014
Rate of children requiring constant nursing care for behavioral problems	.101*	.048
Burden on special work		
Helping children to dress/undress, eat, bathe, use the toilet, keep neat	.070	.078
Treatment and Instructions	.075	.075
Washing, cleaning, cooking, and other work	.090	.107*
Preparation of instruction materials and records	.124*	.086
Program planning and meeting	.129*	.109*
Feeling toward children		
Stereotyped treatment/instructions	.124*	.151**
Dissatisfaction with the effectiveness of treatment/instructions	.237***	.262***
Aversion to dealing with children	.280***	.272***
Feeling concerning work		
Work satisfaction	-.356***	-.334***
Work burden	.373***	.336***
Work environment satisfaction	-.158***	-.163***
Night duty (No=0, Yes=1)	.064	.077
Work support and expectations	-.191***	-.217***
Emotional support	-.206***	-.245***

*: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

records", "burden on program planning and meeting", "stereotyped treatment/instructions", "dissatisfaction with effectiveness of treatment/instructions", "aversion to dealing with children", "work satisfaction", "work burden", "work environment satisfaction", "work support and expectations", and "emotional support" (Table 3).

No close correlation among these 12 variables with "age" and "sex" added as demographic variables was observed (Table 4), so that the stepwise multiple regression analysis was carried out on the burnout score by means of these 14 independent variables. The results

of the stepwise multiple regression analysis showed that burnout was significantly related to "work burden", "work satisfaction", "dissatisfaction with effectiveness of treatment/instructions", "emotional support", "aversion to dealing with children", and "age" (Table 5). Burnout scores were higher as "work burden", "dissatisfaction with effectiveness of treatment/instructions" and "aversion to dealing with children" became higher and "work satisfaction", "emotional support", and "age" became lower.

Table 4. Pearson's product moment correlation coefficients among the independent variables

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. Age	1.000													
2. Sex	-.220	1.000												
3. Rate of children requiring constant nursing care for behavioral problems	.103	-.093	1.000											
4. Washing, cleaning, cooking, and other work	.092	-.032	.074	1.000										
5. Preparation of instruction materials and records	-.020	.000	.159	.084	1.000									
6. Instruction planning and meetings	.013	-.085	-.021	.044	.376	1.000								
7. Stereotyped treatment/instructions	-.020	-.165	.121	.116	.066	.036	1.000							
8. Dissatisfaction with the effectiveness of treatment/instructions	-.026	.010	.052	.186	-.004	-.037	.255	1.000						
9. Aversion to dealing with children	-.148	.187	-.050	.083	.048	-.076	.184	.241	1.000					
10. Work satisfaction	-.093	.176	-.099	-.105	-.183	-.245	-.229	-.177	-.057	1.000				
11. Work burden	.026	.036	.116	.171	.289	.141	.225	.170	.070	-.311	1.000			
12. Work environment satisfaction	-.068	.063	-.086	-.148	-.091	-.039	-.163	-.138	-.080	.378	-.206	1.000		
13. Work support and expectations	.016	-.034	-.061	-.053	-.079	-.078	-.146	-.130	-.087	.253	-.047	.121	1.000	
14. Emotional support	-.142	.282	-.032	-.006	-.049	-.140	-.061	-.094	.073	.198	-.044	.102	.260	1.000

Table 5. Stepwise multiple regression analysis on burnout scores

Variables	standardized β
Work burden	0.266***
Work satisfaction	- 0.215***
Dissatisfaction with effectiveness of treatment/instructions	0.171***
Emotional support	- 0.164***
Aversion to dealing with children	0.137**
Age	- 0.095*
Adjusted R ²	.285***

*, p<0.05, **, p<0.01, ***, p<0.001.

Discussion

In this survey, the rate of persons in a highly burnout state was 37.7%. Compared with the results obtained in our country with the same criteria, this was lower than that of junior high-school teachers¹⁷⁾ (41.2%) but was higher than those of doctors¹⁷⁾ (15.9%), nurses¹⁷⁾ (31.7%), and the staff of welfare homes for the elderly¹⁸⁾ (31.8%). Due to the low rate of effective responses in this study, we will refrain from generalization concerning the results, but there is a likelihood that the burnout level of nursery teachers and instructors in facilities for mentally retarded children would be higher than those of doctors, nurses, and staff of welfare homes for the elderly in Japan.

The aim of this study was to examine occupational factors closely related to burnout in staff of facilities for mentally retarded children. The stepwise multiple

regression analysis showed that their burnout was closely related to work burden, work satisfaction, dissatisfaction with effectiveness of treatment/instructions, emotional support, and aversion to dealing with children.

Firstly, it was found that the work burden and work satisfaction among general job factors were closely related to burnout. Specifically, the more individuals felt that their workloads were heavy, their working hours were long, their work was a burden, their current work was not rewarding, they were dissatisfied with working at their present workplace, and teamwork and communication in the workplace were not good, the higher the burnout score was. Similarly, Strassmeier²⁾ has also pointed out that burnout of workers in facilities for children with mental retardation originated from structural organization problems such as lack of job orientation and cooperation towards an objective. Furthermore, depression of staff

in facilities for mentally retarded individuals¹⁵⁾ has also been found to be closely related to work burden and work satisfaction. And neurosis of staff in facilities for persons with mental retardation was also related to such factors as hard work both qualitatively and quantitatively, responsibility for guiding subordinates, unrewarding nature of work, and pressure from both superiors and subordinates¹⁶⁾.

Addressing these factors may require a range of organizational strategies. Carton *et al.*¹⁹⁾ have reported that administrators of organizations should examine the design of their jobs and attempt to make jobs more meaningful for their employees in order to reduce burnout of employees at facilities for mentally retarded persons. Kyriacou¹²⁾ has also reported that it was necessary in reducing burnout of teachers not to focus on an individual, but to improve management methods, defining of work, human relations, and working conditions (that is, reducing the size of classes and improving spare time and communication with the organization). Accordingly, it is thought to be important to improve work systems on an organizational level to maintain the mental health of staff in facilities for mentally retarded individuals.

Secondly, among distinctive job factors for workers in facilities for children with mental retardation, we found that dissatisfaction with effectiveness of treatment/instructions and aversion to dealing with children were significantly related to burnout. Specifically, the more individuals had doubts or a sense of powerlessness about the effectiveness of treatment /instructions and became fed up with thinking about the children and children's families, the higher their burnout scores were. It has been reported that such feelings related to special work characteristics of direct-care staff with mentally retarded persons as a lack of sense of professional achievement^{6, 9)}, assignment complications and ambiguity of role^{1, 2, 7)}, sense of dissatisfaction with the client's recovery, and emotional distress related to dealing with the clients⁷⁾ were related to burnout. It has also been pointed out that staff burnout in facilities for children with mental retardation was caused by excessive anticipation of the development of retarded children's performance and frustration at the failure to fulfill those expectations²⁾. And depression of staff in facilities for mentally retarded persons¹⁵⁾ has been related to dissatisfaction with effectiveness of treatment/instructions and aversion to dealing with children. Furthermore, neurosis in staff of facilities for persons with mental retardation has also been related to a sense of imperfection of the work and lack of knowledge and skill in this profession¹⁶⁾. These findings were similar to the results of the present study.

Staff members who worked with mentally retarded individuals have reported that they were concerned with the efficacy of treatment plans to address their patients' problems²⁰⁾. It has also been said to be important for

staff to receive enough training to be able to realistically estimate and anticipate the ability of their clients²⁾. Therefore it is thought that gaining of objective knowledge and skills through adequate training systems would be effective in reducing concern for the effectiveness of treatments/instructions and aversion to dealing with children.

On the other hand, the duration of contact with the severely mental handicapped²⁾ and the number of children handled by one worker⁸⁾ had been reported to be the main causes of burnout. But when we examined the number of children, age, level of handicap, degree of nursing care for basic living style needs, medical treatment, and behavioral problems, we found none of them had a significant relationship with burnout. Furthermore, in distinctive duties of direct-care staff in facilities for children with mental retardation²¹⁾, protecting and administering⁶⁾, preparing individual programs, holding meetings, training, and counseling⁹⁾ have been pointed out as being related to burnout, but when we examined the burden on 1) helping children to dress/undress, eat, bathe, toilet, and keep neat, 2) playing with children, 3) washing, cleaning, cooking, and other work, 4) preparation of instruction materials and records, and 5) program planning and meeting, we found that none of them showed any relation to burnout.

Thirdly, we found burnout scores were significantly higher as emotional support and age became lower. The results on emotional support were consistent with those of many past studies^{2, 6, 11-14)}. Cherniss¹⁰⁾ reported that the more the head and the staff discussed job-related problems and the more emotional support the head provided his staff, the less staff burnout there was in facilities for children with mental retardation. Pines¹³⁾ and his group also advocated the improvement of staff meeting functions as an organizational measure for reducing staff burnout. Accordingly, we consider that support systems such as staff meetings and supervision are important. Regarding age, a significant relation to burnout was found not by correlation coefficients but by the multiple regression analysis in this study. In past studies some had found age of workers with mental handicapped children was related to burnout¹⁾ and others had not²⁾. Therefore it is necessary to explore the relationship between demographics and burnout in future.

Finally, we mention limitations of this study. They are as follows: As this study was a cross-sectional survey, the causes and effects of the relationships mentioned above were unknown. From a selection bias that the rate of effective responses was low and there were statistically significant differences between the effective and non-effective responses regarding age, type of facility, and type of job, we will refrain from generalizing the results of the present study. Furthermore, it is necessary to develop measurement indexes for distinctive job factors

of direct-care staffs in facilities for children with mental retardation, of which the validity and the reliability are sufficiently high, and it is expected to verify the characteristics of mental health by occupation in the human service profession with various measurements including burnout, depression, and neurosis, etc. in future.

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