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Survey of Japanese Welfare Facility Staff and Special School Teachers Facing Difficulties at Work with Persons with Challenging Behaviors

Masahiko Inoue* and Shuhei Kaneko†

**Department of Clinical Psychology, Tottori University Graduate School of Medical Sciences, Yonago 683-8503, Japan and †Faculty of Human Environmental Studies, Kyushu University, Fukuoka 819-0395, Japan*

ABSTRACT

Background Effective training programs for managing people with challenging behaviors should be established in both welfare and education settings, as it is important that the support system for challenging behaviors covers the entire life span. For consistent support, it is necessary to understand the difficulties and needs of support staff in caring for people with challenging behaviors from infancy through adulthood. The purpose of this study was to gather data from welfare facility staff and special school teachers regarding their difficulties and needs for managing challenging behaviors, and to determine the differences between teachers and staff members.

Methods We investigated Japanese special school teachers (n = 317) and the staff of welfare facilities for intellectual disabilities (n = 202) regarding their difficulties and needs. The questionnaire comprised 23 items related to the needs and difficulties in responding to challenging behaviors.

Results Three factors were extracted from the analysis of the survey items: "Difficulty in coordination and information sharing with other organizations," "Difficulty in the workplace," and "Difficulty in support and response." The overall trend was that welfare staff have more difficulties and needs than special school teachers.

Conclusion It is necessary to emphasize not only how to respond to challenging behavior but also the importance of establishing a collaborative system within the workplace and with other organizations for staff training in light of their perceptions of working conditions.

Key words challenging behavior; difficulties and needs; intellectual disabilities; special school teachers; staff of welfare facilities

Previous research has found that 10–20% of persons with intellectual disabilities exhibit problem behaviors such as self-injury, aggression, destruction, or other behaviors like unacceptable social and sexual conduct, screaming, non-compliance, and consumption of inedible objects.[1–3] In recent years, these problem behaviors have been collectively referred to as "challenging behaviors," in accordance with the contention that they result from an interaction between the individual and his or her social environment. These challenging behaviors often result in negative personal and social consequences with severe impacts on physical and mental health and quality of life. Challenging behaviors also impact the development of social relationships within the community, restricting and reducing opportunities to participate in community activities.[4] In a school environment, they may be a barrier to acquiring new skills and knowledge.[5]

The behaviors of staff members who provide direct support for persons with special needs have been shown to be important in the success and maintenance of support programs for challenging behaviors.[6, 7] However, challenging behaviors can trigger emotional responses, such as fear, anger, and irritation, in staff members.[8–10] Such negative emotional reactions may lead to increased stress and burnout.[11, 12]

When staff members lack knowledge about challenging behaviors, there may be increased anxiety, turnover, and improper management of behavioral issues,[8, 13] and there is also increased risk for abuse of the persons with intellectual disability.[14, 15] A 2017 survey by the Ministry of Health, Labour and Welfare on the abuse of persons with disabilities in Japan shows that 20–30% of persons with disabilities who have been abused were people with challenging behaviors. The Act on the Prevention of Disability Abuse was passed in Japan in 2012. Its guidance on the prevention of abuse in welfare facilities for persons with disabilities states that there should be "human resource development of supporters for persons with severe behavioral disabilities" including staff training. A 12-hour basic training course that combined lectures and exercises for support staff of persons with severe behavioral disorders was instituted nationwide in 2013. A 12-hour practical training course

Corresponding author: Masahiko Inoue, M.Ed.
masahiko-inoue@med.tottori-u.ac.jp
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was added in 2015. In this way, training opportunities for behavioral issues have increased for welfare facility staff, but no previous studies have analyzed the differences in training needs in relation to staff members' age and gender, or years of experience.

On the other hand, in the school environment, although it has been shown that special school teachers have a great need for training on severe challenging behaviors, training is not yet sufficient.[16] It is important that the support system for challenging behaviors covers the entire life span, so that effective training programs regarding people with challenging behaviors should be established in both social welfare and education settings. In January 2017, the Ministry of Education, Culture, Sports, Science and Technology and the Ministry of Health, Labour and Welfare of Japan started the "Triangle" project,[17] which is a collaboration between home, education, and social welfare. In this report, it was pointed out that in the fields of education and social welfare, human resource staff who support people with developmental disabilities should be organized and should examine the ideal method of training.

In the present study, we conducted a questionnaire survey on the needs and difficulties of welfare facility staff and special school teachers in Japan. The purpose of this study was to gather data from facility staff and special school teachers regarding their difficulties and needs for managing challenging behaviors, and to determine the differences between the teachers and facility staff.

MATERIALS AND METHODS

Participants

The participants were teachers in special schools for intellectual disabilities and facility staff at welfare facilities for intellectual disabilities. In Japan, many special schools for intellectual disabilities comprise three departmental levels: elementary, lower secondary, and upper secondary departments. The elementary and lower secondary provide compulsory education. We arbitrarily made selections from standard special schools for intellectual disabilities in the four areas of Kyushu, Chugoku, Kinki, and Tokai, and surveyed all the teachers in four special schools of the schools permitted. Also, we conducted a survey of facility staff who attended conferences of the welfare organizations for people with intellectual disabilities in the three regions of Kanto, Kinki, and Chugoku. The contents of the survey were explained at the conference hall, and a survey form was placed at the venue. The two surveys requested anonymous responses. We considered submission of the completed survey as consent to participate. We distributed 325 copies of the survey to the teachers. The number of distributions was unknown because the welfare staff survey was placed at the venue and not distributed directly to individual participants.

Questionnaire

The participants were requested to provide the facility type or school department, job description, age, gender, and the number of years of experience supporting persons with disabilities. The participant's name was not required for the survey, and any personal information was made anonymous. Semi-structured interviews were carried out as a preliminary survey with 3 staff members who had more than 10 years of working experience in education and welfare facilities. The questionnaire items were created with reference to the items obtained from these interviews, and in accordance with Ishii and Harada (1993)[18] who investigated the stress of facility staff who work with people with challenging behaviors. The questionnaire comprised 23 items related to the needs and difficulties in responding to challenging behaviors. The questionnaire used a 4-item Likert scale: "completely disagree," "somewhat disagree," "slightly agree," and "completely agree."

Statistical analysis

Factor analysis using R-3.4.0 was conducted to confirm the structure of the items and to create the scale. An analysis of variance was conducted to analyze differences in scale scores using js-STAR version 8.0.0j.

Ethical considerations

This study was approved by the ethics committee of the university to which the first author is affiliated (approval number 1604A015). The study was conducted in accordance with the ethical standards established by the 1964 Declaration of Helsinki.

RESULTS

Data from 570 people were collected, and 519 valid responses with no missing question items were received (202 facility staff, 317 special school teachers). The number of participants and profiles are shown in Table 1.

Factor structure for difficulty and needs

Factor analysis (least-squares method and Promax rotation) of the question items was performed. Based on the results with an eigenvalue greater than 1 and the ease of interpretation of the items comprising the factors, we determined that a 3-factor structure was appropriate. Factors were named based on the interpretation of the

Table 1. Demographics of subjects

Welfare Services	*n*	Special School	*n*	Total
Residential care (adult)	106	Elementary	100	–
Residential care (children)	9	Lower secondary	84	–
Day care (adult)	54	Upper secondary	130	–
Day care (children)	10	Other	3	–
Other	23			–
Total	202		317	519
		Gender		
Male	70	Male	75	145
Female	59	Female	118	177
Unknown	73	Unknown	124	197
Total	202		317	519
		Age (years)		
20s	81	20s	74	155
30s	51	30s	68	119
40s	46	40s	102	148
50s and over	19	50s and over	72	91
Unknown	5	Unknown	1	6
Total	202		317	519
		Years of experience		
Less than 5 years	146	Less than 5 years	79	225
5 to 10 years	28	5 to 10 years	47	75
More than 10 years	25	More than 10 years	186	211
Unknown	3	Unknown	5	8
Total	202		317	519

content of the factor items. "The 'difficulties and needs' of support staff in the behavioral disabilities" comprised 3 factors. F1 consisted of items regarding insufficiency of information and difficulty of coordination with other professionals, and was named "Difficulty in coordination and information sharing with other organizations" (6 items, $\alpha = .88$). F2 included items related to difficulties in meetings and consultations with staff and supervisors in the workplace, and was named "Difficulty in the workplace" (6 items, $\alpha = .80$). The items comprising F3 related to difficulty in communicating, supporting, and understanding people with behavioral disabilities, and were named "Difficulty in support and response" (8 items, $\alpha = .77$; see Table 2).

Differences in affiliation and age of support staff

The 5 × 4 2-way analysis of variance was performed on the total score of the scale and the 3-factor score of the 5 affiliations and the 4-age stages of the support staff (Table 3). In total, 488 persons were included (26 classified as "others" of the welfare facilities and special schools and 6 of unknown age were excluded).

As a result, in the total score, the affiliation showed a moderate significant main effect [$F(4,468) = 5.67$, $P < .01$, partial $\eta^2 = .22$]. According to multiple comparisons with the honestly significant difference (HSD) method, the overall score of "difficulties and needs" was higher for those in residential care and daycare than for those in the elementary, lower secondary, and upper secondary schools ($P < .05$).

There were no significant main effects or interactions for F1. In F2, the affiliation showed a significant main effect [$F(4,468) = 3.74$, $P < .01$, partial $\eta^2 = .18$]. According to the multiple comparisons by the HSD method, "Difficulty in the workplace" was higher in the residential care staff than in the elementary and lower secondary teachers ($P < .05$). Also, daycare staff scored higher than lower secondary teachers ($P < .05$).

Table 2. Factor analysis results of the "difficulties and needs" of support staff in the behavioral disabilities

	F1	F2	F3	Commonality
F1. Difficulty in coordination and information sharing with other organizations (6 items, α = .88)				
22. Information provided by welfare facilities (*schools) or other institutions is insufficient.	.86	–.09	–.01	.65
21. Coordination with medical staff is difficult.	.82	–.11	.03	.60
20. Information provided by medical staff is insufficient.	.82	–.09	.01	.60
23. Coordination with welfare facilities (*schools) or other institutions is difficult.	.82	–.02	–.02	.64
18. Information provided by parents/guardians is insufficient.	.56	.13	–.04	.40
19. Obtaining cooperation from parents/guardians is difficult.	.50	.15	.00	.36
F2. Difficulty in the workplace (6 items, α = .80)				
16. Coordination among staff is difficult.	–.10	.87	–.08	.61
17. Consensus among staff members is difficult.	–.08	.81	–.12	.50
13. Consultation with management and workplace supervisors is difficult.	–.06	.67	–.03	.39
15. Time for case meetings at the workplace is insufficient.	.11	.62	–.14	.38
12. No one is available for consultation at the workplace if difficulties arise due to behavioral issues.	–.10	.60	.10	.37
14. The environment is not equipped with special facilities or rooms capable of handling behavioral disabilities.	.13	.47	–.13	.24
F3. Difficulty in support and response (8 items, α = .77)				
4. Communication with people who have behavioral disabilities is difficult.	.03	–.16	.79	.52
1. Understanding of basic measures for handling and making considerations for those with behavioral disabilities is insufficient.	–.07	–.12	.72	.41
2. Fears arise with regard to the assistance and support of people with behavioral disabilities.	.02	–.15	.65	.34
5. Finding leisure activities (enjoyable activities, things of interest) for people with behavioral disabilities is difficult.	.04	.02	.55	.33
3. Irritation arises due to being rejected or ignored no matter how many times instructions are given.	.01	–.04	.51	.24
6. Feelings of loneliness and helplessness arise, with thoughts such as, “Is this really okay?”	–.05	.14	.46	.27
11. Creation of individual support plans is difficult.	.06	.20	.37	.29
9. Supervision (advice and guidance) at the workplace is desired.	–.04	.27	.35	.27
Correlations between factors				
F2	.58			
F3	.37	,55		
Deleted items				
10. Lack of staff members makes the situation difficult to handle.	.09	.31	.14	.38
7. Work is physically demanding.	.07	.02	.32	.14
8. Sufficient training opportunities for dealing with behavioral disorders need to be provided.	.00	.21	.28	.19

*These items were used differently depending on the respondent. F, factor.

F3 had a moderately significant interaction [F (12,468) = 1.61, $P < .10$, partial η2 = .20]. According to multiple comparisons by the HSD method, “Difficulty in support and response” did not show a difference in support staff in their 20s according to affiliation. Residential care staff in their 30s scored significantly higher ($P < .05$) than those in upper secondary, and among those in their 40s, residential care staff scored significantly higher than those in lower secondary ($P < .05$). In addition, among the support staff in their 50s and over, the residential care staff scored higher ($P < .05$) than elementary and upper secondary teachers.

Table 3. Analysis of variance of total score and factor score by affiliation and ages of support staff

Factor	Occupation	Affiliation	Age (years)				F /partialη2			Multiple comparisons
			A: 20s	B: 30s	C: 40s	D: 50+	Affiliation	Ages	Interaction	
F1. Difficulty in coordination and information sharing with other organizations	Special School	a: Elementary	15.41 (2.17)	14.68 (3.48)	14.56 (3.83)	14.96 (3.45)	1.38 n.s. /.11	0.31 n.s. /.04	0.60 n.s. /.12	
		b: Lower secondary	14.92 (3.59)	14.56 (3.83)	14.89 (3.75)	15.80 (2.43)				
		c: Upper secondary	14.56 (3.55)	14.04 (2.34)	14.75 (3.05)	15.17 (3.22)				
	Welfare Facilities	d: Residential care	14.09 (3.72)	15.52 (4.07)	16.38 (2.32)	14.88 (2.80)				
		e: Day care	16.10 (3.11)	15.78 (4.48)	15.79 (3.75)	15.71 (3.06)				
F2. Difficulty in the workplace	Special School	a: Elementary	13.73 (3.14)	13.73 (3.50)	13.93 (3.03)	13.33 (2.85)	3.74** /.18	1.14 n.s. /.09	0.88 n.s. /.15	a, b < d b < e
		b: Lower secondary	12.50 (3.46)	13.11 (2.94)	13.44 (2.66)	15.07 (2.32)				
		c: Upper secondary	13.63 (3.18)	13.64 (2.86)	13.89 (3.03)	14.50 (2.90)				
	Welfare Facilities	d: Residential care	13.82 (3.71)	16.15 (3.80)	14.57 (3.49)	15.38 (3.12)				
		e: Day care	15.65 (3.75)	14.83 (4.43)	14.53 (3.79)	15.29 (3.15)				
F3. Difficulty in support and response	Special School	a: Elementary	18.18 (2.55)	17.73 (3.62)	16.07 (2.96)	15.44 (3.72)	6.78** /.24	1.73 n.s. /.11	1.61*** /.20	B:c < d C:b < d D:a,c < d
		b: Lower secondary	17.54 (3.21)	16.06 (2.59)	15.70 (4.05)	17.33 (3.72)				
		c: Upper secondary	17.70 (3.33)	15.64 (3.40)	16.84 (3.54)	16.40 (4.10)				
	Welfare Facilities	d: Residential care	17.98 (3.52)	18.85 (3.48)	18.81 (3.74)	20.38 (2.45)				
		e: Day care	18.70 (2.95)	16.56 (4.00)	18.37 (3.59)	18.43 (3.25)				
Total score	Special School	a: Elementary	47.32 (5.88)	46.14 (6.74)	44.55 (6.79)	43.74 (7.90)	5.67** /.22	0.63 n.s. /.06	1.10 n.s. /.16	a, b, c < d, e
		b: Lower secondary	44.96 (7.61)	43.72 (7.38)	44.04 (8.33)	48.20 (6.08)				
		c: Upper secondary	45.89 (8.13)	43.32 (6.13)	45.48 (6.32)	46.07 (7.58)				
	Welfare Facilities	d: Residential care	45.89 (8.40)	50.52 (9.37)	49.76 (7.51)	50.63 (5.02)				
		e: Day care	50.45 (7.59)	47.17 (10.38)	48.68 (7.30)	49.43 (5.63)				

*$P < .05$, **$P < .01$, ***$P < .10$. n.s., not significant.

Differences in affiliation and years of experience of support staff

The 5 × 3 2-way analysis of variance was performed on the total score of the scale and the 3-factor score of the 5 affiliations and the 3 stages of experience of the support staff (Table 4). For this analysis, 487 persons were included (26 persons classified as "others" of the welfare facilities and special schools and 8 persons with unknown years of experience were excluded). In the total score, the affiliation showed a moderate significant main effect [F (4,472) = 5.57, $P < .01$, partial $\eta^2 = .22$]. In the multiple comparison using the HSD method, the score of the residential care staff and the daycare staff was higher than that of the elementary, junior, and upper secondary teachers ($P < .05$). In F1, the weak main effect of belonging [F (4,472) = 2.08, $P < .10$, partial $\eta^2 = .13$] showed a significant trend, and the scores of facility staff for both residential care and daycare were higher than those of the upper secondary teachers ($P < .05$). Regarding F2, the affiliation had a moderate main effect [F (4,472) = 5.74, $P < .01$, partial $\eta^2 = .22$], and the tendency of the main effect was weaker based on years of experience F (2,472) = 2.84, $P < .10$, partial$\eta^2 = .11$. The score was higher for the residential care staff than the elementary, junior, and upper secondary teachers.

The daycare staff's score was higher than for those in the elementary and lower secondary schools ($P < .05$). Regardless of their affiliation, support staff who had more than 10 years of experience had higher scores than those who had less than 5 years ($P < .05$). F3 had a moderately significant interaction [F (8,472) = 2.49, $P < .05$, partial $\eta^2 = .21$]. In multiple comparisons, the residential care staff with more than 10 years of experience scored higher and found more difficulty than those in elementary, junior, and upper secondary schools ($P > .05$). In addition, residential care staff with more than 10 years of experience found more difficulty than those with less than 5 years and less than 5 to 10 years of experience.

Differences in affiliations and gender of staff

The 2 × 2 2-way analysis of variance was performed on the total score of the scale and the 3-factor score of the 2 affiliations (welfare facilities and special schools) and the 2 genders of the support staff. In total, 322 persons were included (197 of unknown gender were excluded). "Difficulty of workspace" [F (1,318) = 9.39, $P < .01$, MSe = 11.50], "Difficulty of support and response" [F (1,318) = 8.84, $P < .01$, MSe = 15.04], and total score [F (1,318) = 7.61, $P < .01$, MSe = 60.22] showed the main effect of the affiliations, and the facility staff scored higher.

DISCUSSION

The current study investigated Japanese special school teachers for intellectual disabilities ($n = 317$) and staff of welfare facilities ($n = 202$) for intellectual disabilities regarding their difficulties and needs when working with persons with challenging behaviors. As a result of the factor analysis of the survey items, 3 factors were extracted: "Difficulty in coordination and information sharing with other organizations," "Difficulty in the workplace," and "Difficulty in support and response."

Regarding the treatment of challenging behaviors, it is important that the staff have unity of intention and continuity of support; staff management and supervision are necessary for achieving this.[19] "Difficulty in coordination and information sharing" and "Difficulty in the workplace" might be considered related to the presence and degree of management and supervision of staff. Many previous studies on staff training on challenging behaviors have reported changes in knowledge, attitudes, attribution, and emotional responses.[20–24] The effects of staff training are likely to be significantly affected by other staff members' attitudes and coordination within the workplace.

In the analysis of affiliation and age and affiliation and years of experience in the overall score, affiliation had a moderate and significant main effect. The overall trend was that staff of welfare facilities had higher levels of difficulty and needs than teachers at special schools. The level of difficulty experienced by welfare facility staff is higher than that experienced by special school teachers, similar to the results of previous studies[18] in Japan, suggesting the need for effective support for the staff of welfare facilities.

Regarding "Difficulty of coordination and information sharing," there was a weak main effect on affiliation and years of experience, and both day care and residential care welfare facility staff scored higher than upper secondary teachers. However, there was no other main effect or interaction. Regarding "Difficulties in coordination and information sharing," the difficulty of staff was almost the same in both education and welfare and did not vary with age or years of experience. "Coordination and information sharing" included cooperation between schools, medical institutions, welfare institutions, and parents. Regardless of affiliation, age, or years of experience, the difficulty of coordination seems to indicate a problem for the entire support system organization in Japan.

Regarding the difficulty of the workplace environment, weak main effects were observed in affiliation in terms of affiliation and age and affiliation and years of experience. In addition, moderate main effects were

Table 4. Analysis of variance of total score and factor score by affiliation and years of experience of support staff

Factor	Occupation	Affiliation	Years of experience			F /partialη2			Multiple comparisons
			A: Less than 5 years	B: 5–10years	C: More than 10 years	Affiliation	Years of experience	Interaction	
F1. Difficulty in coordination and information sharing with other organizations	Special School	a: Elementary	15.43 (2.30)	14.23 (3.49)	14.86 (3.33)	2.08 *** /.13	1.32 n.s. /.07	1.40 n.s. /.15	c < d, e
		b: Lower secondary	13.90 (3.93)	16.53 (3.13)	15.09 (3.27)				
		c: Upper secondary	14.48 (3.57)	14.00 (2.36)	14.90 (3.01)				
	Welfare Facilities	d: Residential care	14.63 (3.94)	15.41 (2.45)	17.27 (1.60)				
		e: Day care	15.76 (3.90)	16.29 (2.71)	16.08 (3.55)				
F2. Difficulty in the workplace	Special School	a: Elementary	13.70 (3.38)	13.23 (3.09)	13.73 (3.04)	5.74** /.22	2.84 *** /.11	0.47 n.s. /.09	a, b, c < d a, b < e A < C
		b: Lower secondary	12.27 (3.56)	13.40 (2.75)	14.02 (2.64)				
		c: Upper secondary	13.48 (3.16)	13.78 (2.46)	14.26 (3.00)				
	Welfare Facilities	d: Residential care	14.23 (3.90)	16.24 (2.51)	16.36 (3.91)				
		e: Day care	14.82 (4.14)	15.00 (3.16)	15.92 (3.38)				
F3. Difficulty in support and response	Special School	a: Elementary	18.00 (2.86)	17.54 (3.80)	16.09 (3.42)	3.62** /.18	0.87 n.s. /.06	2.49* /.21	C:a, b, c < d d:A, B < C
		b: Lower secondary	17.27 (3.56)	16.20 (3.23)	16.46 (3.68)				
		c: Upper secondary	17.33 (4.03)	17.72 (3.33)	16.18 (3.53)				
	Welfare Facilities	d: Residential care	18.31 (3.52)	17.18 (3.55)	21.45 (2.64)				
		e: Day care	18.24 (3.80)	17.14 (3.27)	17.42 (2.84)				
Total score	Special School	a: Elementary	47.13 (5.91)	45.00 (7.68)	44.68 (7.23)	5.57** /.22	1.18 n.s. /.07	1.42 n.s. /.16	a, b, c < d b, c < e
		b: Lower secondary	43.45 (8.87)	46.13 (5.54)	45.57 (7.53)				
		c: Upper secondary	45.30 (8.81)	45.50 (5.24)	45.36 (6.57)				
	Welfare Facilities	d: Residential care	47.17 (9.02)	48.82 (5.14)	55.09 (7.10)				
		e: Day care	48.82 (9.09)	48.43 (6.43)	49.42 (5.91)				

*$P < .05$, **$P < .01$, ***$P < .10$. n.s., not significant.

observed in affiliation, and weak main effects were observed in years of experience. In all cases, welfare staff tended to correlate higher than school teachers. Many Japanese special schools facilitate coordination between school years and faculties for students who are difficult to teach, and there is a support department for overall supervision of the school. In contrast, many Japanese welfare facilities do not have an overall supervision team, because there is insufficient staff and facilities are small. However, further research is needed to clarify whether the presence or absence of a supervision system is associated with different difficulties. Regardless of their affiliation, staff with more than 10 years of experience scored higher than those with less than 5 years. This may be related to the fact that many staff members with more than 10 years of experience have supervisory positions in the workplace. However additional research is needed to clarify this point.

"Difficulty in support and response" was moderately significant in the categories of affiliation and age. Residential care staff in their 30s to 50s generally scored higher than special school staff in "Difficulty in support and response," with the highest scores shown for staff in their 50s. The "Difficulty of support and response" showed a moderate and significant interaction between affiliation and years of experience. In the group with more than 10 years of experience, residential care staff scored higher than elementary, lower secondary, and upper secondary teachers. For residential care staff, those with more than 10 years of experience had more difficulty than those with less than 5 years and less than 5 to 10 years of experience. Both teachers at special schools and staff in welfare facilities had similar levels of difficulty if they had less than 5 years of experience, but there were differences in difficulties for staff with more than 10 years of experience. In particular, it was shown that residential care staff with more than 10 years of experience faced a high level of difficulty.

The high level of difficulty experienced by the older staff shows the opposite of results of other countries' studies.[25, 26] It is possible that older Japanese facility staff have not learned recent evidenced approaches, such as behavioral approaches, but the reason is not clear. However, there are other interesting data showing the difficulty experienced by older facility staff. According to a survey on the abuse of persons with disabilities in Japan,[27] of the facility workers who engaged in the abuse, 12.5% were in their 20s, 12.0% in their 30s, 15.3% in their 40s, 17.5% in their 50s, and 18.5% in their 60s and above. According to these results, further investigation is needed.

Regarding affiliation and gender, although scores were high in welfare institutions, there was no significant difference in gender. There are many men with behavioral disorders, but probably because same-sex care is promoted by welfare facilities, there was no significant difference by gender regarding difficulty and needs. However, overall, it was shown that female staff were more likely than male staff to feel the difficulty and necessity of the item "Fears arise with regard to the assistance and support of people with behavioral disabilities." Based on this result, it is necessary to consider the difference in difficulty when supporting people who exhibit aggressive behaviors.

In this study, more information about the settings and patients is needed. For example, topography of challenging behaviors may be relevant, and the lack of direct measurement of staff exposure to client challenging behaviors has already been acknowledged as a major limitation of the current literature.[28] The other aspects of validation that would be important include reliability over time (e.g., test-retest), correspondence with related measures, and incremental validity with existing measures.

What is remarkable about the survey results is that the level of difficulty for staff of both residential care and daycare facilities is high, as are the training needs. There is a need for training on effective support methods that staff can acquire while gaining support experience. Currently, training of staff of welfare facilities for people with challenging behaviors is being promoted at the national level in Japan. However, the training programs focus on understanding and responding to challenging behaviors and structuring the environment, while training content on the difficulty of coordination, information sharing, and difficulties in the workplace are hardly addressed. It is necessary to reflect on the need to include these aspects in future training. It is also important to explore the factors that cause high difficulties and needs for veteran staff of welfare facilities compared to special school teachers.

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REFERENCES

1 Bowring DL, Totsika V, Hastings RP, Toogood S, Griffith GM. Challenging behaviours in adults with an intellectual disability: A total population study and exploration of risk indices. Br J Clin Psychol. 2017;56:16-32. DOI: 10.1111/bjc.12118, PMID: 27878840

2 Emerson E, Kiernan C, Alborz A, Reeves D, Mason H, Swarbrick R, et al. The prevalence of challenging behaviors: a total population study. Res Dev Disabil. 2001;22:77-93. DOI: 10.1016/S0891-4222(00)00061-5, PMID: 11263632

3 Holden B, Gitlesen J. A total population study of challenging behaviour in the county of Hedmark, Norway: Prevalence, and risk markers. Res Dev Disabil. 2006;27:456-65. DOI: 10.1016/j.ridd.2005.06.001, PMID: 16137857

4 Anderson DJ, Lakin KC, Hill BK, Chen TH. Social integration of older persons with mental retardation in residential facilities. Am J Ment Retard. 1992;96:488-501. PMID: 1562307

5 Chadwick O, Walker N, Bernard S, Taylor E. Factors affecting the risk of behaviour problems in children with severe intellectual disability. J Intellect Disabil Res. 2000;44:108-23. DOI: 10.1046/j.1365-2788.2000.00255.x, PMID: 10898374

6 Hastings R. Staff training in positive behaviour support: research into practice. Tizard Learn Disabil Rev. 2005;10:31-3. DOI: 10.1108/13595474200500018

7 Hastings RP, Remington B. Rules of engagement: toward an analysis of staff responses to challenging behavior. Res Dev Disabil. 1994;15:279-98. DOI: 10.1016/0891-4222(94)90008-6, PMID: 7972967

8 Bromley J, Emerson E. Beliefs and emotional reactions of care staff working with people with challenging behaviour. J Intellect Disabil Res. 1995;39:341-52. DOI: 10.1111/j.1365-2788.1995.tb00526.x, PMID: 7579992

9 Hastings RP. Understanding factors that influence staff responses to challenging behaviours: an exploratory interview study. Ment Handicap Res. 1995;8:296-320. DOI: 10.1111/j.1468-3148.1995.tb00163.x

10 Hatton C, Rivers M, Emerson E, Kiernan C, Reeves D, Alborz A, et al. Staff characteristics, working conditions and outcomes amongst staff in services for people with intellectual disabilities. J Appl Res Intellect Disabil. 1999;12:340-7. DOI: 10.1111/j.1468-3148.1999.tb00090.x

11 Jenkins R, Rose J, Lovell C. Psychological well-being of staff working with people who have challenging behaviour. J Intellect Disabil Res. 1997;41:502-11. DOI: 10.1111/j.1365-2788.1997.tb00743.x, PMID: 9430055

12 Rose D, Horne S, Rose JL, Hastings RP. Negative emotional reactions to challenging behaviour and staff burnout: two replication studies. J Appl Res Intellect Disabil. 2004;17:219-23. DOI: 10.1111/j.1468-3148.2004.00194.x

13 Allen P, Pahl JM, Quine L. Care staff in transition: the impact on staff of changing services for people with mental handicaps. London: H.M.S.O; 1990.

14 Emerson E, McGill P, Mansell J, eds. Severe learning disabilities and challenging behaviours: designing high quality services. London: Chapman and Hall; 1994.

15 Romeo R, Knapp M, Tyrer P, Crawford M, Oliver-Africano P. The treatment of challenging behaviour in intellectual disabilities: cost-effectiveness analysis. J Intellect Disabil Res. 2009;53:633-43. DOI: 10.1111/j.1365-2788.2009.01180.x, PMID: 19460067

16 Ohba S, Inoue M. Investigation of students with behavioral disorders in a special school for intellectual disabilities. Poster presented at the 50th Japanese Association for the Study of Developmental Disabilities Annual Convention; 2015 July 4-5; Tokyo.

17 Ministry of Health. Labour and Welfare [Internet]. Tokyo: [Collaboration between home, education and welfare "Triangle" project report]. [updated 2017 Mar 29; cited 2020 Sep 9]. Available from: https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000191192.html.

18 Ishii T, Harada K. [Research on severe behavioral disorders and related factors]. In T Ishii, editor. Annual report of research 1993 supported by health and labour sciences research grants; 1993. p. 15-80. Japanese.

19 Favell JE, Reid DH. Generalizing and maintaining improvement in problem behavior. In: Horner RH, Dunlap G, Koegel RL, editors. Generalization and maintenance: life-style changes in applied settings. Baltimore: Paul H. Brookes; 1988. p. 171-96.

20 Gore N, Umizawa H. Challenging behavior training for teaching staff and family carers of children with intellectual disabilities: a preliminary evaluation. J Policy Pract Intell Disabil. 2011;8:266-75. DOI: 10.1111/j.1741-1130.2011.00315.x

21 Grey IM, McClean B, Barnes-Holmes D. Staff attributions about the causes of challenging behaviours: effects of longitudinal training in multi-element behaviour support. J Intellect Disabil. 2002;6:297-312. DOI: 10.1177/1469004702006003037

22 Lowe K, Jones E, Allen D, Davies D, James W, Doyle T, et al. Staff training in positive behaviour support: impact on attitudes and knowledge. J Appl Res Intellect Disabil. 2007;20:30-40. DOI: 10.1111/j.1468-3148.2006.00337.x

23 McGill P, Bradshaw J, Hughes A. Impact of extended education/training in positive behaviour support on staff knowledge, causal attributions and emotional responses. J Appl Res Intellect Disabil. 2007;20:41-51. DOI: 10.1111/j.1468-3148.2006.00338.x

24 Wills S, Shephard J, Baker P. Evaluating the impact of positive behaviour support training on staff knowledge, attributions, emotional responses and helping behaviour: capturing hearts and minds. Int J Posit Behav Support. 2013;3:31-9.

25 Bottini S, Wiseman K, Gillis J. Burnout in providers serving individuals with ASD: the impact of the workplace. Res Dev Disabil. 2020;100:103616. DOI: 10.1016/j.ridd.2020.103616, PMID: 32120047

26 Plantiveau C, Dounavi K, Virués-Ortega J. High levels of burnout among early-career board-certified behavior analysts with low collegial support in the work environment. Eur J Behav Anal. 2018;19:195-207. DOI: 10.1080/15021149.2018.1438339

27 Japanese Ministry of Health. Labour and Welfare [Internet]. Tokyo: Response status to cases of disability abuse in prefectures and municipalities (survey results). [updated 2019 Dec 20; cited 2020 Sep 10]. Available from: https://www.mhlw.go.jp/stf/houdou/0000189859_00003.

28 Hastings RP. Do challenging behaviors affect staff psychological well-being? Issues of causality and mechanism. Am J Ment Retard. 2002;107:455-67. DOI: 10.1352/0895-8017(2002)107<0455:DCBASP>2.0.CO;2, PMID: 12323070