The Work Incapacity and Reintegration Study: Results of the Initial Survey Conducted in the United States

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The United States and six other countries (Germany, Denmark, Norway, Sweden, Israel, and the Netherlands) are participating in a cross-national study of work incapacity and reintegration under the auspices of the International Social Security Association. The purpose of the study is to identify those medical and nonmedical interventions that are most successful in helping persons disabled due to a back condition return to work. The study involves a baseline survey and two follow-up surveys over approximately 2 years.

This article reports on the findings from the baseline survey conducted in the United States. It compares the responses of persons from four study groups (the Social Security Administration's Disability Insurance (DI) beneficiaries and Supplemental Security Income (SSI) recipients, and temporary disability insurance (TDI) recipients from two States—California and New Jersey). The article discusses the potential influence of certain characteristics on the capacity for work reintegration. Study findings suggest that the characteristics of TDI recipients with back disorders may differ in some respects from those of recently entitled DI or SSI beneficiaries with similar impairments, and that there may be some correlation between work resumption and factors such as education, occupation, work-related demands, and the presence of other chronic diseases.

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Introduction

The United States is one of many countries that has experienced sizable increases in the number of workers receiving disability benefits. In 1993, the Advisory Committee on Research of the International Social Security Association (ISSA) proposed that a cross-national study of work incapacity and reintegration (WIR) be conducted to identify strategies for dealing with this problem. A group of seven countries (Germany, Denmark, Norway, Sweden, Israel, the Netherlands, and the United States) agreed to participate.

The research goal of the project is to determine whether the various interventions by social security and health care systems found in different countries affect work resumption patterns and, if so, to identify those interventions that are most successful. An intervention is considered successful when the disabled person returns to the labor force instead of becoming a recipient of long-term disability benefits. The participants decided to focus on a specific group of disabled workers in recognition of the fact that individuals with different impairments may successfully recover or return to work through different interventions. Workers with back disorders were selected because they constitute a large proportion of disability beneficiaries and also because existing data suggest that there is a greater potential for successful intervention among persons in this group.

The study involves an initial survey (T1) and two follow-up surveys (T2 and T3) over a period of approximately 2 years. At the conclusion of the study, a cross-national analysis will be performed and a final report will be issued. Each of the participating countries will contribute to the final report. There are restrictions on the publication of bi- or multi-national data, but each country may publish findings from its own national study at

any time. This article describes the most prominent results of the T1 survey conducted in the United States.

Differences Between the U.S. Program and Those in Other Countries

Each participating country agreed to implement a project that will maintain a basic uniformity and comparability to the projects fielded in the other countries, but it was decided that variations in project design were acceptable. The Social Security Administration (SSA) concluded that it would be able to provide information that is roughly comparable to that provided by studies in the other countries. It is important to understand, however, that there are significant differences between disability programs in the United States and those in other countries involved in the project. The cohorts under study in the United States, therefore, are somewhat different from those under study by the other participant countries. The individuals studied, however, are very similar in terms of impairment and work stoppage due to the impairment.

The United States is the only participating country that does not have a national government-administered disability program that provides both temporary and permanent disability benefits. For example, the Norwegian sickness benefit pays 100 percent of covered earnings from the first full day of incapacity up to 52 weeks thereafter. If the worker does not recover within that period, he or she becomes eligible for permanent disability benefits, which provide from 50 percent to 100 percent of the projected old-age benefit, depending on the number of years of coverage. In Sweden, the employer is required to provide sickness benefits for the first 14 days of incapacity, and the National Social Insurance Board pays 80 percent of lost income from day 15 up to 1 year, and 70 percent thereafter.[1]

By contrast, the U.S. disability system is composed of a large number of programs, both public and private. The two largest programs are SSA's Disability Insurance (DI) and Supplemental Security Income (SSI) programs. These programs are designed to provide benefits to individuals who are severely disabled, unable to perform substantial gainful activity, and whose disability is expected either to last for at least 12 months or result in death. The DI program is a social insurance program based on contributions, and the SSI program pays benefits based on financial need. Under the DI program, benefits are not payable until the sixth month following the onset of disability.

Temporary or partial disability programs in the United States generally are privately operated rather than publicly operated programs. There are two exceptions. Workers who are injured in connection with their jobs may receive benefits through State-administered workers' compensation (WC) programs, starting with the date of injury. WC programs vary from State to State in requirements for coverage, and in the types and amounts of benefits provided. Currently, there are 55 WC programs in operation throughout the United States, and 88 percent of the employed wage and salary labor force is covered. Additionally, social insurance programs that partially compensate for the loss of wages due to temporary nonoccupational disability are available in five States (California, Hawaii, New Jersey, New York, and Rhode Island), Puerto Rico, and in the railroad industry. The maximum duration of benefits varies between 26 and 52 weeks.[2]

Study Design and Methodology

For the purpose of producing sound cross-national comparability of results, each participant country agreed to follow a core design, the objective of which would be to answer the question: What interventions are successful in helping back-disabled individuals return to the work force permanently? The core design developed by ISSA and the participating countries incorporates a series of basic elements that will be common for all of the national studies. These include the choice and definition of cohorts to be included in the study, the cohort characteristics, interventions, incentives and disincentives, outcomes to be measured, and the methodology to be applied. The core design involves the following critical elements:

- the sample size must be a minimum of 300 cases that can be monitored throughout the entire observation period;
- persons selected for the sample selection must—
  (1) be unemployed due to disability for at least 3 months;
  (2) have a back disorder with a diagnosis (International Classification of Disease) code of 720, 722, or 724;[3] and
  (3) be aged 59 or younger;
- cases are to be followed for a period of approximately 2 years, with initial baseline data collected 3 months after work stoppage, follow-up interviews 1 year after work stoppage, and again after 2 years; and
- data will be collected by each country using an instrument and data collection approach as consistent with the other participating countries as possible.

Information on cohort characteristics, interventions, and outcomes will be measured by a variety of techniques, including interviews with the disabled person, data from social security program administrators, and interviews with attending physicians. SSA will obtain information primarily from interviews with disabled persons and will not interview attending physicians. Each participating country will produce a national report of its findings and, as indicated earlier, a cross-national report will be prepared for ISSA with the assistance of research teams from the participating countries. An international data management center has been established to process data from each country, and participants may request data from the center for any cross-national analyses they wish to undertake.

SSA was unable to select sample cases from its administrative data bases that meet all of the above requirements. Since the DI program has a 5-month waiting period, potential respondents could not be selected for an initial contact approximately 3 months after work stoppage. The SSI program does not have a waiting period, but many applicants do not file for benefits immediately upon becoming disabled and the disability determination process for both programs often takes several months to complete. Additionally, the SSI program is means-tested and recipients do not represent a cross-section of the disabled population, but only those with extreme financial needs. In order to obtain a sample of recently disabled individuals representative of all segments of the population, SSA decided to request samples from State agencies that administer WC and temporary disability insurance (TDI) programs.

SSA asked several State agencies to participate in the project by providing samples of WC and TDI recipients who meet the criteria for sample selection. Although several States expressed an interest in participating, they were prevented from releasing information to SSA by State laws protecting the confidentiality of WC and TDI records. Nevertheless, two State agencies, the New Jersey Department of Labor (DOL) and the California Employment Development Department (EDD), agreed to identify potential respondents and forward a letter inviting them to participate in the study. The New Jersey DOL administers both the WC and the TDI programs in that State, and the California EDD administers the largest TDI program in the United States.

The New Jersey DOL was unable to identify WC recipients who were potential respondents because its data base does not include sufficient information. However, both State agencies identified samples of TDI beneficiaries who meet the criteria for selection, and sub-samples of volunteers who could be reached by telephone were selected from those groups. Additionally, samples of recently entitled SSI and DI beneficiaries were selected from SSA's administrative files. The initial contact with most of the SSI/DI beneficiaries could not be made at 3 months following work stoppage, and it is recognized that limited information about the influence of various interventions on work resumption would be secured, since a limited number of beneficiaries from these programs ever return to work. However, the samples do provide a national perspective with regard to the characteristics of individuals who became disabled due to a back disorder.

The California EDD provided SSA with data (for example, age and gender) on the population of individuals who met the criteria for sample selection. These data were compared to the characteristics of individuals who actually participated in the survey. From this information, we determined that the rates of participation were greater for older individuals and for males. We examined the potential impact of these differences by computing post-stratification weights using gender and four age groups. We then compared the tabulations obtained from unweighted data with the tabulations obtained by using the post-stratification weights. No major differences were seen in the weighted and unweighted tabulations displaying the relation between various variables and the fact that an individual had returned to work. Since we could not compute weights for the New Jersey TDI (NJTDI) cases, and we saw no major differences between the analyses using weighted and unweighted data from the California TDI (CATDI) cases, we decided to complete the data analysis using unweighted data. Thus, the tabulations and analysis contained in the remainder of this article are based on unweighted data.

Participation Rate

Of the 215 individuals who received TDI benefits from the State of New Jersey and who volunteered to participate in the WIR study, 4 subsequently decided not to participate. During the course of the interview, an additional 8 respondents were determined to be incorrectly included in the universe of potential respondents, and 22 individuals could not be located. Thus, 181 (87 percent) of the 215 individuals who originally volunteered to participate in the study were interviewed. There were 13 individuals from the sample of California TDI recipients who later decided not to participate in the study, and another 13 individuals who did not meet the study criteria. However, a significant number (85) could not be located and only 306 (76 percent of those who had volunteered to participate) were interviewed.

Similar patterns were seen in conducting the survey of DI and SSI beneficiaries. However, interviewers were unable to locate a much greater number of SSI recipients (82, compared with 29 DI beneficiaries). Overall, there were 970 individuals from the 4 sample groups who were correctly included in the survey and who could be located, and 924 (85 percent) who were interviewed.

Results of the T1 Survey

The WIR survey was designed to measure characteristics that typify the respondents and that may affect both their incapacity to work and their potential for reintegration into the work force. Thus, some basic demographic and household characteristics are being recorded for each respondent, including age, gender, education, nationality, native language, household composition, and income. Certain variables related to work and employment are also being measured, including occupation, job demands, employment history, and the respondent's history of absence from work due to illness. Additionally, the respondent's personal opinions about his or her own health are being recorded. Since an accounting of the respondent's medical condition is crucial to the study, there will be repeated measurements of functional limitations, the level of pain, and the presence of other chronic diseases. Finally, all medical interventions applied to promote work resumption are being measured. Nonmedical interventions will be addressed in the T2 survey.

The results of the T1 survey are based on national samples of DI beneficiaries and SSI recipients, and samples of TDI recipients from two States—New Jersey and California. Al-

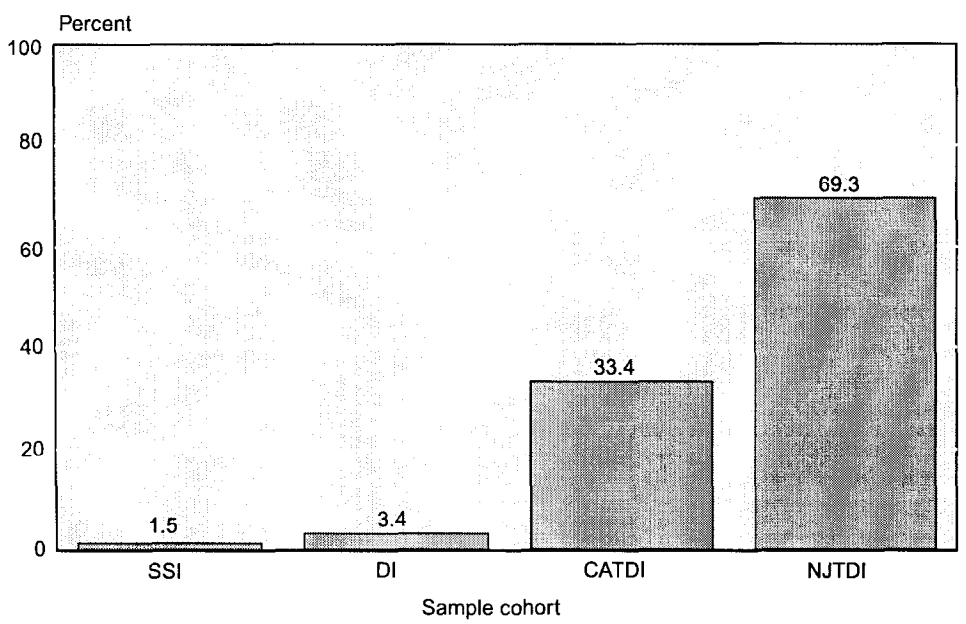
though we recognize that the results from the TDI samples are not representative of the Nation, nor of the entire population of TDI recipients with back ailments, we compare the results from the different sample cohorts for purposes of describing potential differences in characteristics of the sample populations and outcomes. The sample is representative of those in our sample universe who volunteered to participate in the survey. The TDI cohorts are clearly the groups that we are most interested in for return-to-work purposes.

Work Resumption

There were broad differences among the percentages of respondents from the different sample cohorts who had returned to work at the point the T1 survey was conducted. As anticipated, the number of DI beneficiaries and SSI recipients who were working was minimal (3.4 percent and 1.5 percent, respectively, as shown in chart 1). By contrast, 69.3 percent of New Jersey TDI recipients and 33.4 percent of California TDI recipients had returned to work.

The TDI recipients were interviewed at a point that ranged from about 4 months to 10 months after the date of disability. Since NJTDI benefits are payable for only 6 months, benefits to most respondents from that group had been discontinued at the point the survey was conducted. CATDI benefits are payable for 12 months, which may account for the difference in the proportion of respondents who had returned to work. Data from the T2 measurement will show whether the percentage of recipients who return to work is comparable in both States once TDI benefits have been discontinued for all respondents. Additionally, data from the T2 and T3 surveys should give us some indication of the proportion of TDI beneficiaries who eventually file for DI and/or SSI benefits, and the disposition of their benefit applications.

Chart 1.—Respondents returning to work, by sample cohorts



Since significant numbers of TDI recipients from both States returned to work, further descriptions of the characteristics of those groups will refer to their work status. Descriptions of the DI and SSI samples will not refer to work status, since the number of beneficiaries who returned to work was negligible.

Age Group

The age groupings of respondents from TDI samples in New Jersey and California were similar. In both States, the proportion of respondents aged 30-49 was in the 60-70 percent range, while about a 25 percent of the respondents were aged 50-59, and less than 10 percent were between the ages of 20 and 29 (table 1). The average age of respondents from New Jersey was 43; for those from California, the average age was 44. There was little variance between the proportion of respondents from each age group who had returned to work. This pattern was similar in both States.

DI and SSI beneficiaries were considerably older than the TDI respondents. More than two-thirds (67.1 percent) of SSI recipients and 84.5 percent of DI beneficiaries were between ages 50 and 59. The average age of SSI recipients was 52 and DI beneficiaries were, on average, age 54.

Gender

Female respondents outnumbered males from the New Jersey TDI sample (60.9 percent female) but were approximately equal to males in California (51.8 percent female). In both States, the proportion of males who had returned to work was only slightly higher than the proportion of females. The numbers of male and female SSI recipients were approximately equal, but almost two-thirds (67.5 percent) of the DI beneficiaries were male. This pattern is similar to the gender distribution of disability beneficiaries as a whole—males constitute 61.5 percent of DI beneficiaries, but only 41.7 percent of disabled SSI recipients.[4]

Education

Respondents from the CATDI and the NJTDI samples were considerably better educated than those from the DI and SSI samples. Among those from California, 46.9 percent completed at least 2 years of college. The corresponding number from the NJTDI sample was 42.4 percent. About 11 percent from each group did not complete high school.

Among respondents from the DI sample, 26.3 percent did not complete high school and 20.1 percent completed at least 2 years of college. Almost half (45.3 percent) of respon-

dents from the SSI sample did not complete high school and only 12.5 percent had 2 years of college or more.

The level of education may be a predictor of the tendency to return to work. For example, among respondents from the CATDI sample, only 11.8 percent of those whose education stopped at middle school had returned to work, while 28.8 percent of high school graduates and 46.5 percent of those who completed 4 years of college were working. The proportions of respondents from the NJTDI sample who had returned to work were much higher, but the pattern was similar. Among those who only completed grade school, 50.0 percent had returned to work, compared with 60.8 percent of high school graduates, and 100 percent of those with 4 years of college.

Nationality and Native Language

Respondents were asked whether they were born in the United States or in a foreign country, and whether their native language was English. The percentages of foreign-born respondents from the CATDI and the NJTDI samples were

Table 1.—Demographic and household characteristics of respondents, by sample cohort[1]

[In percents]

Characteristic	Total				Returned to work	
	DI	SSI	CATDI	NJTDI	CATDI	NJTDI
Age group						
50-59	84.5	67.1	28.5	25.8	32.2	60.9
40-49	10.5	20.2	35.7	34.3	35.8	68.9
30-39	4.6	9.8	26.2	34.8	32.5	75.8
20-29	.4	2.9	9.5	5.1	31.0	66.7
Mean	54.0	52.0	44.0	43.0	43.0	42.0
Gender						
Male	67.5	50.3	48.2	39.1	35.4	72.9
Female	32.5	49.7	51.8	60.9	31.7	67.0
Education (Highest grade completed)						
Kindergarten	0	.5	0	0	0	0
Grade school	7.5	14.1	5.6	4.5	23.5	50.0
Middle school	18.8	30.7	5.6	6.7	11.8	58.3
High school	46.4	37.5	41.0	44.1	28.8	60.8
2-year college	12.1	9.4	29.8	25.7	34.1	71.7
4-year college	3.8	2.6	14.1	11.7	46.5	100.0
Graduate school	4.2	.5	3.0	5.0	77.8	100.0
Other	7.1	4.7	1.0	2.2	66.7	50.0
Nationality						
Native born	94.2	82.8	81.6	81.0	34.5	73.1
Foreign born	5.8	17.2	18.4	19.0	28.6	52.9
Native language						
English	92.5	77.0	83.2	81.6	34.8	73.3
Other	7.5	23.0	16.8	18.4	27.5	51.5
Household composition						
Lives alone	61.9	22.1	21.5	17.8	37.5	69.0
Lives with partner only	22.8	20.6	47.1	44.8	43.1	72.6
Lives with partner and children	3.0	22.1	7.3	10.4	5.3	58.8
Lives with children only	12.4	35.1	24.1	27.0	20.6	63.6

[1] Respondents represent sample cohorts from the Social Security Administration's Disability Insurance (DI) and Supplemental Security Income (SSI) programs, and the California and New Jersey temporary disability insurance programs, (CATDI) and (NJTDI).

almost identical (18.4 percent and 19.0 percent, respectively) and were similar to the percentage from the SSI sample (17.2 percent). The percentage of foreign-born DI beneficiaries was considerably less (5.8 percent). The difference between the TDI samples and the DI sample may be a reflection of the makeup of the population in New Jersey and California compared to the Nation as a whole. The variance between the SSI and DI samples could be due to differences in the two programs.

The percentage of respondents from each cohort who said their native language was other than English corresponded closely to the percentage of those who said they were foreign born. The proportion of foreign-born respondents from each of the TDI samples who reported they were working was somewhat less than the proportion of respondents born in the United States who had returned to work.

Information on nationality and native language is more relevant to some of the other participant countries than it is to the United States, because they have greater numbers of foreign workers. We have included data on these characteristics in this article because it appears that respondents who are foreign born or whose native language is other than English may be less inclined to resume working. This trend will be explored more fully when additional study data have been gathered.

Household Composition

Another factor that could influence the decision to return to work is the degree of family support received. Respondents were asked if they lived alone, with a partner only, with a partner and children, or with children only. The responses from the CATDI and the NJTDI samples were almost identical. The most frequent answer (47.1 percent and 44.8 percent, respectively) was that the respondent lived with a partner only. This was the least frequent response from respondents from the SSI sample; the most common response from this group was that the person lived "with children only" (35.1 percent). The majority of respondents from the DI sample (61.9 percent) lived alone.

The results from the TDI samples were not clear with respect to any potential correlation between household composition and the tendency to return to work. The percentages of respondents from the CATDI sample living alone or with a partner only, and who had returned to work, were much higher than the percentages of those respondents who lived with a partner and children, or with children only. Differences in percentages were much less pronounced in New Jersey, by household composition.

Income

One of the objectives of the WIR study is to provide insight into the effect of lost income on the tendency to return to work. Thus, respondents were asked to furnish information about their income prior to becoming disabled and following work stoppage.

Income received prior to work stoppage was primarily from earnings. The median income reported by respondents from the DI sample was $1,800 per month. Most of the respondents (92.9 percent) reported income from earnings, but 21.2 percent also reported income from other sources (table 2). The primary sources of other income were sick pay, workers' compensation, veterans' benefits, and miscellaneous sources (housing subsidy, rental income, alimony, and so forth). Median income after work stoppage was $1,499 per month (a decline of 16.7 percent). Respondents were able to compensate for the loss of income from earnings not only through the receipt of DI benefits, but through an increase in the rate of recipiency from the income sources previously cited.

The decline in income was much greater for respondents from the SSI sample. Median income declined from $1,000 per month to $581, a loss of 41.9 percent. A total of 65.0 percent of SSI recipients reported income from earnings prior to becoming disabled, and 30.5 percent reported income from other sources. The most frequent sources of income other than earnings were the Aid to Families with Dependent Children and General Assistance programs. In addition to SSI payments, there was some increase in the recipiency of income from other sources following work stoppage, but the increase was small compared with the loss of income from earnings.

Median income for respondents from the CATDI sample declined from $1,724 per month to $1,100 per month (-36.2 percent). The income of this group prior to work stoppage also came primarily from earnings (96.7 percent reported earnings) but a percentage comparable to that of the DI sample (21.6 percent) also had income from other sources. The experience of respondents from the NJTDI sample was similar. Median

Table 2.—Percent of earned income and amount before and after work stoppage, by sample cohort[1]

Circumstance	DI	SSI	CATDI	NJTDI
Before work stopped				
Percent with earned income	92.9	65.0	96.7	96.1
Percent with other income	21.2	30.5	21.6	20.4
Median income	$1,800	$1,000	$1,724	$1,600
After work stopped				
Median income	$1,499	$581	$1,100	$1,066
Percent change in median income	-16.7	-41.9	-36.2	-33.4

[1] Respondents represent sample cohorts from the Social Security Administration's Disability Insurance (DI) and Supplemental Security Income (SSI) programs and the California and New Jersey temporary disability insurance programs, (CATDI) and (NJTDI).

income declined from $1,600 per month to $1,066 (-33.4 percent) due to loss of earnings. The vast majority of respondents (96.1 percent) reported income from earnings at the point they became disabled and 20.4 percent had income from other sources. Other than the receipt of TDI benefits, there was no significant increase for either group in income from other sources following work stoppage.

Occupation

Each respondent was asked to identify his trade or occupation at the point he or she became disabled. There were some differences between the CATDI sample and the NJTDI sample, due perhaps to the availability of different types of jobs in each State. As shown in table 3, the highest numbers of respondents from the CATDI sample described themselves as technicians (13.1 percent), craft or trade workers (12.1 percent), professionals (10.7 percent), or clerical workers (10.4 percent). The most frequent responses from the NJTDI sample were professionals (15.1 percent), clerical workers (14.5 percent), craft or trade workers (11.7 percent), and factory workers or truck drivers (11.7 percent).

The data from these samples suggest, as intuition suggests, that there could be a relationship between a back-disabled individual's occupation and his or her ability to return to work. The highest percentage of respondents from each sample that had returned to work were those who described themselves as professionals. Other respondents from both cohorts who were likely to be working were those who described themselves as technicians and clerical workers. Those least likely to have returned to work in California were unskilled workers and, in New Jersey, factory workers or truck drivers.

Table 3.—Type of occupation and work-related demands at the onset of disability, by sample cohort[1]

[In percents]

Occupation and work-related demands	Total				Returned to work	
	DI	SSI	CATDI	NJTDI	CATDI	NJTDI
Occupation						
Manager	5.8	3.1	7.4	6.2	27.3	81.8
Professional	8.9	3.1	10.7	15.1	50.0	92.6
Technician	8.9	8.6	13.1	11.2	43.6	73.1
Clerical	3.5	3.9	10.4	14.5	41.9	73.1
Service/sales	6.6	4.7	7.7	3.9	30.4	85.7
Agricultural/fishing	2.2	2.3	2.4	0	0	0
Crafts/trades	21.7	17.2	12.1	11.7	27.8	76.2
Factory workers/truck drivers	17.3	18.0	6.7	11.7	30.0	42.9
Unskilled	10.2	10.9	5.7	5.0	17.7	55.6
Other	15.0	27.3	23.8	20.7	33.8	59.5
Work-related demands[2]						
Learn new things	77.1	66.1	78.9	77.7	76.5	79.0
High level of skill	79.9	59.5	81.6	79.9	76.5	85.5
Creativity	70.9	58.3	76.5	74.9	75.2	78.2
Repetitive work	88.9	87.5	94.3	85.5	92.0	84.7
Make independent decisions	84.6	61.4	83.2	77.7	87.1	80.6
Independently decide how to work	80.4	66.4	77.5	77.9	82.2	77.4
Work quickly	88.9	85.9	93.6	87.2	89.1	87.1
Strenuous physical work	91.1	92.1	78.5	62.0	65.3	54.0
Excessive amount of work	76.2	74.0	69.1	60.9	62.4	53.2
Have enough time to complete work	75.4	85.6	79.2	81.0	80.2	86.3
Free from conflicting demands	55.6	52.8	33.6	57.0	60.4	57.3
Work in twisted positions	92.5	86.6	74.7	64.8	56.4	57.3
Work in same positions for long periods	81.5	85.9	79.9	81.6	75.2	78.2
Move heavy objects	85.0	82.8	65.4	56.4	54.5	46.0

[1] Respondents represent sample cohorts from the Social Security Administration's Disability Insurance (DI) and Supplemental Security Income (SSI) programs, and the California and New Jersey temporary disability insurance programs, (CATDI) and (NJTDI).

The occupations most often reported by respondents from the DI and SSI samples were somewhat different. The most frequent responses from these cohorts were craft or trade workers, factory workers or truck drivers, and unskilled workers.

Work-Related Demands

The demands placed on a worker by type of occupation is another factor that could influence his or her ability to return to work. Respondents were given a list of work-related demands and asked to describe the extent to which their jobs involved each of them. Possible responses were "often," "sometimes," "seldom," or "never."

Respondents from the DI sample described their jobs as being more demanding in several respects than did respondents from the SSI sample. For example, DI respondents more frequently described their jobs as often or sometimes requiring them to have a high level of skill, to learn new skills, to be creative, to make independent decisions, and to be given inadequate time to complete work assignments. Both the DI and SSI groups responded in similar proportions to questions about the repetitiveness of the work, the amount of strenuous physical activity involved, the demand to do an excessive amount of work, the requirement to work in twisted positions or the same position for long periods, and the demand to move heavy objects. In no respect were respondents from the SSI sample more likely to describe their jobs as having demanding features.

Both TDI sample respondents gave similar answers, in most respects, to those of the DI sample respondents. However, respondents from both California and New Jersey less frequently described their jobs as requiring them to do strenuous physical work, or to move heavy objects.

The data from the CATDI and the NJTDI samples suggest that there may be a connection between some work-related demands and the tendency to return to work. Respondents from both groups who had not returned to work were much more likely to describe their jobs as requiring them to do strenuous physical work, to do an excessive amount of work, to work in twisted positions, or to move heavy objects. Respondents from the NJTDI sample who had returned to work were more likely to report that their jobs often or sometimes required them to be creative, to demonstrate a high level of skill, or to make independent decisions. This pattern was not evident from the results of the CATDI sample.

Subjective Opinions Regarding Health

Survey participants were asked to respond to a series of questions regarding their subjective opinions about the current state of their health and their expectations of recovery. Responses from both TDI samples were similar. For example, 8.9 percent of respondents from the CATDI sample described their health as excellent and 23.4 percent expected their health to get worse (chart 2). The comparable percentages from the NJTDI sample were 10.6 percent and 27.3 percent, respectively. Responses regarding the tendency to become ill and the participants' evaluation of their general health in comparison to others were also similar.

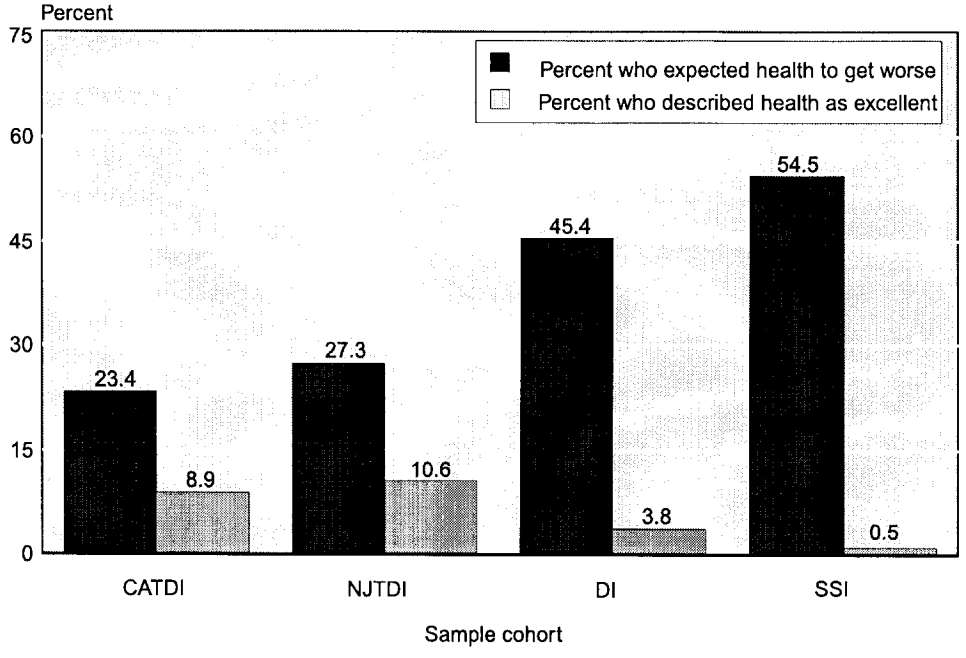
Respondents from the DI and SSI samples were much less inclined to describe their health as excellent or to be optimistic about the future state of their health. Only 3.8 percent of respondents from the DI sample and 0.5 percent from the SSI sample described their health as excellent. The percentages of respondents from those samples who expected their health to get worse were 45.4 percent and 54.5 percent, respectively.

Respondents from both TDI samples who had returned to work were much more likely to describe their health as excellent than those who had not yet returned to work. Those who had returned to work were also more inclined to be optimistic about the future state of their health. Respondents who had not yet returned to work more frequently expressed uncertainty about their future.

Presence and Impact of Other Chronic Diseases

Many recipients of disability benefits have multiple health problems. Questions were asked regarding other chronic health

Chart 2.—Respondents' subjective opinions about health, by sample cohorts



conditions to provide information about the prevalence of other conditions and the effect they have on work reintegration. The proportion of respondents from the CATDI sample with at least one other chronic disease was 54.6 percent; the corresponding rate from the NJTDI sample was 50.8 percent (table 4). The most frequently reported problems were the same in both instances—chronic headaches, other musculoskeletal disorders, and rheumatism.

Respondents from the DI and SSI samples were more likely to have other chronic diseases. A total of 76.6 percent of SSI recipients, and 74.6 percent of DI beneficiaries, reported having at least one other chronic disease. The most frequent disease reported was rheumatism. Respiratory, heart, and vascular diseases were also much more prevalent among DI and SSI respondents.

More than half of DI and SSI respondents who had other chronic illnesses (52.0 percent of DI beneficiaries and 64.2 percent of SSI recipients) reported that these conditions interfered with their ability to return to work (chart 3). This compares with 24 percent for CATDI respondents and 14 percent for NJTDI respondents.

The presence of other chronic diseases appears to have had a minimal effect on the ability of respondents from both TDI samples to resume working. Among the respondents from the CATDI sample, 26.4 percent of those who had another chronic disease had returned to work, compared to 33.4 percent of the entire cohort. Only 29.3 percent of those with another chronic disease who had not returned to work stated that the other condition interfered with their ability to do so (chart 4). The pattern was similar among respondents from the NJTDI sample; 64.0 percent of those with another chronic disease had returned to work, just slightly less than the figure for the entire cohort (69.3 percent). Among those who were not working, only 27.8 percent considered the other disease to be an impediment.

Medical Interventions

Respondents were asked questions about the medical practitioners who treated them and the types of treatment they received. When asked what type of physician treated them most often (family doctor, company doctor, or specialist), the responses from both TDI samples were similar. Among the NJTDI sample, 68.9 percent of respondents said they were treated by a specialist, and 62.1 percent of CATDI respondents answered similarly (table 5). The percentage reported by DI beneficiaries was somewhat lower (52.6 percent) and considerably lower for SSI recipients (39.0 percent). Respondents from the SSI sample were the only group that was treated most often by a family doctor. The number of respondents from all groups who said they were most often treated by a company doctor was negligible. The percentages of respondents from each group who reported being treated by a physical therapist was similar, ranging from 60 percent to 67 percent. There did not appear to be any correlation between the type of medical practitioner seen most often and the tendency to return to work.

Among the most frequent treatments reported by all cohorts were X-rays, injections or medications for pain relief, bed rest, heat or cold, and external supports (for example, a brace or corset). Many respondents from the DI and SSI samples also reported that they had used crutches or other walking aids. Fewer respondents from both of the TDI samples reported using these devices.

Table 4.—Respondents with other chronic diseases, by sample cohort[1]

[In percents]

Chronic disease	Total				Returned to work	
	DI	SSI	CATDI	NJTDI	CATDI	NJTDI
Respondents with at least one other disease	74.6	76.6	54.6	50.8	26.4	64.0
Specific disease						
Respiratory	19.2	26.9	8.9	5.1	22.2	77.8
Heart/vascular	30.8	26.7	10.8	10.7	27.3	15.8
Rheumatism	52.1	54.7	16.8	15.7	21.6	53.6
Diabetes	15.1	13.0	4.9	7.8	26.7	64.3
Cancer	3.8	5.8	1.3	1.1	0	50.0
Neurological	13.5	16.9	5.6	3.4	29.4	50.0
Chronic headaches	23.8	37.5	17.7	20.7	20.4	51.4
Other musculoskeletal disorder	28.3	33.0	17.1	19.6	23.1	48.6
Other chronic disease	25.1	22.1	13.1	24.2	15.0	69.8

[1] Respondents represent sample cohorts from the Social Security Administration's Disability Insurance (DI) and Supplemental Security Income (SSI) programs, and the California and New Jersey temporary disability insurance programs, (CATDI) and (NJTDI).

We compared the frequency with which treatments were reported by respondents from the TDI samples who were working, and those who had not returned to work. In most instances, the frequency was similar among both groups. However, a much higher proportion of respondents from the CATDI sample who reported having back surgery (51.7 percent) had returned to work than the proportion from the entire sample (33.4 percent). The most frequent types of surgery reported were laminectomy and spinal fusion.[5] Most of those who had a laminectomy (61.4 percent) had returned to work, but only 28.6 percent of those who had a spinal fusion were working.

Among respondents from the NJTDI sample, 74.0 percent of respondents who reported having surgery had returned to work, compared with 69.6 percent for the entire sample. The proportion of those who returned to work after having a laminectomy was 83.8 percent, but only 68.4 percent of those who had a spinal fusion were working.

Most of the respondents from the DI and SSI samples who reported having surgery had either a laminectomy or a spinal fusion. Although the percentages of respondents from these groups who reported having surgery were roughly comparable to those from the TDI samples, the outcomes in terms of work resumption were entirely different (that is, a significant number of TDI recipients returned to work, but few DI or SSI beneficiaries did so).

Conclusion

The primary purpose of the WIR study is to identify those medical and nonmedical interventions that are most successful in helping individuals disabled by a back condition to return to work. This article reports only the findings for the U.S. study from the first of three surveys. Thus, its purpose is limited to describing the findings from this survey for each of the four sample groups, as well as differences in characteristics that could impact upon the potential for work resumption. The most significant observations are:

- Persons who became entitled to DI or SSI benefits due to a back condition were, on the average, about 10 years older than those with a similar diagnosis who became eligible for TDI benefits;

- The level of education for TDI recipients was considerably higher than that of DI beneficiaries, and much higher than that of SSI recipients. TI data suggest that this factor could potentially affect the tendency to return to work;

- The proportion of SSI recipients who were born outside the United Sates, or whose native language was other than English, was about three times that of DI beneficiaries. Respondents from the TDI samples who were born in the United States or whose native language was English were more likely to have returned to work than those who were foreign born or whose native language was foreign;

- The loss of income due to disability was in the range of 30 percent to 40 percent for respondents from the SSI and TDI cohorts. The percentage of lost income was about half that for DI beneficiaries;

- Among respondents from the TDI samples, those who reported that they were employed as professionals, technicians, or clerical workers were more likely to have returned to work than those who said they were employed as truck drivers, factory workers, or unskilled workers. The latter were among the occupational groupings most often reported by the DI and SSI cohorts;

- DI beneficiaries more frequently described the work they were doing when they became disabled as requiring creativity, a high level of skill, or the ability to make independent decisions than did SSI recipients. Respondents from the TDI cohorts who reported that their jobs frequently required them to do strenuous physical work, to work in twisted positions, or to lift heavy objects were less likely than others to be working;

Chart 3.—Respondents with other chronic diseases that affected ability to return to work, by sample cohorts

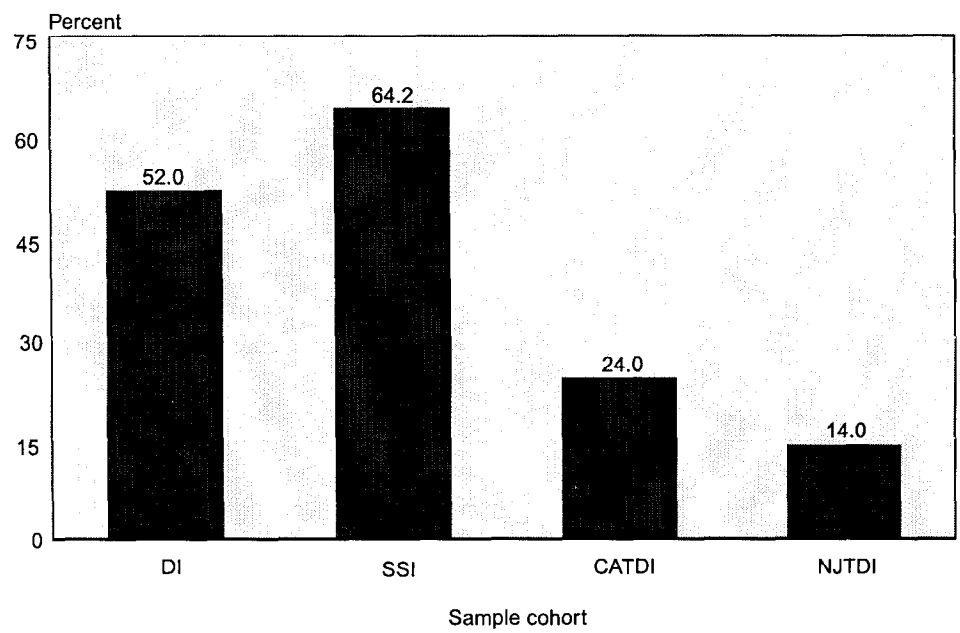


Chart 4.—Respondents with other chronic diseases who had not returned to work, by both TDI sample cohorts

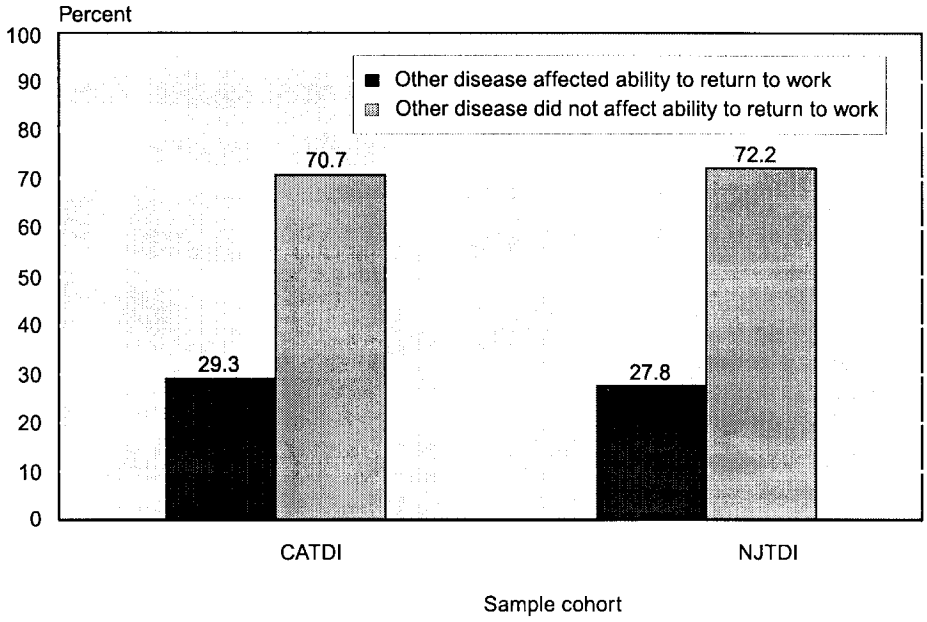


Table 5.—Medical interventions, by type of provider, treatment received, and sample cohort[1]

[In percents]

Provider and treatment	Total				Returned to work	
	DI	SSI	CATDI	NJTDI	CATDI	NJTDI
Type of provider						
Family doctor	42.8	60.0	35.7	31.1	34.0	69.7
Company doctor	4.6	1.1	2.1	0	33.3	0
Specialist	52.6	39.0	62.1	68.9	33.3	72.6
Physical therapist	67.4	60.9	63.6	63.7	32.5	65.8
Treatment received						
X-rays	90.0	90.5	85.2	85.5	32.8	66.7
Hospitalization	39.6	33.7	30.2	39.1	48.9	65.7
Back surgery	40.4	29.0	28.5	43.0	51.7	74.0
Laminectomy	27.3	26.3	42.7	41.6	61.4	83.8
Spinal fusion	27.3	27.6	20.4	21.3	28.6	68.4
Other	45.5	46.1	36.9	37.1	42.1	75.8
Heat or cold	55.5	48.4	56.4	66.3	32.0	67.0
Electric therapy	44.4	38.0	40.9	38.8	30.7	60.9
Acupuncture	5.9	9.9	9.8	5.6	33.3	60.0
Pain relieving injection/medicine	82.9	77.1	70.5	71.5	27.4	65.6
Bed rest	51.7	50.5	69.2	59.2	30.8	68.9
Massage	39.5	41.7	45.3	41.3	34.1	63.5
Manipulation/traction	22.2	20.1	36.4	30.3	32.4	68.5
Mud packing/medicinal baths	15.0	22.5	21.6	19.0	28.8	50.0
Muscle training/range-of-motion	43.8	33.9	43.3	44.9	37.9	66.3
Walking aids/crutches	52.1	52.6	29.5	19.0	23.3	55.9
Corset/external support	53.8	57.8	51.2	52.0	28.2	63.4

[1] Respondents represent sample cohorts from the Social Security Administration's Disability Insurance (DI) and Supplemental Security Income (SSI) programs, and the California and New Jersey temporary disability insurance programs, (CATDI) and (NJTDI).

- Many of the respondents reported having other chronic diseases, the most common of which were headaches, other musculoskeletal disorders, and rheumatism. The majority of SSI and DI beneficiaries said the presence of other chronic disorders affected their ability to return to work. TDI respondents from California and New Jersey were much less likely to report that the presence of other chronic disorders affected their ability to return to work. The impact of other chronic diseases on the work resumption of TDI recipients appeared to be minimal;
- The type of medical provider had no apparent effect on the tendency of respondents from the TDI cohorts to return to work. The proportions of those who had returned to work and were treated primarily by a specialist were approximately the same as those who were treated primarily by a family doctor. Respondents from the TDI cohorts were treated by a specialist more frequently than DI beneficiaries, and much more frequently than SSI recipients; and
- There was consistency among the four sample groups with regard to the most frequent types of treatment. X-rays, pain medications, bed rest, heat or cold, and external supports were most frequently prescribed.

The T2 survey was conducted during July and August of 1997. The next report on the WIR study will cover the findings of that survey. This report will include detailed information about nonmedical interventions (not addressed in the T1 survey) and more complete information regarding the proportions of respondents from the TDI cohorts who reenter the labor force, as well as those who apply for long-term benefits. Also planned is a final report on the U.S. national study, following the T3 survey, which will track changes in income, household composition, medical treatments, and so forth, over a 2-year period and evaluate the affects of those changes on the work status of individual respondents. The final report will be a cross-national analysis that compares the experiences of the participating countries in reintegrating back-disabled persons into the work force.

Notes

[1] U.S. Social Security Administration, *Social Security Programs Throughout the World, 1995*. Washington, DC: U.S. Government Printing Office, 1996.

[2] U.S. Social Security Administration, *Social Security Programs in the United States*. Washington, DC: U.S. Government Printing Office, 1997, pp. 36-49.

[3] The applicable International Classification of Disease codes refer to the following conditions: ankylosing spondylitis and other inflammatory spondylopathies (720); intervertebral disc disorders (722); and other unspecified disorders of the back (724).

[4] U.S. Social Security Administration, *Annual Statistical Supplement, 1996*, tables 5.A1 and 7.E3.

[5] A laminectomy involves removal of part or all of an intervertebral disc, usually by cutting through the spine's lamina. A spinal fusion is the surgical welding together of two or more vertebrae by bone grafting, with a resulting loss of motion between the affected vertebrae, for the purpose of increasing the stability of the spine.