



# **Study on the Factors that Enable Persons with Higher Brain Dysfunction to Retain Their Works**

**[Survey Report No. 92] Summary**

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## 1. Coauthors

Katsuo Taya	(Chief Researcher, Social Support Department, National Institute of Vocational Rehabilitation)
Tadashi Aobayashi	(Research Cooperator, Social Support Department, National Institute of Vocational Rehabilitation)

## 2. Research period

Fiscal 2007 to 2008

## 3. Composition of the survey report

Overview

Chapter 1	Present conditions of work supports for persons with higher brain dysfunction
Chapter 2	Support and use status of Local Vocational Centers for Persons with Disabilities
Chapter 3	Realities of users of the Vocational Center, National Institute of Vocational Rehabilitation
Chapter 4	Follow-up survey of users of the Vocational Center, National Institute of Vocational Rehabilitation
Chapter 5	Survey of the workplaces of users of the Vocational Center, National Institute of Vocational Rehabilitation
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## 4. Background and purpose of the survey

The support environment surrounding persons with higher brain dysfunction have undergone major changes over the past ten years (since about 1998). Particularly notable are the model project for higher brain dysfunction conducted in fiscal 2001 to 2005 and the generalization project for supports for higher brain dysfunction introduced in fiscal 2006, which promoted public understanding of persons with higher brain dysfunction in the domain of medical rehabilitation.

In the realm of vocational rehabilitation, the job coach support project initiated in fiscal 2002 has had major effects on work supports for persons with higher brain dysfunction.

The primary purpose of this study is to verify the effects of the model project for supports for persons with higher brain dysfunction, the generalization project, and the job coach support project on work supports for persons with higher brain dysfunction.

It is said that many persons with higher brain dysfunction who obtain jobs or return to work encounter some problems in terms of job performance or human relationships, thereby causing them to leave their jobs. Few large-scale, systematic surveys have been conducted on persons with higher brain dysfunction who have retained their jobs. Therefore, the secondary purpose of this study is to conduct a follow-up survey of persons with higher brain dysfunction by relying on the Vocational Center of the NIVR to obtain knowledge about how to support persons with higher brain dysfunction and how employers should provide necessary supports to allow such disabled persons to retain their jobs, and also obtain knowledge about the support measures designed to prevent and improve occupational inability, thereby helping to improve the supports for persons with higher brain dysfunction.

## 5. Contents of the survey

### ■ Support and use status of Local Vocational Centers for Persons with Disabilities

A nationwide questionnaire survey was conducted regarding the Local Vocational Centers for Persons with Disabilities (47 centers and five branches, hereafter referred to as "Local Centers") as pertaining to how persons with higher brain dysfunction used these centers in fiscal 2005 to 2007, the numbers of users and their characteristics (including age, sex, disability certificate, and disease or disorder causing

disability), and vocational information (such as supports and post-use situation), thereby examining the effects of the "model project for supports for persons with higher brain dysfunction" and "the generalization project for supports for higher brain dysfunction." Moreover, the effects of the job coach support project implemented nationwide since 2002 were also examined.

The 48 establishments that responded (for a response rate of 92.3%) received 1,063 users during the three years from fiscal 2005 to 2007 (with 256 users in fiscal 2005, 324 users in fiscal 2006, and 483 users in fiscal 2007). The persons with higher brain dysfunction who used Local Centers nationwide during these three years are estimated to total 1,195. This corresponds to 1.54% of the total count of persons with disabilities (77,538) who used Local Centers nationwide during the three years from fiscal 2005 to 2007.

### (1) Overall characteristics of users

The 852 cases with clarified, detailed personal information are characterized by the fact that: (1) men account for a percentage as high as 86.5%; (2) the peak age group is in the 30s, accounting for 29.3% (with those in their 20s to 50s accounting for 96.2%); (3) the holders of disability certificates account for a relatively high percentage at 72.7%, and a breakdown of data by type of certificate indicates that there are as many holders of certificates for physical disability (33.0%) as those of certificates for mental health and welfare (33.9%). As classified by the degree of disability for holders of certificates for physical disability, no uneven concentration is seen in terms of serious, medium and light degrees. With regard to the disability grade of holders of certificates for mental health and welfare, the medium degree (second grade) accounts for a majority (at 51.1%). (4) As classified by the cause of disability, brain damage (46.5%) and cerebral vascular disturbance (36.6%) account for the highest percentages. Among all causes of brain damage, traffic accidents account for 78.3%. Of all the supports, "vocational assessment" accounts for the highest percentage (at 87.1%), followed by "vocational preparatory training" at 20.0%, "job coach supports" at 22.1%, and with "other supports" (vocational rehabilitation training, employer supports, task trial method and other supports in consideration of the workplace environment) conducted in 24.5% of the workplaces.

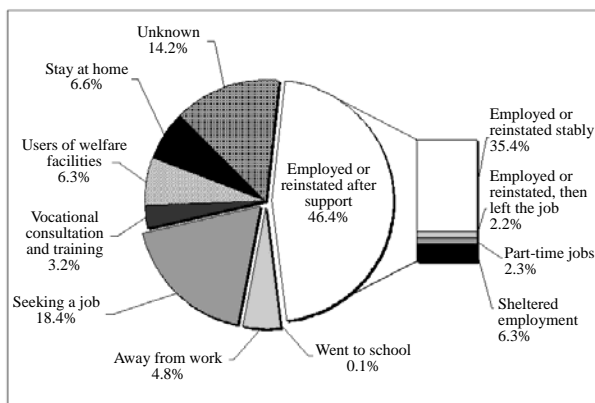


Fig. 1 Returning after using Local Centers

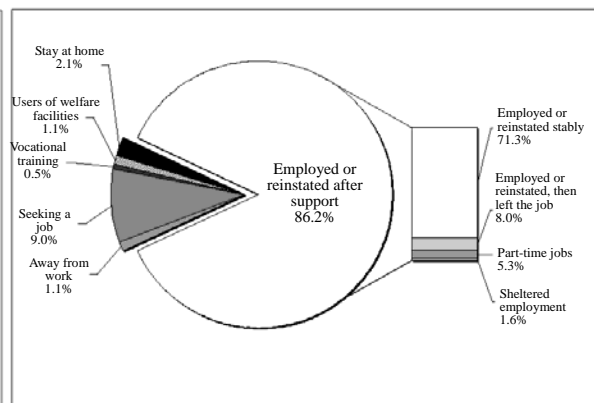


Fig. 2 Returning of the job coach supported group

The return status six months after using a Local Center shows that those who became employed accounted for about half, at 46.4% (Fig. 1). The supports for those able to work indicate that, the greater number of support items, the more likely persons are to become employed or reinstated (80% for four types; 77% for three types). Particularly notable is the case where job coach and other supports are provided, resulting in 86.2% of the persons becoming subject to employment or reinstatement, and thereby demonstrating the effectiveness of job coach supports (Fig. 2).

## (2) Comparison of the realities of uses in fiscal 2002 and 2007 (Fig. 3)

A comparison of changes in the realities of users in fiscal 2002 immediately after introduction of the model project (in 2001) and in 2007 immediately after introduction of the generalization project (2006) reveals that the count rose from 360 in fiscal 2002 (1.5% of Local Center users) to 546 (2.0% of Local Center users) in fiscal 2007.

A comparison by Local Center indicates the following. Here, let us classify the municipalities as follows: group A for the Tokyo metropolitan government which had already been working on supports for persons with higher brain dysfunction before the central government initiated the model project, group B for municipalities that began working on supports for persons with higher brain dysfunction concurrently with the onset of the model project (in fiscal 2001), group C for municipalities that began working on supports for persons with higher brain dysfunction since the onset of the generalization project (in fiscal 2006), and group D for municipalities not working on the project as of fiscal 2007. A close look at the use status of Local Centers by group indicates that, in the municipalities working on the support project, persons with higher brain dysfunction using Local Centers account for about 2%, while users of Local Centers in the municipalities not working on the support project account for only a little more than 1%.

The employment rate of those after using the Local Centers has also risen during the past five years, from 34% in fiscal 2002 to 47% in fiscal 2007.

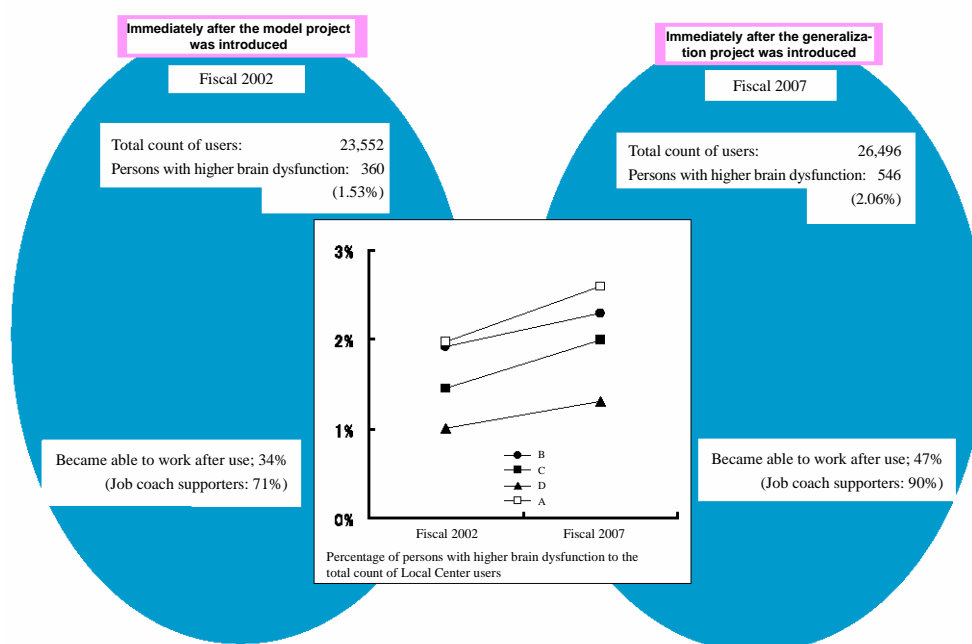


Fig. 3 Comparison of the realities of users immediately after model project introduction (in fiscal 2002) and immediately after generalization project introduction (in fiscal 2007)

## ■ Realities of users of the Vocational Center, National Institute of Vocational Rehabilitation

The coauthors clarified the realities of persons with higher brain dysfunction who used the Vocational Center of the NIVR during the 14 years from fiscal 1994 to 2007, and considered the effects of the model project and generalization project on work supports provided for persons with higher brain dysfunction. To identify the disability characteristics of users, the coauthors conducted a hearing and a neuropsychological examination when users began using the Local Centers, and then examined their social life (particularly how they work) six months after the users used the Local Centers.

### (1) Overall results

There were 243 users (persons with higher brain dysfunction) who became disabled at age 16 or older. The use status by fiscal year showed an annually higher trend until 2004 and reflected a particularly increasing trend while the national model project was implemented from fiscal 2001 to 2005. Among all types of training, the vocational preparatory training of users reflects the highest trend (Fig. 4). (The decline in fiscal 2007 was due to the limited quota placed on persons with higher brain dysfunction.)

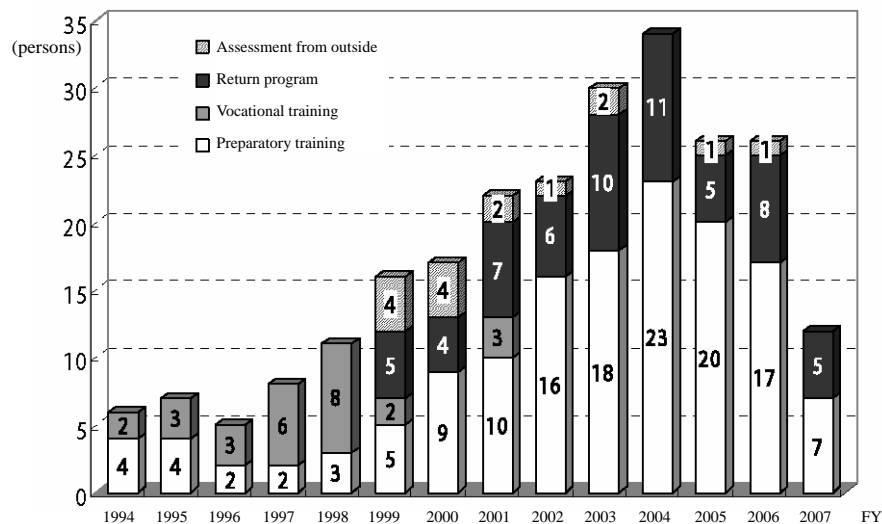


Fig. 4 Numbers of users by fiscal year and type of training

The following lists the characteristics of the users.

- (1) Users are predominantly male (90.9%). When classified by age, people in their 20s to 40s account for 88.1% (35.8% on average).
- (2) As classified by cause of disability, brain damage accounts for 50.6% and cerebral vascular disturbance accounts for 40.3%.
- (3) The period of hospitalization is 6.5 months on average. Those hospitalized for at least three months and up to 12 months account for 59.7%.
- (4) The time elapsed after they became disabled is 3.7 years on average. The peak value is at least one year, but less than two years, accounting for 27.2%.
- (5) Disability certificate holders account for 75.2%. As classified by certificate type, the certificates for physical disability account for 61.3%, certificates for mental health and welfare for 11.1%, and non-holders of certificates for 24.3%. Note that holders of certificates for mental health and welfare emerged in and after 1998, with more than 90% being users in and after 2001.
- (6) As classified by physical motion function, "no paralysis" combined with "minor paralysis" accounts for 75.7%. Many of the motion function disorders of brain-damaged persons receiving vocational rehabilitation supports are minor.
- (7) As classified by the disability characteristics of higher brain dysfunction, memory disorder was noted in 81.9% of the cases, attention disorder in 67.5%, alogia in 18.5%, composition disorder in 11.9%, unilateral neglect in 10.7%, difficulty in accepting the disorder in 11.1%, feeling control disorder in 10.3%, and intellectual decline in 6.6%. Since many users have memory or attention disorders as general symptoms, few users have alogia, apraxia or agnea as a focal symptom.
- (8) Intellectual ability, as determined by a WAIS-R adult intellect inspection, turned out to be as follows: FIQ =  $85.6 \pm 15.0$ , VIQ =  $90.3 \pm 15.0$ , PIQ =  $83.8 \pm 17.5$ , with motion ability slightly lower than linguistic ability.

- (9) The General Aptitude Test Battery (GATB) showed the following results:  $G = 56.9 \pm 28.3$ ,  $V = 54.3 \pm 23.4$ ,  $N = 67.8 \pm 27.9$ ,  $Q = 51.7 \pm 28.1$ ,  $S = 59.3 \pm 25.8$ ,  $P = 44.7 \pm 28.7$ ,  $K = 40.5 \pm 34.6$ ,  $F = 37.3 \pm 33.7$ ,  $M = 37.1 \pm 41.0$ , with mathematical ability relatively high, and motion co-response, finger dexterity, and hand and arm dexterity relatively low.
- (10) The Rivermead Behavioral Memory Test (RBMT) revealed the following results: memory disorder 82.4%. As classified by degree of memory disorder, heavy disorder accounted for 9.9%, medium disorder for 38.0% and light disorder for 34.5%, thereby showing a predominance in light to medium degrees.
- (11) SDS depression inspection showed the following results: depression at 1.0%, neurosis and similar disorders at 16.0% and normal states at 76.2%, thereby revealing that only a few of the users had a tendency toward depression.
- (12) A close look at how people returned to society six months after using the Vocational Center of the NIVR indicates that those at work account for 56.4%, or more than half of all users. As classified by cause of disability, persons with cerebral vascular disturbance accounted for a high value at 72.7%, while those with brain damage account at only 44.3% (Fig. 5). When classified by support menu, the "return program" accounts for a very high percentage at 84.4%, while "preparatory training" accounts for only 44.5% (Fig. 6). Taking such a special support measure as the "rehabilitation support program" often enables the reinstatement of such disabled persons, suggesting that it is not that the degree of a person's disability is totally unrelated. It was thus demonstrated that the method of support, the employer's understanding and other considerations from the people around have more to do with determining the possibility of employment for persons with higher brain dysfunction who seek vocational rehabilitation than the individual's disability characteristics.

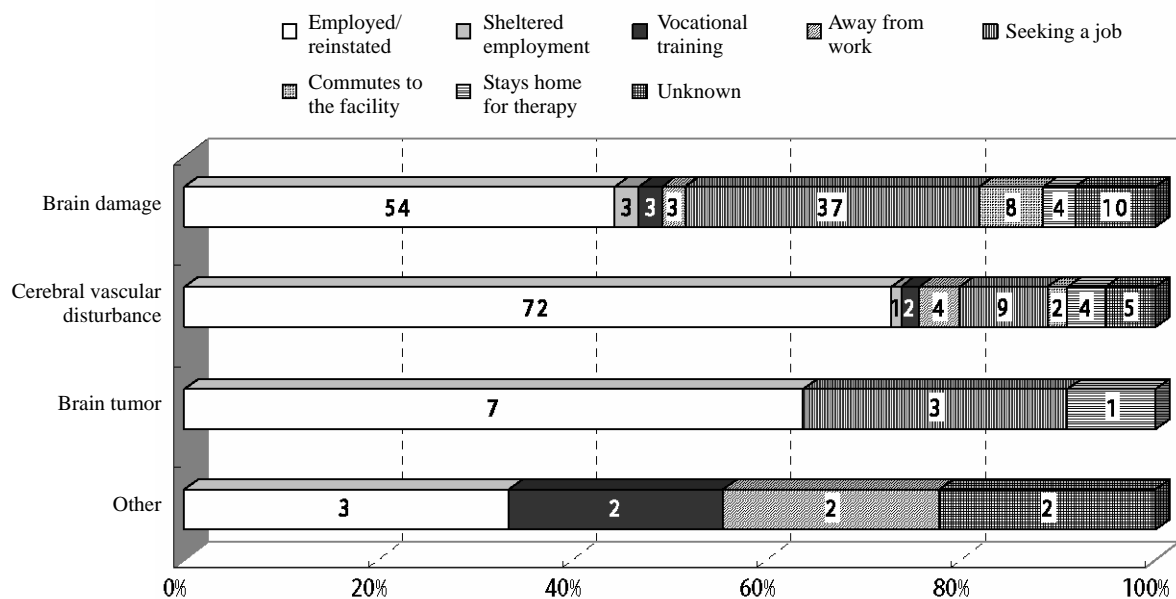


Fig. 5 What users did after using the NIVR (as classified by cause of disability)

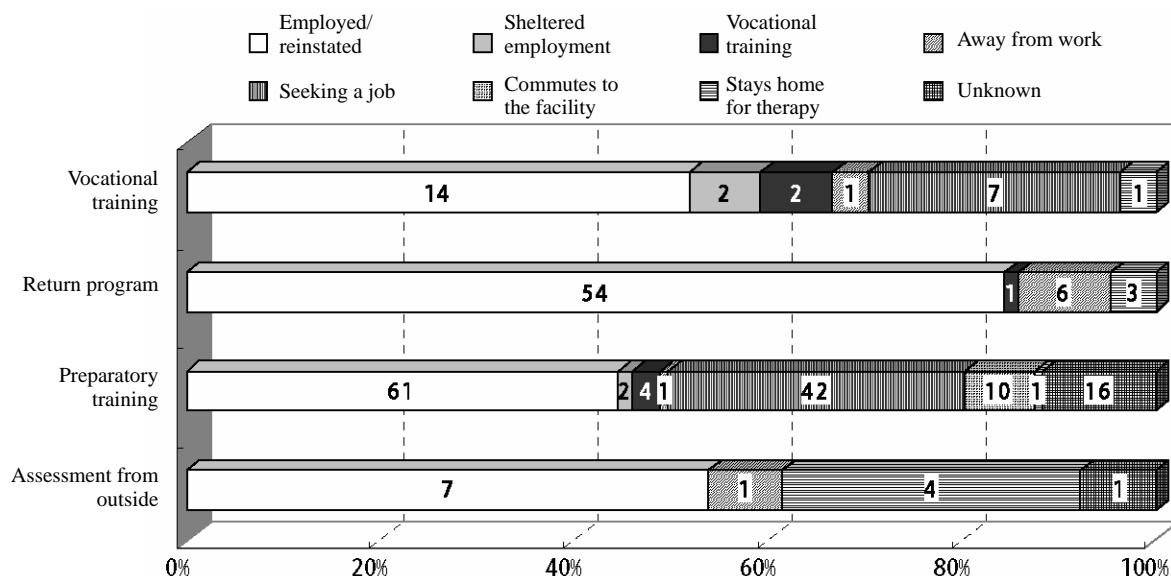


Fig. 6 What users did after using the NIVR (as classified by training type)

## (2) Effects of the model project and generalization project

Persons with higher brain dysfunction who used the Vocational Center of the NIVR from fiscal 1994 to 2007 were divided into two groups (i.e., group before the start or eight years from fiscal 1994 to 2001, and group after the start or five years from fiscal 2002 to 2007), starting with fiscal year 2001 when the model project for supports for higher brain dysfunction was initiated. Both groups were compared and the differences identified to examine the effects of support projects for persons with higher brain dysfunction. The findings are as follows:

- (1) Users increased 2.2-fold. (Public understanding was enhanced by the supporting model project and generalization project.)
- (2) There were no changes as classified by the age group of users.
- (3) As classified by cause of disability, persons with brain damage accounted for about 50% and those with cerebral vascular disturbance about 40%, thereby showing no significant difference between the groups before and after the start.
- (4) The period of hospitalization for consciousness disorder tended to be slightly shorter in the group after the start, with no difference in the period after onset of the disability.
- (5) The ownership of disability certificates generally showed a slight increase among previous non-holders and a marked increase among holders of certificates for mental health and welfare.
- (6) As classified by physical function, non-paralyzed persons increased slightly from 43.5% in the group before the start to 53.0% in the group after the start.
- (7) As classified by intellectual function, FIQ rose from 82.1 on average for the group before the start to 87.6 on average for the group after the start.
- (8) The characteristics of higher brain dysfunction showed a decline in focal symptoms (unilateral neglect and composition disorder) and an increase in attention disorder.
- (9) The group after the start shows higher marks in memory inspection (RBMT) than the group before the start.
- (10) In the group after the start, growth was seen in the number of intermediary cases from regions where the support model project and generalization project were implemented.
- (11) Introductory institutions that referred visitors to Local Centers indicate a decline in those who came via labor organizations and an increase in those who came via medical institutions.
- (12) The rate of employment after the use of Local Centers was 48.9% for the group before the start, as opposed to a higher percentage (at 60.3%) for the group after the start.

## ■ Follow-up survey of users of the Vocational Center of the NIVR

### (1) Background and purpose

The Vocational Center of the NIVR has been collaborating with the research department of the NIVR in providing supports for higher brain dysfunction since 1994. The NIVR has been continuously surveying the work status of users ever since.

The present survey examined the work status, together with the current status of disorders and health, experiences with the work support services used and other matters, and verified whether these aspects affect obtaining employment by the users.

### (2) Method

Questionnaire survey forms were mailed to 244 users of the Vocational Center of the NIVR from 1994 to 2007. The response rate was 51.2%.

### (3) Results

#### (a) Work rate (Fig. 7)

Of the 127 effective respondents, 93 are currently at work, marking a work rate of 72.4%. A similar survey conducted in 2002 showed a work rate of 40.4%. The rate therefore marked a considerable increase.

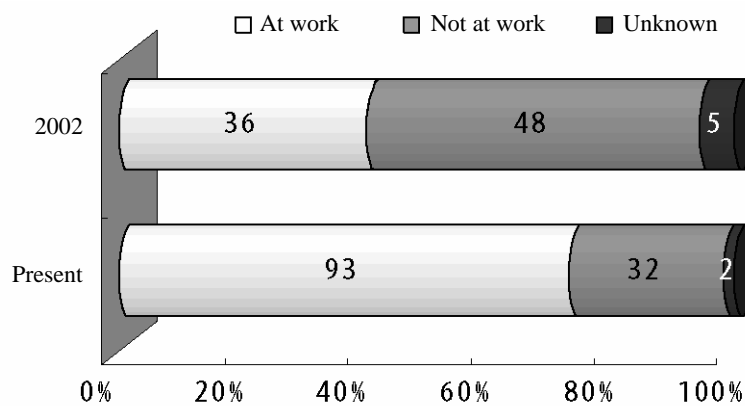


Fig. 7 Work rates of 2002 and at present

#### (b) Comparison of job-holders and non-job-holders

Basically, there were no significant differences between job-holders and non-job-holders in terms of disability, health condition or nature of supports received. The following lists the items where differences were examined. The items concerning health and disability include:

- Ownership of disability certificates (certificate for physical disability, certificate for mental health and welfare, and certificate for therapy)
- Type of higher brain function (such as memory disorder and attention disorder)
- Intelligence quotient
- Cause of higher brain function (such as head trauma, brain bleeding and apoplexy)
- Period of hospitalization

The items concerning work supports include the following:

- Use of work support institutions (such as Hello Work, Local Vocational Centers for Persons with Disabilities, and Centers for Persons with Disabilities at Work and in Life)
- Use of work support services (such as vocational introduction and mediation, and job coaching).



(c) Use of job-holders (Fig. 8)

The present conditions of job-holders indicate that most are established in their workplaces. They are satisfied with their current workplaces and enjoy good human relationships. Their high adaptability is also evident from the many who answered "superior or colleagues from the workplace" as someone to consult when having a problem.

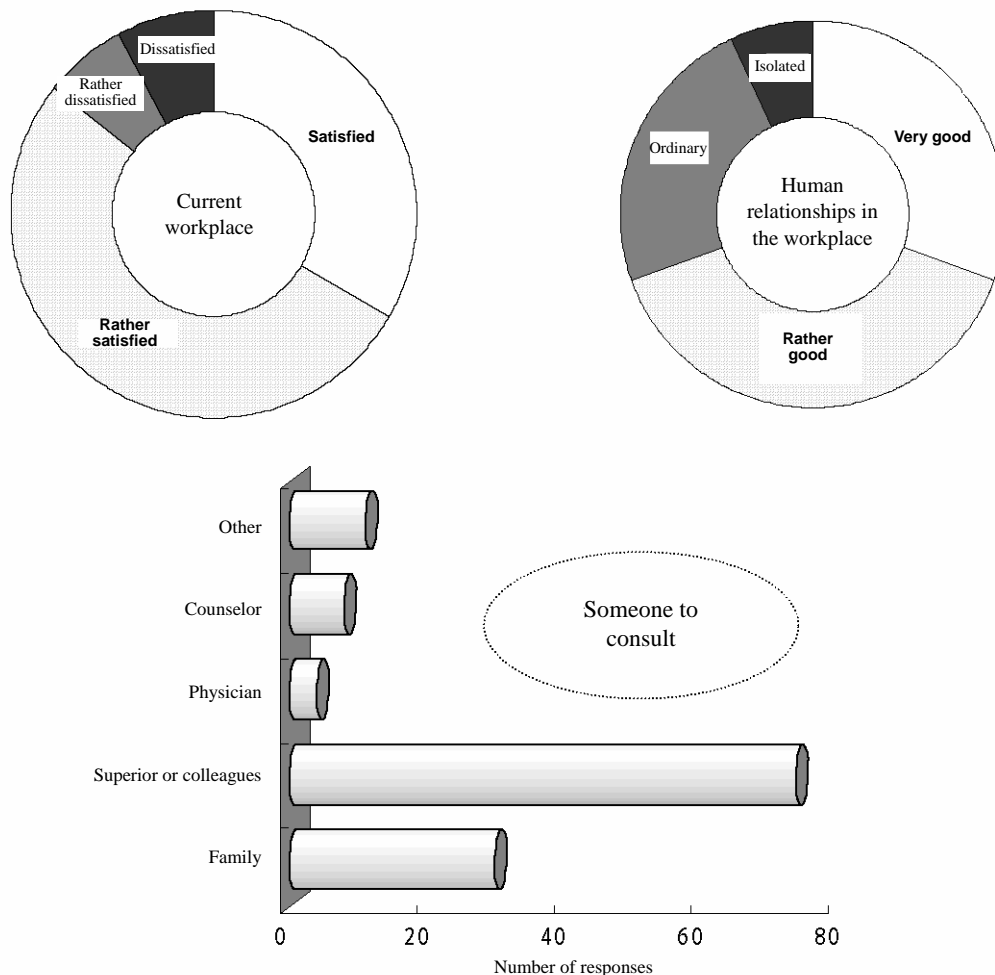


Fig. 8 Awareness of job-holders and whom they consult

#### (4) Summary

The findings from the follow-up survey indicate that job-holders are not enabled to work by the nature of disability, type of higher brain dysfunction, use of supports or related factors. In view of the current adaptability of job-holders, one would say that the efforts of people in their workplaces concerning work should be examined in more detail.

### ■ Survey of the workplaces of users of the Vocational Center of the NIVR

#### (1) Purpose

The findings from the user follow-up survey reported in the preceding section revealed that understanding the persons with higher brain dysfunction regarding their status of obtaining and retaining jobs entails considering not only the nature of their disability and supports, but also how both factors affect efforts in the workplace. The coauthors therefore investigated the relations between efforts and work supports provided by the corporations and employers (hereafter collectively

referred to as “the employers”) who employ persons with higher brain dysfunction. The aim was to consider the factors that help establish such people in their workplace.

## (2) Method

Regarding the respondents to the user follow-up survey reported in the preceding section (hereafter, "persons with disabilities"), the coauthors investigated the employers for whom the persons with disabilities are currently holding jobs. Prior to the survey, the coauthors informed the persons with disabilities of the purpose and nature of the survey, and confirmed their consent to taking the survey. The survey forms were then mailed to the 38 employers who gave their consent. The contents of the survey included the efforts of employers and the effects of job coach supports. The immediate superior or colleague of each person with a disability was also requested to fill out the questionnaire survey form.

## (3) Results

(a) Their current performance and future employment prospects (Fig. 9)

Regarding the current performance of persons with disabilities, many respondents said "Satisfied." Moreover, regarding the future, many employers also expect to employ said persons on a long-term basis or are even considering promoting them.

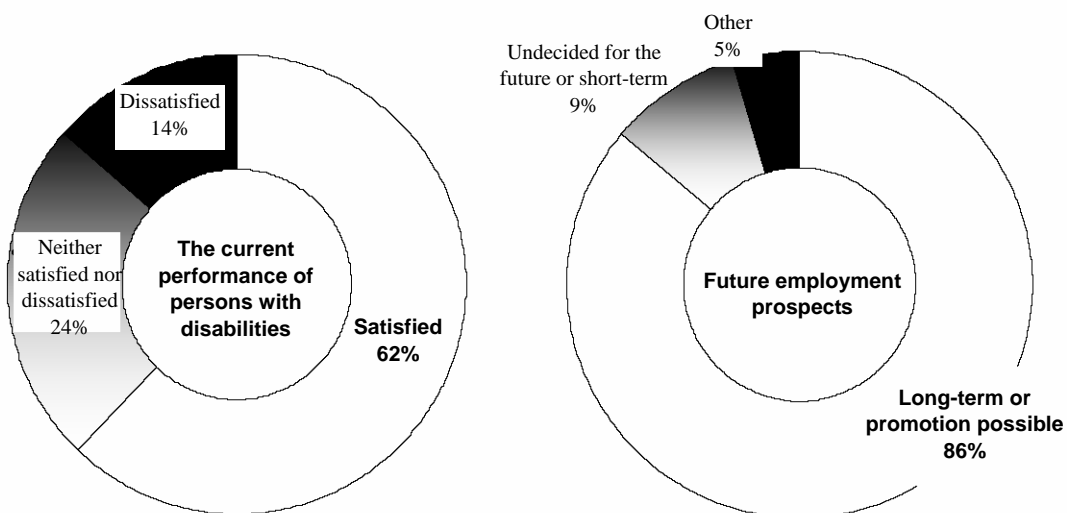


Fig. 9 Satisfaction with the work performance of persons with disabilities and their future employment prospects

(b) Problems and efforts (Fig. 10)

Every employer had expected to encounter some problems with the performance of persons with disabilities before hiring them. However, many responded that there are currently no problems. Many efforts made by those employers concern tasks and the employers have arranged a system for consultation, in order to talk with, encourage, and make arrangements for them to facilitate their life and visit the hospital.

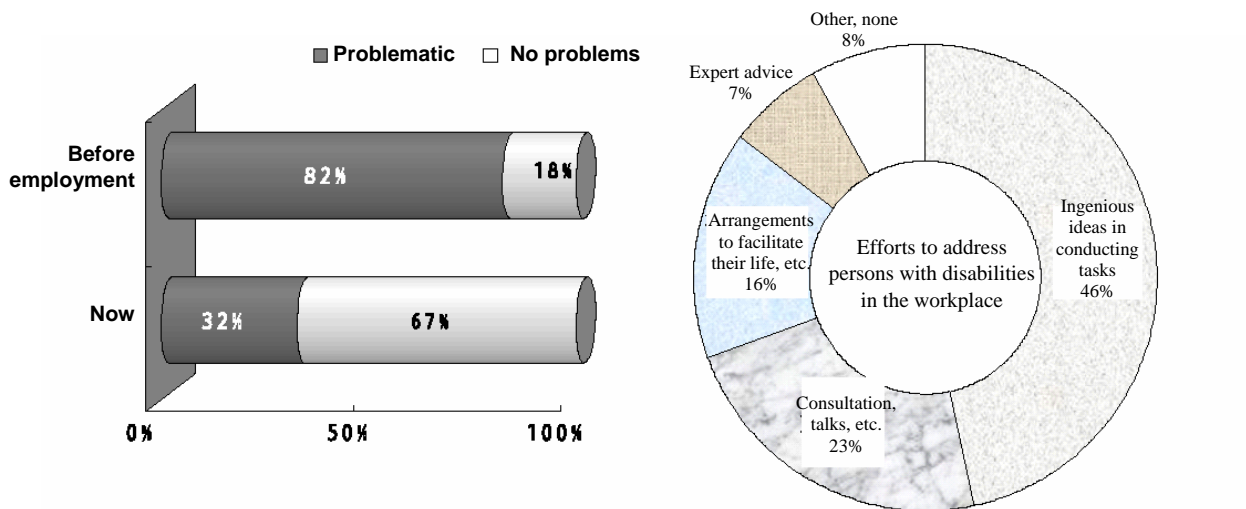


Fig. 10 Problems encountered before employment and currently, and efforts made by the employers

(c) Effects of job coach supports (Fig. 11)

Less than half of the employers used job coach supports, and many users acknowledged the effects of such supports. The coauthors consider that one can safely say that job coach supports are very effective in regard to subsequent intra-corporate efforts and establishment of a support system.

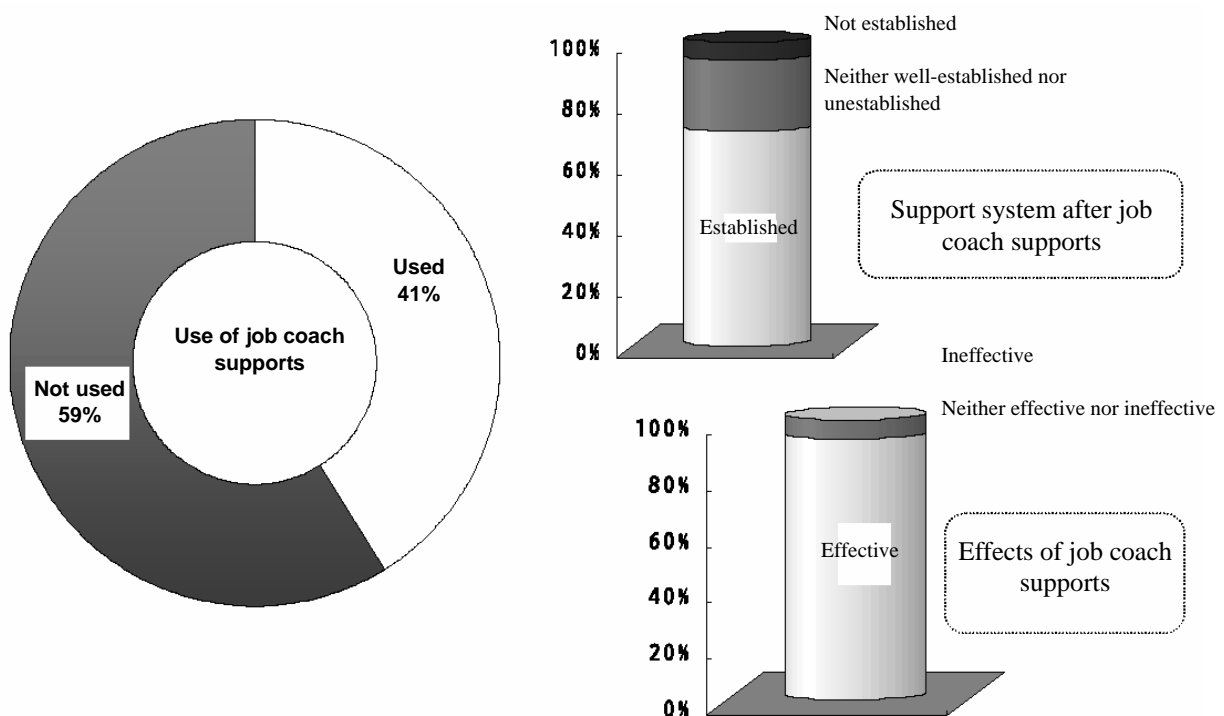


Fig. 11 Use of job coach supports and a support system, and the effects

(d) Hearing survey

To more elaborately examine the support efforts and factors used to establish the supports, some employers were subjected to an interview survey. Their comments revealed that they saw some problems with work, communications and other aspects of the persons with disabilities during the initial days of their employment, but that such problems were eventually resolved due to the diligent

efforts of those persons, the persistent guidance of the employers, expert advice, and other aids. The employers subject to the hearings had not known about the higher brain dysfunction until they had employed the persons with disabilities, but said that they had been greatly helped by the manner in which the experts (work support institution representatives and job coaches) interacted with the persons with disabilities and guided them.

#### **(4) Summary**

Many of the employers surveyed saw the persons with disabilities become established. They give high scores to the performance of persons with disabilities and expect long-term employment in the future. However, it was not that there were no problems with establishing the persons with disabilities. There had apparently been various problems with these persons adapting to the tasks involved and the workplace. However, many of these problems have been resolved due to the diligent efforts of the persons with disabilities, as well as the efforts of employers and expert supports. It therefore seems that collaboration among all three groups can solve problems regarding the adaptation and establishment of persons with higher brain dysfunction in the workplace.