Original Paper

# An Observation of Worker Duty Recognition at Hospitals and Elder Care Facilities Separately

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Key words: duties recognition standard, job satisfaction, workplace stress, hospital, elder care facilities

#### Abstract

In this study, we examined measures that could be implemented in personnel affairs and management to insure longer stability in the workforce of hospitals and elder care facilities, by grasping the characteristics of the conditions at both institutions and comparing them. First, we made a factor analysis for 38 question items and set up a duties recognition standard according to hospitals and elder care facilities. As a result, five factors of similar content were obtained for both institutions. Next, we calculated the mean of the duties recognition standard according to each characteristic. The results showed that care workers at hospitals had a lower "sense of purpose." In contrast, in elder care facilities, the lower "sense of purpose" was among nurses. In addition, the over-20-years group of workers had the lowest "stress reactors" at hospitals, but the "work burden" was the highest. Furthermore, an analysis of the relationship between the "duties recognition standard" and "job satisfaction" showed the "continuation awareness" of nurses and care workers at hospitals was lower than other types of jobs. It also showed that the nurses at elder care facilities had a lower "sense of belonging." Finally, in the relevance analysis of the duties recognition standard with job satisfaction, we found that in both hospitals and elder care facilities, "continuation awareness," "sense of belonging" and "office environmental awareness" in common have the strongest equilateral correlation with "human relations in the office."

#### Introduction

In Japan, the aging rate (the ratio of the senior citizen population older than 65 years old to the total population) is rising. In 2006, we reached a society with 20.8% aged [1], and the welfare services that senior citizens use in homes and institutions is increasing. As the demand for welfare services increases and the needs also diversify, expected roles for care and nursing are rising. As if in defiance of these expectations, the job attrition rate of care workers at this point is 21.6% [2] and significantly exceeds the job attrition rate of 16.2% of all workers in 2007 [3].

Backed by such present conditions, this paper draws attention to job satisfaction and the work stress of workers at hospitals and elder care facilities. By grasping the characteristics of the conditions at hospitals and elder care facilities and comparing them, we aim to examine measures that could be implemented in personnel affairs and management to insure longer stability in the workforce of these institutions. In this

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study, we will perform:

- (1) A presentation of a "duties recognition standard" for hospitals and elder care facilities
- (2) An analysis of basic characteristics in relation to the "duties recognition standard"
- (3) An analysis of "job satisfaction" in relation to the basic characteristics
- (4) An analysis of the relationship between the "duties recognition standard" and "job satisfaction" with the hope of offering concrete proposals to the personnel affairs and management section of these institutions.

#### Analysis Framework

#### 1. Subjects and Method

In this paper, we conducted a survey by enlisting the help of five hospitals in Okayama and four elder care facilities (one health service facility for the elderly requiring long-term care and three welfare facilities for the elderly requiring long-term care). The survey covered the subjects from all types of employment at the facilities, including nurses, care workers, clerks, physical therapists, dietitians and so on. The survey method was as follows: a form requiring about 7 minutes to be filled out was given to each participant, then they could use their break at work to fill out the form. This was a consigned questionnaire in which the person in charge received and compiled the responses.

#### 2. Contents of the Questionnaire

We composed our own original questionnaire for this research after referring to previous studies on "workplace stress" [4-6] and "job satisfaction" [7, 8]. There were questions on the quantity of work, human relations on the job and stress as "the work environment" and also questions on "job satisfaction" consisting of "continuation awareness" "sense of belonging" and "office environmental awareness." In addition, we sought information of the participant on sex, age, type of work, employment conditions, length of service, working hours, night duty, overtime and motives for working.

#### 3. Method of Analysis

First, to get the standard of duty recognition, we performed a factor analysis for the 38 items questioned by using principal component analysis by varimax rotation. Secondly, we evaluated validity as to whether the measured standard score expressed the concepts adequately. The evaluation method used criterion-related validity to estimate the relevance between the measurements and an external standard or job satisfaction. Thirdly, we performed a reliability verification of the measurements as to whether they measured precisely the phenomenon that we were to measure. We calculated the  $\alpha$  factor of Cronbach about every standard to determine the internal consistency reliability of the question items which constituted a standard.

#### The Results

We distributed 680 questionnaires to hospitals and elder care facilities and 655 were returned. After excluding 70 answers that were marked insufficiently, there were a total of 585 valid answers which became the object for the analysis (answer rate 96.3%, valid answer rate 86.0%).

# 1. Distribution of the Characteristics of the Subject Groups

Table 1 shows the distribution of the characteristics of the hospital and elder care facilities respondents. The sex of the respondents from the hospitals show that 49 respondents or 14.5% were men and 288 respondents or 85.5% were women. At the elder care facilities, 42 respondents or 16.9% were males and 206 respondents or 83.1% were females. In both cases females comprised over 80% of all respondents. The reason the percentage of males was slightly lower in the hospitals than in the elder care facilities was that we were unable to receive many responses from doctors. By age, there were relatively more of the younger generation in their 20s, or 113 respondents or 33.5% in the hospitals and 86 respondents or 34.7% in the elder care facilities within their 20s. As for the type of job, the greatest number of the respondents at the hospitals were nurses, with 164 respondents or 48.7%. At the elder care facilities the greatest number of respondents were care workers<sup>†1)</sup> with 165 respondents, or 66.5%. As for the type of employment, 66 of the hospital respondents were managers, or 19.6%, while 60 respondents at the elder care facilities or 24.2% were managers. The ratio of managers at the elder care facilities was higher. As for years of employment, most respondents worked between 3 to 10 years and the distribution was similar in both cases.

Table 1 The distribution of the characteristics of each Object Group

		Hospit	als	Elder care facilities		
	Contents	frequency	%	frequency	%	
sex	man	49	14.5	42	16.9	
	woman	288	85.5	206	83.1	
age	10's	1	0.3	1	0.4	
	20 <b>'</b> s	113	33.5	86	34.7	
	30's	86	25.5	65	26.2	
	<b>40'</b> s	77	22.8	50	20.2	
	50's	51	15.1	38	15.3	
	60's	9	2.7	8	3.2	
type of job	clerk	40	11.9	15	6.0	
	nurse	164	48.7	31	12.5	
	care worker	70	20.8	165	66.5	
	physical therapist	40	11.9	6	2.4	
	care manager	10	3.0	23	9.3	
	dietician	9	2.7	6	2.4	
	others	4	1.2	2	0.8	
position	regular employee	245	72.7	156	62.9	
	permanent temp	11	3.3	10	4.0	
	manager	66	19.6	60	24.2	
	part-timer	12	3.6	22	8.9	
	others	3	0.9	0	0.0	
period of work	less than 3 years	78	23.1	65	26.2	
	$3\sim$ 10 years	110	32.6	93	37.5	
	$10\sim20$ years	80	23.7	64	25.8	
	over 20 years	69	20.5	26	10.5	
		N=337		N=248		

#### 2. Constituent Factors and Reliability of the Duties Recognition Standard

A factor analysis of 38 items of the duties recognition scale was performed using principal component analysis by varimax rotation. Factors were derived according to the following conditions: the accumulation contribution rates were more than 50% with the eigenvalue higher than 1 and the factor loadings more than 0.5. The results from hospitals and elder care facilities are shown in Table 2 and Table 3.

# 2. 1. Hospitals

We derived the 5 factors indicated below in the duties recognition scale for workers at hospitals.

#### 2. 1. 1. Factor 1: Human Relations in the Office

In Factor 1, we evaluated human relations between superiors and coworkers in the workplace, which we interpreted to be "human relations in the office" and it consisted of 4 question items such as "If I bring up personal problems, my co-workers and superiors will listen to me" and "I can rely on my coworkers and superiors when I am in trouble." The  $\alpha$  factor of Cronbach was 0.760, and the reliability of the scale was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was 0.433, and a meaningful correlation was seen.

# 2. 1. 2. Factor 2: A Sense of Purpose

In Factor 2, we evaluated motivations for working and sense of purpose at the workplace, which we interpreted to be "a sense of purpose" and it consisted of 5 question items such as "The purpose of my work is not clear to me" and "I am not interested in what I am doing now." The  $\alpha$  factor of Cronbach was 0.733 and the reliability of the scale was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was -0.359, and a meaningful correlation was seen.

#### 2. 1. 3. Factor 3: Stress Reactors

In Factor 3, we evaluated the conditions of mind and body, which we interpreted to be "stress reactors" and it consisted of 4 question items such as "I am dead tired recently" and "I am exhausted at the end of work." The  $\alpha$  factor of Cronbach was 0.758 and the reliability of the scale was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was -0.361, and a meaningful correlation was seen.

#### 2. 1. 4. Factor 4: Private Human Relations

In Factor 4, we evaluated the relationships of close persons outside the workplace, which we interpreted to be "private human relations" and it consisted of 3 question items such as "When I bring up personal problems, my family and friends listen to me" and "I can talk without hesitation to my family and friends." The  $\alpha$  factor of Cronbach was 0.779 and the reliability of the scale was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was 0.212, and a meaningful correlation was seen, but this was low when we compared it to other factors.

# 2. 1. 5. Factor 5: Work Burden

In Factor 5, we evaluated the burden of the quantity of the work, which we interpreted to be the "work burden" and it consisted of 3 question items such as "There is too much work" and "My work is too much for one person to do." The  $\alpha$  factor of Cronbach was 0.694 and the reliability of the scale was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was -0.212, and a meaningful correlation was seen, but this also was low when we compared it to other factors.

#### 2. 2. Elder Care Facilities

We derived the 5 factors indicated below in the duties recognition scale of the workers at elder care facilities.

Table 2 Factor analysis results (Hospitals)

			factor loading		
	1	2	3	4	5
	human relations in the office	a sense of purpose	stress reactors	private human relations	work burden
	$(\alpha = 0.760)$	$(\alpha = 0.733)$	$(\alpha = 0.758)$	$(\alpha = 0.779)$	$(\alpha = 0.682)$
34 If I bring up personal problems, my co- workers and superiors will listen to me	0,794	-0. 129	0. 027	0. 180	-0. 015
$^{\rm 37}$ I can rely on my coworkers and superiors when I am in trouble.	0.765	-0. 164	-0.066	0. 174	-0.060
30 I can speak freely with my coworkers and superiors	0,711	-0. 143	-0. 196	0. 122	0. 030
I am given appropriate evaluations from my superior	0,616	-0. 139	-0. 118	0. 049	-0. 070
1 The purpose of my work is not clear to me	-0.004	0,778	0. 034	-0. 168	0. 015
$4\ \ I$ am not interested in what I am doing now	-0. 127	0,757	0. 111	-0.066	0. 124
19 I am in charge of nonessential work	-0. 107	0,624	-0. 039	0.008	-0. 011
$_{\mbox{36}}$ My skills and knowledge are of little use in $_{\mbox{my}}$ work	-0. 265	0,569	0. 172	0.048	-0.078
11 I don't know what is expected of me at work	-0. 329	0,556	0. 314	-0. 028	-0. 075
9 I am dead tired recently	-0.016	0. 033	0,852	0. 029	0. 192
17 I am exhausted at the end of work	-0. 041	0.032	0,775	0. 105	0. 313
38 I don't feel well these days	-0. 217	0. 363	0,656	-0.065	0. 123
7 I sometimes feel slightly dizzy	-0. 141	0.072	0,614	-0. 090	-0. 056
16 When I bring up personal problems, my family and friends listen to me	0. 131	-0. 046	-0. 013	0, 858	-0. 032
I can talk without hesitation to my family and friends	0. 219	-0.071	-0. 105	0,810	0. 031
I can rely on my family and friends when I have trouble at work	0. 109	-0. 048	0. 072	0,775	-0. 085
2 There is too much work	0.008	-0.082	0.049	-0. 017	0.796
26 My work is too much for one person to do	-0. 168	0.027	0. 113	0. 034	0.753
35 I don't have enough time to do my work	0.066	0.080	0. 206	-0. 122	0.735

# 2. 2. 1. Factor 1: Private Human Relations

In Factor 1, we evaluated the relationships of close persons outside the workplace, which we interpreted to be "private human relations" The  $\alpha$  factor of Cronbach was 0.810 and the reliability of the standard was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was 0.163, and a meaningful correlation was seen, but this was low when we compared it to other factors.

# 2. 2. 2. Factor 2: A Sense of Purpose

In Factor 2, we evaluated motivations for working and sense of purpose at the workplace which we interpreted to be "a sense of purpose" The  $\alpha$  factor of Cronbach was 0.700 and the reliability of the standard was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was -0.377, and a meaningful correlation was seen.

### 2. 2. 3. Factor 3: Stress Reactors

In Factor 3, we evaluated the conditions of mind and body which we interpreted to be "stress reactors." The  $\alpha$  factor of Cronbach was 0.754 and the reliability of the standard was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was -0.405,

and a meaningful correlation was seen.

# 2. 2. 4. Factor 4: Human Relations in the Office

In Factor 4, we evaluated office human relations between superiors and coworkers in the workplace which we interpreted to be "human relations in the office." The  $\alpha$  factor of Cronbach was 0.730, and the reliability of the scale was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was 0.448, and a meaningful correlation was seen.

# 2. 2. 5. Factor 5: Work Burden

In Factor 5, we evaluated the burden of the quantity of the work which we interpreted to be the "work burden." The  $\alpha$  factor of Cronbach was 0.707 and the reliability of the standard was confirmed. The coefficient of the correlation with the external standard of "job satisfaction: office environmental awareness" was -0.251, and a meaningful correlation was seen, but this was low when we compared it to other factors.

Table 3 Factor analysis results (Elder Care Facilities)

	factor loading				
	1	2	3	4	5
	private human relations	a sense of purpose	stress reactors	human relations in the office	work burden
	$(\alpha = 0.810)$	$(\alpha = 0.700)$	$(\alpha = 0.754)$	$(\alpha = 0.730)$	$(\alpha = 0.707)$
\$16\$ When I bring up personal problems, my family and friends listen to me	0.834	-0. 082	-0. 091	0. 110	0. 030
18 I can talk without hesitation to my family and friends	0.829	-0.067	-0.037	0. 135	0.009
I can rely on my family and friends when I have trouble at work	0.781	-0.004	-0.074	0. 117	0. 024
4 I am not interested in what I am doing now	-0. 304	0.693	0. 090	-0.050	0.050
19 I am in charge of nonessential work	0. 182	0.664	0.070	-0.091	-0.105
1 The purpose of my work is not clear to me	-0. 223	0.658	0.034	0.024	0. 158
$36\ \ {\rm My\ skills}$ and knowledge are of little use in $\ \ {\rm my\ work}$	0. 032	0.640	-0, 005	-0. 182	0. 125
$11 \   \underset{work}{\text{I don'}} \ t \ know \ \text{what is expected of me at}$	0. 007	0.616	0. 183	-0. 230	0. 028
9 I am dead tired recently	-0.005	0.045	0.792	-0. 132	0. 263
7 I sometimes feel slightly dizzy	-0.142	-0.014	0,703	0.002	-0.059
17 I am exhausted at the end of work	0.090	0. 201	0.686	-0. 179	0. 378
38 I don't feel well these days	-0. 159	0. 235	0,673	-0. 169	0. 216
$_{\mbox{\footnotesize 37}}$ $_{\mbox{\footnotesize when I}}^{\mbox{\footnotesize I}}$ am in trouble.	0. 195	-0. 087	-0. 092	0.723	-0. 128
34 If I bring up personal problems, my co- workers and superiors will listen to me	0. 313	-0.057	-0. 115	0,717	-0. 157
30 I can speak freely with my coworkers and superiors	0. 283	-0. 174	-0. 214	0.695	-0. 097
5 I am given appropriate evaluations from my superior	-0. 202	-0. 215	-0. 014	0.609	-0. 023
2 There is too much work	0.056	-0. 044	0. 229	0.069	0.767
26 My work is too much for one person to do	0.019	0. 059	0. 117	-0. 212	0,750
35 I don't have enough time to do my work	-0.034	0. 188	0. 118	-0. 192	0.745

#### Discussion

### 1. Relationships between the Duty Recognition Standard and the Characteristics of the Subject Groups

We performed an analysis of the difference of duty recognition according to the individual characteristics of hospital and elderly care facility workers such as the type of job and the length of service. To do this we calculated the mean of the standard score according to the individual characteristics and compared the mean by the characteristics.

#### 1. 1. First Characteristic: Type of Job

#### 1 1 1 Hospitals

We observed a significant difference of the mean (Table 4) of the standard score according to the types of jobs of the respondents at the hospitals. There was a significant difference among physical therapists, care workers and nurses in the "a sense of purpose," and we found that physical therapists, compared with care workers and nurses, recognized "a sense of purpose" more highly. (In the case of a "sense of purpose," a lower score means higher recognition and a higher score means lower recognition because the item questioned negatively.) To account for this, it can be said that the content and the goals of the duties of physical therapists are more clearly defined. In contrast, a difference occurs in the "a sense of purpose" for nurses and care workers because their duties are far more diverse and ambiguous.

There was a significant difference in "stress reactors" among nurses and physical therapists and we found that nurses have higher "stress reactors" than physical therapists. In addition, there was a significant difference between nurses, care workers and physical therapists about "work burden," and we found that nurses have a higher sense of "work burden" than care workers and physical therapists. We can assume that nurses feel a more quantitative burden of work since their work is influenced by a labor shortage among nurses and the diversity of duties in nursing. For these reasons, the "stress reactors" of nurses is higher as a result.

#### 1. 1. 2. Elder Care Facilities

When observing the difference in the mean (Table 4) of the standard score according to the types of jobs of the respondents in the elder care facilities in "human relations in the office" there is a significant difference among nurses and care workers and care managers, and we found that nurses have lower expectations of "human relations in the office" than care workers and care managers. Nurses of the elder care facilities are fewer in number and there is less cooperation with persons in other types of jobs in the carrying out of their duties. Therefore, we assumed that it was not necessary for nurses emphasize human relations in the office so highly.

There is a significant difference among nurses, care workers and care managers about "a sense of purpose" and we found that nurses have a lower "sense of purpose" than care workers and care managers. The nurses in elder care facilities have many duties over and above medical care. A lower "sense of purpose" among nurses in elder care facilities may be accounted for by the fact that they have fewer occasions to demonstrate their individual skills and training in medicine.

There is a significant difference in care workers, nurses and clerks concerning "private human relations" and we found that care workers have a higher sense of "private human relations" than nurses and clerks. As indicated above, workers in elder care facilities need the support and understanding of family and friends and this tendency is particularly strong among care workers.

#### 1. 1. 3. Comparison

Nurses in hospitals show recognition at the same level as the other types of jobs about "human relations in the office," as we have seen. However, in contrast, "human relations in the office" were lower among the nurses of elder care facilities than among the other types of jobs. We understood it as follows. Nurses in

elder care facilities are fewer in number than the nurses of hospitals, as we have said. In addition, there are fewer occasions where the contents of their duties require human relations in the office because there is less collaboration with the other types of jobs among their duties.

Care workers are lower than the other types of jobs at hospitals about "a sense of purpose." In contrast, "a sense of purpose" is lower among nurses in elder care facilities. These findings seem to suggest that it may be necessary to reconsider the significance of the existence and the role of care workers at hospitals, which operate mainly on medical functions as the primary function of the hospital. On the other hand, it may be said that there is a necessity to reconsider the significance of the existence and the role of nurses in elder care facilities, which focus mainly on welfare services.

Furthermore, the nurses in hospitals rank "work burden" higher than the other types of jobs. In contrast, we found that in elder care facilities there is no difference among the types of jobs in the "work burden." As we mentioned earlier, this could be due to the influence of the labor shortage of nurses at hospitals and the accompanying increase of their duties. For these reasons, the nurses of hospitals may feel a higher quantitative work burden than the other types of jobs.

		human relations in the office a sense of purpose		stress reactors	private human relations	work burden	
	n	mean examination	mean examination	mean examination	mean examination	mean examination	
hospitals							
clerk	40	13.88	12.18	12.38	11.78	10.53	
nurse	164	13.61	12.87	13.09	11.49	11.06	
care worker	70	13.61	13.23	12.89 *	12.11	10.21	
physical therapist	40	14.53	10.88   *	11.53	11.40	9.45	
care manager	10	14.60	11.10	12.30	11.70	10.80	
dietician	9	14.56	10.56	13.33	12.11	10.44	
others	4	13.00	10.75	12.75	12.75	10.50	
elder care facilities							
clerk	15	13.27	12.40	11.47	10.60	10.60	
nurse	31	12.90	13.45	13.61	10.90	10.58	
care worker	165	14.48   *	12.17	12.73	12.17 📗 *	10.50	
physical therapist	6	14.83	12.83 *	11.00	12.17	9.50	
care manager	23	14.61	11.22	12.65	11.74	10.43	
dietician	6	17.17	8.83	11.67	11.50	8.17	
others	2	17.00	12.00	13.50	15.00	9.00	

Table 4 The mean of the standard score according to the type of job

# 1. 2. Second Characteristic: Period of Work

#### 1. 2. 1. Hospitals

We observed a difference of the mean (Table 5) of the standard score according to the period of work of the respondents at the hospitals. There was a significant difference in "human relations in the office"

<sup>(\*;</sup>p<0.05, \*An analysis of variance of the one way layout)

among the less-than-3 years group and 3-10 years group. We found that the less-than-3 years group has a higher recognition of "human relations in the office" than 3-10 years group. We assume that the group of less-than-3 years is more inexperienced than the group of 3-10 years. Since they rely on the boss and help each other more than others among fellow workers, they have a higher regard for the "human relations in the office."

About "stress reactors" we found that the less-than-3 years group and over-20 years group had a significant difference: the less-than-3 years group is higher in "stress reactors" than the over-20 years group. It suggests that persons whose length of service is shorter feel more fatigue due to shallower experience and an unfamiliar environment.

The less-than-3 years group and 10-20 years group had a significant difference concerning "private human relations," with the less-than-3 years group higher in "private human relations" than 10-20 years group. The following observations can be made. The person who has a shorter length of service regards human relations outside of the workplace more highly and he feels that he receives more support from those around him.

As for "work burden" the less-than-3 years group and the over-20 years group had a significant difference, with the over-20 years group having a higher sense of "work burden" than the less-than-3 years group. We assume that the group feels a greater work burden due to the fact that as the length of service becomes longer, the burden and the responsibility of duties grow heavier.

### 1. 2. 2. Elder Care Facilities

We observed a difference of the mean (Table 5) of the standard score according to the period of work of the respondents at elder care facilities. As for "a sense of purpose," the 3-10 years group and over-20 years group had a significant difference. We found that the 3-10 years group has a lower "sense of purpose" than the over-20 years group. We assume that the longer the length of service of the person in the institution and the more acutely aware he is of his role, the greater the "sense of purpose" is recognized.

As for "private human relations" the less-than-3 years group and 3-10 years group had a significant difference and we found that the less-than-3 years group has a higher awareness of "private human relations" than the 3-10 years group. Like the hospital, the shorter the length of service of a person, the more highly he regards human relations outside of the workplace. And he feels more support and understanding from family and friends.

# 1 2 3 Comparison

The less-than-3 years group of hospital workers were more aware of "human relations in the office" than the other periods of work. In contrast, there was no difference in the elder care facilities according to periods of work. We assume, as mentioned above, that because the less-than-3 years group rely on and seek more help from their boss and other experienced persons due to their shallower work experience at the hospital, they regard human relations in the office more highly.

Although there is no significant difference among hospital workers by the period of work in their "a sense of purpose," in elder care facilities "a sense of purpose" is ranked higher in the over-20 years group than in the other groups. It can be assumed that people who have worked for a longer period of time at elder care facilities are more highly aware of "a sense of purpose" with the accumulation of the work period and more experience depending on that length.

Concerning "work burden." Although the over-20 years group ranks "work burden" higher among hospital workers than the other groups, there was no significant difference in the elder care facilities in the period of work. This inclination toward the "work burden" at hospitals means that the burden of the work becomes heavier as length of service becomes longer. On the other hand, about "stress reactors," the over-20 years group is lower than the other groups at the hospital, while in the elder care facilities,

by contrast, there was no difference by the length of service. It is observable that people with longer experience at hospitals are more able to control their stress.

Finally, about "private human relations," both hospitals and elder care facilities show similar results. "Private human relations" is higher among the group whose period of work is shorter.

		human relations in the office	a sense of purpose	stress reactors	private human relations	work burden	
	n	mean examination	mean examination	mean examination	mean examination	mean examination	
hospitals				-			
less than 3 years	78	14.31	12.12	13.13	12.37	9.65	
3∼10 years	110	13.36	12.95	13.35	12.15 *	10.40	
10~20 years	80	14.01	12.38	12.33	10.96	11.11	
over 20 years	69	13.67	12.29	11.88	10.97	11.39	
elder care facilities							
less than 3 years	65	14.83	12.23	12.51	12.66	9.95	
3∼10 years	93	14.01	12.59	12.96	11.56	10.57	
10∼20 years	64	14.30	11.97 *	12.27	11.66	10.44	
over 20 years	26	14.15	11.19	13.31	11.65	10.96	

Table 5 The mean of the standard score according to period of work

(\*;p<0.05, \*An analysis of variance of the one way layout)

# 2. The Relationship Between Job Satisfaction and the Characteristics of the Subject Group

We asked questions about job satisfaction concerning such items as "continuation awareness," "a sense of belonging" and "office environmental awareness" independently from the duties recognition standard and performed an analysis of the answers in regard to the differences by the type of job. To do this we calculated the mean of the job satisfaction score according to type of job and compared the mean of the score between them.

# 2. 1. Hospitals

Observing the difference of the mean (Table 6) of the job satisfaction score according to the type of job of the respondents at hospitals for "continuation awareness," there was a significant difference among care managers<sup>†2)</sup>, nurses and care workers, and we found that nurses and care workers have lower "continuation awareness" than care managers.

There was also a significant difference concerning "office environmental awareness" among care managers, nurses and care workers. We also found that nurses and care workers have lower "office environmental awareness" than care managers. Care managers of hospitals are comparatively satisfied in the workplace and they have a stronger will to continue working in the future. In contrast, the feeling of satisfaction for the environment of the present workplace is relatively low among nurses and care workers in hospitals. We can say that their intention to want to continue working will be relatively weak in the future. We guess that there are factors such as a low "sense of purpose" or a high "work burden" working in the background.

#### 2. 2. Elder Care Facilities

The difference of the mean (Table 6) of the job satisfaction score according to the types of jobs of the respondents at elder care facilities indicates that nurses, clerks, care workers and care managers show a significant difference concerning "a sense of belonging," and we found that nurses have a lower "sense of belonging" than clerks, care workers and care managers.

There was a significant difference concerning "office environmental awareness" among nurses and care managers, and compared to care managers, we also found that nurses have a lower "office environmental awareness." From these results, we can say that feeling of satisfaction for the workplace is relatively lower for nurses at elder care facilities than other types of jobs. We assume that there are factors such as a lower recognition of "human relations in the office" or a lower "sense of purpose" at work behind this.

#### 2. 3. Comparison

As we have seen above, the "continuation awareness" of nurses and care workers at hospitals is lower than other types of job. On the contrary, there was little difference in recognition of this item according to the type of job in the elder care facilities. At the same time, there is little difference according the type of job about a "sense of belonging" at hospitals. In elder care facilities, a "sense of belonging" among nurses is relatively lower than the other types of jobs. Moreover, we found that the feeling of satisfaction of nurses and care workers is relatively low in "office environmental awareness" at hospitals, and the feeling of satisfaction of nurses is relatively low in the elder care facilities. As mentioned, we presume that the burden and stress of their work stemming from the labor shortage of nurses has influenced the fall of the "continuation awareness" among nurses at hospitals. Concerning care workers at hospitals, as mentioned above, we imagine that there may be a connection between their "sense of purpose," role awareness and the significance of their existence at work being low and lower "continuation awareness." We can assume that these factors promote a lowering of the "office environmental awareness" of nurses and care workers.

At the same time, we can assume that the low in a "sense of belonging" among the nurses at elder care facilities is connected to the lower recognition of the "human relations in the office" and their purpose and role awareness also being low. The "office environmental awareness" of nurses seems to be low owing to these factors.

#### 3. The Relationship Between Job Satisfaction and Duty Recognition

We calculated a coefficient of correlation to observe relevance with the duties recognition standard ("human relations in the office," "a sense of purpose," "stress reactors," "private human relations" and "work burden") and job satisfaction items ("continuation awareness," "a sense of belonging" and "office environmental awareness").

			continuation sense of be awareness		of belonging	office environment awareness	
	n	mean	examination	mean	examination	mean	examination
hospitals							
clerk	40	3.45		3.53		3.13	
nurse	164	3.20 -	)	3.41		2.89	)
care worker	70	3.17	<del> </del>	3.56		2.89	<b>h</b> *
physical therapist	40	3.38	*	3.55		2.93	*
care manager	10	4.00	ע	3.90		3.60	ע
dietician	9	3.78		4.33		3.22	
others	4	3.75		3.75		3.00	
elder care facilities							
clerk	15	3.53		4.00	了.	3.47	
nurse	31	3.26		3.45	<b>┧</b> *	3.00	)
care worker	165	3.53		3.86	┦ *	3.26	*
physical therapist	6	3.50		3.83	*	3.33	
care manager	23	3.61		4.00	J	3.61	J
dietician	6	4.17		4.50		4.33	
others	2	4.50		5.00		5.00	

Table 6 The mean of job satisfaction according to the type of job

(\*;p<0.05, \*An analysis of variance of the one way layout)

# 3. 1. Hospitals

At hospitals we found a significant connection between "continuation awareness" and "human relations in the office" at 0.495, "a sense of purpose" at - 0.467, "stress reactors" at - 0.329, "private human relations" at 0.199 and "work burden" at - 0.107.

We found a significant connection between a "sense of belonging" and "human relations in the office" at 0.482, "a sense of purpose" at - 0.454, "stress reactors" at - 0.362, "private human relations" at 0.196 and "work burden" at - 0.110.

We found a significant connection between "office environmental awareness" and "human relations in the office" at 0.433, "a sense of purpose" at - 0.344, "stress reactors" at - 0.361, "private human relations" at 0.212 and "work burden" at - 0.212.

Observing the standards most strongly related to job satisfaction items, we find that they all have a strong connection to "human relations in the office" as do "continuation awareness," "a sense of belonging" and "office environmental awareness."

# 3. 2. Elder Care Facilities

At elder care facilities, we found a significant connection between "continuation awareness" and "private human relations" at 0.220, "a sense of purpose" at - 0.412, "stress reactors" at - 0.333 and "human relations in the office" at 0.419.

We found a significant connection between "sense of belonging" and "private human relations" at 0.168, "a sense of purpose" at - 0.379, "stress reactors" at - 0.355, "human relations in the office" at 0.412 and

"work burden" at -0.137.

We found a significant connection between "office environmental awareness" and "private human relations" at 0.163, "a sense of purpose" at - 0.377, "stress reactors" at - 0.405, "human relations in the office" at 0.448 and "work burden" at - 0.251.

Observing the standards most strongly related to job satisfaction items, we find that they all have a strong connection to "human relations in the office" as do "continuation awareness," "sense of belonging" and "office environmental awareness."

#### 3 3 Comparison

As mentioned above, observing the standards most strongly related to job satisfaction items, we find that they have a strong connection to "human relations in the office" as do "continuation awareness," "a sense of belonging" and "office environmental awareness." Therefore, we have found that hospitals and elder care facilities have a common recognition about the relevance of job satisfaction with duties recognition.

The above-mentioned results suggest that in order to raise the job satisfaction of the workers of hospitals and elder care facilities, it will be necessary to raise the awareness of "human relation at the office." Gleaned from the "human relations in the office" question items, this includes building a relationship of confidence with coworkers and superiors in facing difficulties and a proper evaluation of workers' efforts. As concrete proposals, we suggest securing and supporting adequate places for conversation, the maintenance of a system for coping with problems and setting up of appropriate evaluation opportunities. Our survey made clear to us that action in setting up such policies will lead to a rise in the job satisfaction of workers at hospitals and elder care facilities.

#### Conclusion

In this study, we developed a duties recognition standard of the workers at both hospitals and elder care facilities. We attempted to grasp the characteristics of hospitals and elder care facilities and at the same time through a comparison of both, to study how personnel affairs and personnel management measures for the workers of hospitals and elder care facilities should be implemented in the future.

First, we made a factor analysis of 38 question items and then produced a duties recognition standard for both hospitals and elder care facilities. As a result, we obtained five factors of similar content for hospitals and elder care facilities. Conversely, the first factor for the elder care facilities was "human relations outside of the office," whereas, the first factor at the hospitals was "human relations in the office." The results indicated that "human relations in the office" are more highly evaluated at hospitals. In contrast, at elder care facilities, they highly evaluated "human relations outside of the office." Accordingly, the families of workers at elder care facilities should be supported in various ways so that workers can get understanding from their family.

Next, we calculated the mean of the duties recognition standard by separate characteristics. The results show that "a sense of purpose" was lowest among care workers at hospitals. In contrast, in elder care facilities "a sense of purpose" was lowest among nurses. The analysis of these factor results suggest that at both hospitals which perform health care services and at elder care facilities which perform welfare services, the significance of the existence of nurses and care workers and their roles must be reassessed. In addition, at hospitals, the over-20-years group had the lowest "stress reactors" while "work burden" was the highest. Such a difference was not recognized at elder care facilities. Accordingly, we found out that there is a bias toward the workload by the length of service at hospitals. The longer one works, the greater the sense of burden becomes.

Furthermore, in the relevance analysis of the basic characteristics with job satisfaction, the recognition

of nurses and care workers at hospitals of "continuation awareness" was lower than the other types of jobs. In addition, the nurses at elder care facilities had a low "sense of belonging." Observing these factors from the analysis of the duties recognition standard mean according to the type of job, we find that they are influenced by the fact that the "work burden" of nurses at hospitals is high and the "a sense of purpose" of care workers at hospitals is low and also that "human relations in the office" and "a sense of purpose" among nurses at elder care facilities are low. The analysis of these factor results suggests that to raise the "continuation awareness" of nurses and care workers at hospitals which perform health care services, the "work burden" of nurses and the significance of the existence of care workers and their roles at hospitals must be reassessed. At the same time, elder care facilities which perform welfare services must reassess the existence and the role of nurses in order to raise the "continuation awareness" of nurses at their facilities.

Finally, in the relevance analysis of the basic characteristics with job satisfaction, we found that "human relations in the office" has the strongest equilateral correlation among the common factors of "continuation awareness," "a sense of belonging" and "office environmental awareness" at both hospitals and elder care facilities. As a policy to raise the awareness of "human relations in the office" from the above-mentioned results, we suggest that securing and supporting adequate places for conversation, the maintenance of a system for coping with problems and the setting up of appropriate evaluation opportunities are essential.

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#### Footnotes

- †1) Staffs to perform care services, including certified care workers, helpers, etc. and excluding care managers.
- †2) The breakdown of the care managers of hospitals was one medical social worker, eight care managers and one social worker.

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