

Factors related to depression among childcare worker; Cross-sectional study in Hokkaido, Japan

Asae OURA¹⁾, Miwa SUZUMURA¹⁾, Michiyo YAMAMOTO²⁾, Hiroko YAKO-SUKETOMO³⁾,
Kayoko KATAYAMA⁴⁾, Asako TOKIZAWA¹⁾, Tomoyo SATO¹⁾, Mitsuru MORI¹⁾

¹⁾Department of Public Health, Sapporo Medical University School of Medicine

²⁾Department of Nursing, Faculty of Health Science, Hokkaido University of Science

³⁾Faculty of Sports and Health Sciences, Japan Women's College of Physical Education

⁴⁾Cancer Prevention and Cancer Control Division, Kanagawa Cancer Center Research Institute

ABSTRACT

The goal of the present study was to investigate the factors related to depression among childcare workers. From November 2015 to August 2016, 358 nurseries (17.9%) answered a questionnaire. Adjusted for nursery work experience totaling more than five years, work place, cooperation in the work place, quality of sleep, hospital visiting, factors related to work of more than five years (OR=0.55, 95%CI=(0.34, 0.91)), ability to consult troubles with boss (OR=0.36, 95%CI=(0.18, 0.73)), to be able to take paid holidays (OR=0.49, 95%CI=(0.27, 0.88)), having a spouse (OR=0.55, 95%CI=(0.32, 0.94)) were considered to decrease the risk of depression. The Japanese government should prompt to improve the treatment of nurseries.

(Received December 2, 2016 and Accepted March 28, 2017)

Key words: childcare worker, depression, cross-sectional study, Japan

1 INTRODUCTION

Users of nurseries are not only parents who work, but also parents who have an illness or are undergoing medical treatment. Therefore, nurseries are one of the most important society resources which are necessary in medical care. Japan struggling with problems such as a declining birth rate and aging population. Gender equality has been pushed by the government¹⁾, and consciousness for the women working during child care has increased. According to Ministry of Health, Labour and Welfare, there were 24,425 authorization nurseries²⁾ and 8,038 approvals outside the nurseries in 2014, in Japan³⁾. Nurseries have been increasing year by year in Japan, but the problem of having waiting lists for children is still present. In 2015, childcare in Japan was greatly revolutionized⁴⁾. There were not enough childcare workers about one hundred twenty thousand workers, in Japan, in 2014⁵⁾. The government began to improve the treatment of nursery teachers, for example efforts such as wage improvement at nurseries.

There is a turnover problem at the nurseries, which was also 30 percent in the United States⁶⁾. Previous studies^{7, 8)} on the turnover of nursery teachers in the United States have been actively carried out. Porter⁹⁾ reported that one of the causes on the turnover of nursery teachers was not only no welfare and low wages, but also work environment, for example insufficient support from boss, and circumstances of the individual, for example relocation of husband.

In Japan, there were not very many studies^{10, 11, 12, 13)} that focused on treatment of childcare workers as far as we know. Nakane¹⁴⁾ suggested that a reason why there may be a low tone of work-life balance of kindergarten teachers and childcare workers in Japan have the high turnover rate, a drop in the treatment for the labor, and instability of employment. In 2011, childcare workers who retired were investigated for possibility of returning to childcare¹⁵⁾. Some anxious factors shown for working as a childcare worker again were work and family-life balance, one's health, and time of work. On the other hand, the reasons of quitting jobs were

shown to be difficulty with work and family-life balance, life events, such as marriage, relocation of husband and pregnancy. Depression was considered as one of the factors which affect the health hazard in the labor. Therefore, previous studies on the relationship between depression¹⁶⁾, stress or mental health^{17,18)} and childcare-workers in Japan were reported to be written in Japanese or a cross-sectional design¹⁹⁾, which was referred to in an English paper of longitudinal study design as far is known. We started a longitudinal study for childcare workers in Sapporo to clarify a cause to lose employment from 2015. The present study reported factors related to depression among childcare workers in the baseline.

2 METHODS

The present study was conducted to evaluate factors related to depression among childcare workers. To obtain the data for the cross-sectional study, we requested cooperation from 261 authorized nurseries and 65 unapproved nursery schools, which we researched, in Sapporo City, from November 2015 to August 2016. Entry registration of the present study was completed in the following schedule: November, 121 childcare workers; December, 81 childcare workers; and January, one childcare worker. We performed a re-request of the present study cooperation to each nursery school in February. After re-requesting, entry registration was completed in the present study; February, 70 childcare workers; March, 56 childcare workers; April, 20 childcare workers; May, five childcare workers; June, one childcare worker; July, two childcare workers; and August, one childcare worker. Thus, a total of 70 nursery schools (21.1%) were obtained for the present study. The reason why Sapporo City was selected for the research site was the following: i) researchers could easily access the research field of the nursery schools, and cooperation from persons concerned with childcare was provided, ii) There is the problem of a waiting-list for children throughout Japan. One big city with the problem is Sapporo.

The study included a childcare worker whose relatives were from in charge of a nursery school in Sapporo, Hokkaido, in Japan. Written informed consent was obtained from 358 of 2,000 childcare workers (17.9%).

We sent to the childcare facility an envelope which included questionnaire, manual of the present study, written informed consent, and a self-addressed envelope for number of childcare workers. The facilities where the study would take place agreed to hand each childcare worker an envelope. The childcare workers who agreed to participate returned signed consent and asked for a self-administered questionnaire. The questionnaire included questions regarding: i) work history, ii) current treatment, iii) lifestyle, iv) relationships with family, and v) health status, including the Center for Epidemiologic Studies Depression Scale (CES-D²⁰⁾) evaluation. The study was approved by the Ethical Board of Sapporo Medical University.

Childcare workers were divided into two groups according to their CES-D score: those who were depressed (CES-D score of 16 and up) and those who were not²⁰⁾. Statistical analysis were performed using the Statistical Package for Social Science (SPSS version 20, in Japanese). The t-test, Chi-square test and Fisher's exact probability test were used to compare each group. A multiple logistic regression analysis was conducted to control for any confounding factors related to the depression of childcare workers. The Odds ratios (OR) of depression and 95% confidence intervals (CI) were estimated with logistic regression analysis. A level of 0.05 was determined to be a critical level of significance.

3 RESULTS

One hundred nineteen childcare workers (33.2%) were determined depression from CES-D. Table 1 shows the baseline characteristic of childcare workers. Depressed childcare workers were more likely to be younger ($p<0.05$), to have overtime work ($p<0.05$), to take work home ($p<0.05$), to visit a hospital ($p<0.05$) than their counterpart. Depressed childcare workers were less likely to have a long career of childcare work in total ($p<0.05$), and at their current nursery school ($p<0.05$), to gain a managerial position ($p<0.05$), to be able to consult troubles with boss ($p<0.05$), to have been assessed in the workplace ($p<0.05$), to practice ideal childcare ($p<0.05$), to receive support in the workplace ($p<0.05$), to be able to take paid holidays (<0.05), to have pride in work ($p<0.05$), to have quantity of work ($p<0.05$), sleep time ($p<0.05$),

Table 1. Baseline characteristics

		Total N=358	depressed N=119	non-depressed N=239	p-value
Gender	female	348(97.2%)	114(95.8%)	234(97.9%)	0.31
Age	years old	36.9±11.4	33.7±10.6	38.5±11.5	<0.001*
Work place	authorized daycare center	293(83.0%)	104(87.4%)	189(80.8%)	-
	authorized daycare center until 0-2 years of age	3(0.8%)	0(0%)	3(1.3%)	
	unlicensed nursery	57(16.1%)	15(12.6%)	42(17.9%)	
Total number of years worked at nursery	years	11.7±8.6	9.1±7.7	12.9±8.8	<0.001*
	more than five years work	247(69.4%)	72(60.5%)	175(73.8%)	0.02*
The number of years nursery teachers worked at the current nursery school	years	6.8±7.1	5.1±6.2	7.6±7.4	<0.01*
Responsibility	0 years old	64(18.1%)	23(19.5%)	41(17.4%)	0.50
	1 years old	67(18.9%)	27(22.9%)	40(16.9%)	
	2 years old	51(14.4%)	18(15.3%)	33(14.0%)	
	3 years old	26(7.3%)	9(7.6%)	17(7.2%)	
	4 years old	13(3.7%)	4(3.4%)	9(3.8%)	
	5 years old	9(2.5%)	3(2.5%)	6(2.5%)	
	free	70(19.8%)	15(12.7%)	55(23.3%)	
	mixing childcare	54(15.3%)	19(16.1%)	35(14.8%)	
Agreement	positive staff	247(69.0%)	80(67.2%)	167(69.9%)	0.63
Employment status	full time	302(85.1%)	100(84.7%)	202(85.2%)	1.00
Education	associate degree	241(67.7%)	80(67.2%)	161(67.9%)	0.91
Qualification	child minder	347(98.6%)	116(99.1%)	231(98.3%)	1.00
	kindergarten teacher	280(89.7%)	96(91.4%)	184(88.9%)	0.56
Management	director, deputy director, chief	64(17.9%)	12(10.2%)	52(21.8%)	0.01*
Overtime work	yes	250(70.0%)	94(79.0%)	156(65.5%)	<0.01*
	hours/week	4.4±5.2	5.1±4.9	3.9±5.3	0.07
take work home	yes	180(50.6%)	69(58.5%)	111(46.6%)	0.04*
Income	less than 50,000 yen	6(1.7%)	1(0.8%)	5(2.1%)	-
	50,000 - 100,000 yen	25(7.0%)	4(3.4%)	21(8.9%)	
	100,000 - 150,000 yen	141(39.6%)	63(52.9%)	78(32.9%)	
	150,000 - 200,000 yen	142(39.9%)	43(36.1%)	99(41.8%)	
	200,000 - 250,000 yen	35(9.8%)	7(5.9%)	28(11.8%)	
	250,000 - 300,000 yen	6(1.7%)	1(0.8%)	5(2.1%)	
	300,000 yen or more	1(0.3%)	0(0%)	1(0.4%)	
Listen to worries	Boss	293(84.0%)	84(71.2%)	209(90.5%)	<0.001*
	colleague	340(96.3%)	108(93.9%)	232(97.5%)	0.13
	family member	342(97.2%)	109(94.8%)	233(98.3%)	0.09
Job training	adoption	180(50.4%)	56(47.1%)	124(52.1%)	0.37
	expert	320(89.6%)	106(89.1%)	214(89.9%)	0.85
Conference	participation	345(96.4%)	115(96.6%)	230(96.2%)	1.00
Carreer enhancement	possible	277(80.1%)	89(75.4%)	188(82.5%)	0.16
Evaluation from the surroundings	possible	96(26.9%)	20(16.8%)	76(31.9%)	<0.001*
Practice ideal childcare	possible	225(63.4%)	61(51.3%)	164(69.5%)	<0.001*
Cooperation in the workplace	supporting	296(82.9%)	90(75.6%)	206(86.6%)	0.01*
Paid holiday	possible	279(77.9%)	82(68.9%)	197(82.4%)	<0.01*
Proud to work	having	327(91.6%)	99(83.9%)	228(95.4%)	<0.001*
Amount of work	many	169(47.3%)	66(55.5%)	103(43.3%)	0.03*
Continuation of work	yes	320(89.4%)	101(84.9%)	219(91.6%)	0.07
Sleeping time	hours	6.2±0.9	6.0±9.1	6.3±9.4	0.01*
Quality of sleep	keeping	229(64.0%)	55(46.2%)	174(72.8%)	<0.001*
Smoking	smoker	36(10.1%)	15(12.7%)	21(8.8%)	0.11
	smoking experience	44(12.3%)	9(7.6%)	35(14.6%)	
	non-smoker	277(77.4%)	94(79.7%)	183(76.6%)	
Alcohol drinking	not drinking	132(37.0%)	43(36.4%)	89(37.2%)	0.91
Leisure activity	having	201(56.5%)	68(57.6%)	133(55.9%)	0.82
Hospital visit	visiting	157(44.0%)	64(54.2%)	93(38.9%)	<0.01*
Spouse	have	141(41.0%)	33(28.9%)	108(47.0%)	<0.01*
Child	have	133(44.6%)	34(34.0%)	99(50.0%)	0.01*
Live with parents or parents-in-law	yes	89(32.5%)	33(34.7%)	56(31.3%)	0.59
Nursing care experienced	yes	49(14.1%)	16(13.7%)	33(14.3%)	1.00

*: p<0.05

Table 2. Odds ratio and 95% confidence intervals for depression associated with related factors

		Model 1 (95%CI)	Model 2 (95%CI)	Model 3 (95%CI)	Model 4 (95%CI)
Nursery total work year	more than 5 years	0.53(0.33, 0.86)	0.55(0.34, 0.88)	0.55(0.34, 0.90)	0.55(0.34, 0.91)
Management	yes	0.49(0.24, 0.99)	0.50(0.25, 1.02)	0.49(0.24, 1.01)	0.51(0.25, 1.05)
Overtime work	yes	1.77(1.02, 3.08)	1.68(0.96, 2.94)	1.65(0.96, 2.85)	1.43(0.80, 2.54)
take work home	yes	1.50(0.93, 2.41)	1.36(0.84, 2.21)	1.44(0.90, 2.31)	1.25(0.75, 2.06)
Income	more than 150,000 yen/ month	0.66(0.40, 1.07)	0.66(0.40, 1.08)	0.65(0.39, 1.09)	0.63(0.38, 1.06)
Consult with boss	yes	0.28(0.16, 0.52)	0.30(0.15, 0.59)	0.35(0.19, 0.65)	0.36(0.18, 0.73)
Cooperation in the workplace	supporting	0.53(0.30, 0.94)	0.53(0.30, 0.94)	0.65(0.35, 1.18)	0.68(0.37, 1.24)
Paid holiday	possible	0.41(0.23, 0.72)	0.45(0.25, 0.79)	0.58(0.33, 1.00)	0.49(0.27, 0.88)
Carreer enhancement	possible	0.53(0.29, 0.96)	0.60(0.33,1.09)	0.63(0.35, 1.12)	0.59(0.31, 1.10)
Amount of work	many	1.77(1.11, 2.82)	1.61(0.99, 2.62)	1.29(0.78, 2.11)	1.19(0.70, 2.00)
Sleeping time	7-8 hours	0.73(0.44, 1.21)	0.76(0.46, 1.27)	0.95(0.55, 1.63)	1.02(0.58, 1.77)
Spouse	have	0.56(0.33, 0.93)	0.54(0.32, 0.91)	0.52(0.31, 0.87)	0.55(0.32, 0.94)
Child	have	0.65(0.37, 1.12)	0.66(0.38, 1.14)	0.49(0.28, 0.87)	0.56(0.31, 1.01)

Model 1: Adjusted for nursery work experience totaling more than five years, work place.

Model 2: Adjusted for nursery work experience totaling more than five years,work place, cooperation in the workplace.

Model 3: Adjusted for nursery work experience totaling more than five years, quality of sleep, hospital visiting.

Model 4: Adjusted for nursery work experience totaling more than five years, work place, cooperation in the workplace, quality of sleep, hospital visiting.

to be satisfied with quality of sleep ($p<0.05$), to have a spouse ($p<0.05$), to have a child ($p<0.05$) than their counterparts.

The Odds ratio and 95% confidence intervals for depression associated with related factors were showed in the Table 2. Adjusted for nursery work experience totaling more than five years, work place, factors related to work more than five years (OR=0.53, 95%CI=(0.33, 0.86)), to be in a managerial position (OR=0.49, 95%CI=(0.24, 0.99)), to be able to consult troubles with boss (OR=0.28, 95%CI=(0.16, 0.52)), to receive support in the workplace (OR=0.53, 95%CI=(0.30, 0.94)), to be able to take paid holidays (OR=0.41, 95%CI=(0.23, 0.72)), to be able to have a career (OR=0.53, 95%CI=(0.29, 0.96)), to have a spouse (OR=0.56, 95%CI=(0.33, 0.93)) were considered to decrease the risk of the depression. On the other hand, adjusting for the same factors, factors related to working overtime (OR=1.77, 95%CI=(1.02, 3.08)), and amount of work (OR=1.77, 95%CI=(1.11, 2.82)) were considered to increase the risk of depression (Model 1).

Adjusted for one item of cooperation in the workplace in additional to Model 1, factors related to working more than five years (OR=0.55, 95%CI=(0.34, 0.88)), ability to consult troubles with boss (OR=(0.30, 95%CI=(0.15, 0.59)), receiving support in the work place (OR=0.53, 95%CI=(0.30, 0.94)), ability to take paid holidays (OR=0.45,

95%CI=(0.25, 0.79)), and having a spouse (OR=0.54, 95%CI=(0.32, 0.91)) were considered to decrease the risk of depression (Model 2).

Also, adjusted for nursery work experience totaling more than five years, quality of sleep, and hospital visiting in Model 3, factors related to working more than five years (OR=0.55, 95%CI=(0.34, 0.90)), ability to consult the troubles with boss (OR=0.35, 95%CI=(0.19, 0.65)), and having a spouse (OR=0.52, 95%CI=(0.31, 0.87)) were considered to decrease the risk of depression.

Furthermore, adjusted for nursery work experience totaling more than five years, work place, cooperation in the workplace, quality of sleep, and hospital visiting in Model 4, factors related to working more than five years (OR=0.55, 95%CI=(0.34, 0.91)), ability to consult troubles with boss (OR=0.36, 95%CI=(0.18, 0.73)), ability to take paid holidays (OR=0.49, 95%CI=(0.27, 0.88)), and having a spouse (OR=0.55, 95%CI=(0.32, 0.94)) were considered to decrease the risk of depression.

4 DISCUSSION

Depressed childcare workers totaled at 119 persons (33.2%) in the present study. Therefore, the judgment of depression in the present study was measurement with the questionnaire, not the interview. The case of nurses, improvement of specialty was related to burnout and depression in

a previous study²¹⁾. In the statistical data of the Ministry of Education, 0.59% of primary and junior high school teachers took a leave of absence with mental illness²²⁾, and 45.7% of primary and junior high school teachers became mentally ill within two years after relocation²²⁾. One of common aspects of the childcare workers and elementary school teachers was that they demanded cooperation with the parents of infants or low-age children. By the way, they may have to confront the issue of differences in values²³⁾ and so-called monster parents. We would like to clarify the association and influence in our future study.

Becoming an experienced nursery staff decreased the risk of burnout²⁴⁾. Our previous studies^{25, 26)} were conducted to explore potential association work environments and depression among caregivers working for group homes in Japan. Especially, caregivers for frail elderly may be very similar to childcare workers. Although age of care was different, similar work was present, such as care of changing diapers, and assistance with meals. The previous study of caregivers²⁵⁾ reported that improvement of expertise reduced the risk of turnover. There is also a need for time to improve the expertise. The average tenure of nursery teachers was 7.8years²⁷⁾. Half of the graduates of the nursery teacher training school did not get a job in a nursery²⁷⁾. In such a situation, the government performs a policy to let retired nursery teachers return to their job. One of the reasons, what they do not return is that nursery teacher were poorly paid, but work was a heavy responsibility. The average salary of the male nursery teacher was 231,200 yen, female nursery was 213,300 yen, and total was 214,200 yen. The salary of female nursery workers was lower by about 30,000 yen per month when compared to all women in the work force. The salary of male nursery workers was lower by about 130,000 yen per month when compared to all men in the work force^{27, 28)}. On the other hand, childcare workers should be assigned heavy responsibility, for example, they should pay attention to Sudden Infant Death Syndrome (SISD), and attention to allergies, in order to, prevent accidents in the nursery²⁹⁾. In the demand-control theory³⁰⁾, nursery teachers may be classified as a high strain group that has a high demand and low-control, and has a

high risk of depression. The present study did not show to have a relation between depression and salary. However, the work of childcare workers may not have a balance between salary and responsibility. Treatment improvement of childcare workers is an urgent problem in Japan.

Generally, when one becomes a manager, the responsibility gets heavies. Managerial positions do not significantly increase risk in the present study, however depressed nursery teachers were less likely to be in a managerial position than their counterparts. When nursery teachers become the managerial class, they may be freed from human relations. Ikemoto³¹⁾ reported that salary does not rise when the nursery becomes the chief. Depression decreases when childcare workers are recognized as colleagues and bosses recognize their good work. As far as we know, there are very few systems to recognize or promote excellent nurseries in Japan. Making systems compliment or acknowledge the work of a nursery may lead to reduction in turnover.

One of the reason is that it may be a trust relationship to not speak about consultations to others and the boss within the nursery. The present result supported the previous study of caregivers³²⁾ and depression among caregivers in group homes in Japan in our previous study²⁶⁾. Just like the present study, subjects who had fewer acceptances by their supervisors for consultation were significantly associated with an increased risk of depression²⁶⁾. When nursery workers build a good relationship of trust with the boss, they can consult with the boss. A good relationship of trust with the boss may be to support the childcare workers, and they could work comfortably.

One of the preventative methods for depression includes resting. The result of the present study was supported this method.

Having a spouse reduced the depression of care workers in our previous cross-sectional study²⁶⁾. Furthermore, about 95% of subjects were able to consult with a family member in the present study. Stress of work may be able to be reduced by having good communication within the family.

Certain limitations to our preset study should be disclosed. First, the design of the study was cross-sectional, which is why causal relationship was not able to prove. Second, the response rate

was low, which is why subjects included selected bias. Nursery schools in Japan organizes events each month, which they are always prepared. Because of that, there are several calls from the head or chief of nursery school that they opened the envelope now, after April. In recruitment of longitudinal research, we will recruit universities. As big bias, the intention of the director greatly affected the study participant. The method to investigate to childcare workers in various facilities will be problem that we must overcome in the future. Third, the present study did not geographically represent the entirety of Japan. By bias, subjects of the present study may have been blessed with a good environment, for example childcare workers could easily get time off. However, the depressed childcare workers were about 30% in the present study with good environment. Actual nurseries under the current situation may be more severe.

In conclusion, adjusting for nursery work experience totaling more than five years, work place, cooperation in the workplace, quality of sleep, hospital visiting, depressed childcare workers' factors which were related to working more than five years, ability to consult troubles to boss, ability to take paid holidays, and to have a spouse were considered to decrease the risk of depression.

ACKNOWLEDGEMENTS

We would like to thank the head of the child care facility which cooperated with the present investigation. The authors wish to acknowledge Prof. Shinichi Oda, and Lecturer Miho Nishino at Hokkaido Bunkyo University, Prof. Masanori Kawamura at Hokkai-Gakuen University and Hiromi Shinagawa at Sapporo International University, Hokkaido Hoiku Kyogikai, and Sapporoshi Taikizidozeronokai for many advices and support in the present study. Our special thanks go to the participants in the present study, which was supported in part by research grants from Grand-in-Aid for Scientific Research (C) (15K00727).

References

1. Gender Equality Bureau Cabinet Office. [Internet]. [cited 2016 Oct 6]. Available from: http://www.gender.go.jp/english_contents/index.html

2. 厚生労働省. 保育所関連状況とりまとめ (平成26年4月1日). [Internet]. [updated 2014 Sep. 9; cited 2016 Oct 6]. Available from: <http://www.mhlw.go.jp/file/04-Houdouhappyou-11907000-Koyoukintoujidoukateikyoku-Hoikuka/0000057778.pdf>
3. 厚生労働省. 平成26年度認可外保育施設の現状とりまとめ. [Internet]. [updated 2016 Feb. 19; cited 2016 Oct 6]. Available from: <http://www.mhlw.go.jp/stf/houdou/0000112878.html>
4. Cabinet Office, Government of Japan Web. The comprehensive Support System for children and child-rearing. [Internet]. [cited 2016 Oct 6]. Available from: http://www8.cao.go.jp/shoushi/shinseido/event/publicity/pdf/naruhodo_book_2609/eng/print.pdf
5. 厚生労働省. 保育士確保. [Internet]. [cited 2016 Oct 6]. Available from: <http://www.mhlw.go.jp/bunya/kodomo/osirase/140131-1.html>
6. National Association for the Education of Young Children. NAEYC Advocacy Toolkit. [Internet]. [updated 2004; cited 2016 Oct 6] Available from: www.naeyc.org/files/naeyc/file/policy/toolkit.pdf
7. Cassidy DJ, Lower JK, Kintner-Duffy VL, Hegde A V, Shim J. The day-to-day reality of teacher turnover in preschool classrooms: An analysis of classroom context and teacher, director, and parent perspectives. *Journal of Research in Childhood Education* 2011; 25: 1-23.
8. Barnett WS, Masse LN. Comparative benefit-cost analysis of the Abecedarian program and its policy implications. *Economics of Education Review* 2007; 26: 113-125.
9. Porter N. High turnover among early childhood educators in the United States. *Child research net*. [Internet]. [cited 2016 Oct 6]. Available from: http://www.childresearch.net/projects/ecec/2012_04.html
10. Hirokawa D. Trends in research that caregivers of work continuation of motivation, turnover intention. *中村学園大学・中村学園大学短期大学部研究紀要* 2008; 40: 83-90. (in Japanese)
11. Kato Y, Ando M. Impacts of depression at work among nursery teachers: Focus on Years of experience, sense of coherence, and coping skills. *Research on early childhood care and education in Japan* 2016; 54: 54-66. (in Japanese)
12. Matsuura M, Kamiji R, Minagawa J. Prospect of studying reality shock to eliminate the problem of increasing potential nursery teachers. *山陽論叢* 2015; 22: 87-100. (in Japanese)
13. 川村雅則. 保育所で働く保育士の雇用実態:北海道の状況 (福祉保育労アンケート調査より) *月刊保育情報* 2016; 476: 7-20.
14. 中根真. 保育者のワーク・ライフ・バランス (Work-Life Balance) 研究序説: 保育者論の新たな展開のために. *龍谷大學論集* 2012; 480: 46-66.
15. 厚生労働省. 保育人材確保のための『魅力ある職場づくり』に向けて. [Internet]. [updated 2014 Aug; cited 2016 Oct 6]. Available from: <http://www.mhlw.go.jp/file/04-Houdouhappyou-11601000-Shokugyouanteikyoku-Soumuka/0000057898.pdf>

16. 加藤由美, 安藤美華代. 保育士の抑うつに関連する要因の検討: 経験年数, 首尾一貫感覚, 対処スキルに着目して. 保育学研究 2016; 54: 54-66. (in Japanese)
17. 宮下敏恵. 保育士におけるバーンアウト傾向に及ぼす要因の検討. 上越教育大学研究紀要 2010; 29: 177-186.
18. 齊木久代, 中川香子. 保育職問題評価尺度の試み; 保育職満足度, ストレス関連反応との関連. 保育士養成研究 2008; 26: 77-86.
19. Hisashige A. Occupational influences relative to be burnout phenomenon among Japanese nursery school teachers. *Environmental Research* 1993; 63: 219-228.
20. 島 悟, 鹿野達男, 北村俊則, 浅井昌弘. 新しい抑うつ性尺度評価について. *精神医学* 1985; 27: 717-723 (in Japanese).
21. 久保真人. *バーンアウトの心理学: 燃え尽き症候群とは*. サイエンス社, 東京, 2004.
22. 文部科学省初等中等教育局初等中等教育企画課. 教員のメンタルヘルスの状況. [Internet]. [updated 2012 Jan. 22; cited 2016 Oct 6]. Available from: http://www.mext.go.jp/b_menu/shingi/chousa/shotou/088/shiryo/_icsFiles/afieldfile/2012/02/24/1316629_001.pdf
23. 3 保護者への対応. 文部科学省. [Internet]. [cited 2017 Feb 14]. Available from: http://www.mext.go.jp/a_menu/shotou/uneishien/detail/1297226.htm
24. 本村良美, 八代利香. 看護師のバーンアウトに関連する要因. *日本職業・災害医学学会誌* 2010; 58: 120-127.
25. Suzumura M, Fushiki Y, Kobayashi K, Oura A, Suzumura S, Yamashita M, Mori M. A prospective study of factors associated with risk of turnover among care workers in group homes for elderly individuals with dementia. *J Occup Health*. 2013; 55: 487-94.
26. Suzumura M, Fushiki Y, Kobayashi K, Oura A, Suzumura S, Yamashita M, Mori M. A cross-sectional study on association of work environment, coping style, and other risk factors with depression among caregivers in group homes in Japan. *Ind Health*. 2013; 51: 417-23.
27. 厚生労働省. 保育分野 (1. 現状と課題). [Internet]. [cited 2016 Oct 6]. Available from: <http://www.mhlw.go.jp/file/06-Seisakujouhou-11600000-Shokugyouanteikyoku/0000057759.pdf>
28. e-Stat. 平成 27 年賃金構造基本統計調査. [Internet]. [cited 2016 Oct 6]. Available from: http://www.e-stat.go.jp/SG1/estat/GL08020103.do?_toGL08020103_&tclassID=000001058843&cycleCode=0&requestSender=estat
29. 兵庫県医師会・兵庫県. 保育所・幼稚園における健康管理マニュアル. [cited 2016 Oct 6]. Available from: <http://www.hyogo.med.or.jp/wp-content/uploads/H25-rp03.pdf>
30. Karasek, RA. Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly* 1979; 24: 285-308.
31. 池本美香. 保育士不足を考える: 幼児期の教育・保育の提供を担う人材供給の在り方. *JRI レビュー*. [Internet]. [cited 2016 Oct 6]. Available from: <https://www.jri.co.jp/MediaLibrary/file/report/jrireview/pdf/8162.pdf>
32. Karantzas GC, Mellor D, McCabe MP, Davison TE, Beaton P, Mrkic D. Intentions to quit work among care staff working in the aged care sector. *Gerontologist* 2012; 52: 506-516.

別刷請求先: 大浦 麻絵

〒060-8556 札幌市中央区南1条西17丁目
 札幌医科大学 医学部公衆衛生学講座
 TEL: 011-611-2111 (内線 27410)
 FAX: 011-641-8101
 E-mail: aoura@sapmed.ac.jp

保育者における抑うつに関連する要因； 北海道における横断研究

大浦麻絵¹⁾，鈴木美和¹⁾，山本道代²⁾，助友裕子³⁾，
片山佳代子⁴⁾，時沢亜佐子¹⁾，佐藤知世¹⁾，森 満¹⁾

¹⁾札幌医科大学医学部公衆衛生学講座

²⁾北海道科学大学保健医療学部看護学科

³⁾日本女子体育大学体育学部スポーツ健康学科

⁴⁾神奈川県立がんセンター臨床研究所

保育に従事する労働者（以下，保育者）の抑うつに関連する要因を明らかにすることを本研究の目的とした。2015年11月から2016年8月までの間，358人の保育者（17.9%）から自記式質問票の回答を得た。5年より長い保育従事，保育施設の分類，職場の協力体制，睡眠の質，通院で補正後，5年より長い保育従事（OR=0.55，

95%CI= (0.34, 0.91))，上司に相談が出来ること（OR=0.36，95%CI=(0.18, 0.73))，年休が取れること（OR=0.49，95%CI=(0.27, 0.88))，配偶者がいること（OR=0.55，95%CI=(0.32, 0.94))が抑うつに対するリスクを減少させていた。保育所の労働環境を改善する必要があることが示唆された。