

Employment, Attitudes Toward Work, and Quality of Life Among People With Schizophrenia in Three Countries

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Abstract

This study examines attitudes toward work, work incentives, and the impact of work on quality of life for people with schizophrenia, and investigates whether these findings differ among Western countries. We interviewed 24 randomly selected subjects with schizophrenia and schizoaffective disorder (12 employed and 12 unemployed) at each of three sites: Boulder, Colorado, United States; Berlin, Germany; and Berne, Switzerland. No significant differences were found in the subjects' attitudes toward work or subjective well-being, although Swiss patients had a higher cost-of-living-adjusted income. Unemployed subjects reported a lower subjective reservation (minimum financially worthwhile) wage than employed subjects in Berlin and Berne, whereas the reverse was true in Boulder. When subjects from all sites were combined, employed patients displayed less psychopathology and significant advantages in terms of objective and subjective measures of income and well-being: They were also more likely to stress the importance of work. The results suggest that work is associated with a markedly better quality of life for people with schizophrenia, but that disability-pension programs in the United States might introduce work disincentives.

Key words: Quality of life, work, employment.
Schizophrenia Bulletin, 24(3):469–477, 1998.

This study analyzes attitudes toward work, work incentives, and the impact of work on quality of life for people with schizophrenia in three Western countries: Germany (Berlin), Switzerland (Berne), and the United States (Boulder, CO). The findings from the three sites are compared, with a focus on whether these variables are influenced by local disability support plans.

Work and Quality of Life. In the general population, employed people are more satisfied with their lives than unemployed people are (Habich and Noll 1994). Is the quality of life for people with schizophrenia also correlated with employment? A number of benefits associated with working can be identified: They include income, sense of purpose, social relationships, structured time and activities, skill development, and creativity (Fagin and Little 1984). Many of these benefits are considered to be of particular value to people with schizophrenia (Warner 1994). Do these people, in fact, display advantages in their subjective well-being and objective quality of life when they are employed? Although Lehman et al. (1995) demonstrated an association between homelessness and a lower subjective quality of life in severely mentally ill people, there is little empirical evidence showing the same for unemployment. For employed people, success in work appears to spill over into satisfaction with leisure activities (Furnham 1991), even though compensation theory suggests that increased satisfaction with one life domain does not necessarily become generalized; on the contrary it may lead to decreased satisfaction in other areas (Glatzer 1984). How, then, is employment associated with the satisfaction ratings of schizophrenia patients with respect to their different life domains? Central to mental health care is the improvement of patients' quality of life; to what extent can employment help achieve this objective? These questions have been little studied.

Attitudes Toward Work. Do the meaning and importance of work for people with schizophrenia differ among countries? For many middle-class people, attitudes toward work are shaped by the view that work is a source of iden-

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tity, self-respect, and status; that is, it is intrinsically rewarding and a crucial element of a meaningful life, offering secure, predictable, and increasing rewards for effort and leading to increasing power and control (Fineman 1987). This view is probably also held by most professional caregivers, who often assume that it is shared by their patients. For most people with schizophrenia, however, the generally available types of work are unlikely to fulfill many of these functions. In a German study (Gunkel et al. 1995), mentally ill people who were employed noted problems associated with their jobs that were not similarly perceived by employers, relatives, or case managers. In one U.S. study (Warner and Polak 1995), many people with serious mental illness reported that available work was hard, stressful, dirty, demanding, and fast-paced. Moreover, these jobs were too low-grade and poorly reimbursed, particularly in light of the economic costs of working inherent in the disability support system, the loss of leisure time, and the risk of increased symptoms and relapse imposed by a job. National differences in job availability and disability pension plans may therefore influence attitudes toward work among people with schizophrenia. Moreover, national character may influence attitudes, regardless of disability status.

The Reservation Wage. Is the rate of earning that makes employment worthwhile influenced by the national disability pension policy? Potential workers do not take a job (they reserve their labor) until offered a wage that is sufficient to make working worthwhile, given their economic and social constraints: Economists refer to this as the *reservation wage* (Berndt 1991). In Warner and Polak's (1995) study, for example, most patients with mental illness subjectively reported a reservation wage of \$5 to \$6 an hour.

Mentally ill people in the United States face economic disincentives to begin work or to maximize their working hours. Increased earnings trigger decreased benefits from entitlement and rent-subsidy programs. Consequently, economic gains for people receiving entitlements who shift from unemployment to part-time employment may be small (Walls et al. 1990; Warner and Polak 1995) and may increase their reservation wage. These work disincentives may contribute to the low employment rates (10% to 20%) for mentally ill people in the United States (Anthony et al. 1988). Since U.S. disability support plans impose greater work disincentives than others (Walls et al. 1990; Warner and Polak 1995). The different incentives provided by different national disability plans may also magnify differences in attitudes toward work. Brief descriptions of the disability support programs in the three countries in this study follow.

Disability Support in the United States, Germany, and Switzerland

Disabled people in the United States may receive support from several different entitlement programs, including Social Security Disability Income (SSDI), Supplemental Security Income (SSI), and the Department of Veterans Affairs (VA), and rent subsidy from the Department of Housing and Urban Development (HUD). Regulations vary from program to program. The earnings allowance under SSI requires that for over \$65 to \$85 per month of new income, \$1 be deducted from the SSI check for every \$2 earned. The SSDI check, by contrast, is never reduced because of earnings; the recipient is awarded the whole amount or none of it. After a trial work period and an extended period of eligibility, however, the first month in which earnings exceed \$500 triggers the termination of SSDI. Veterans are generally entitled to receive their entire VA pension in addition to earned income. HUD rent subsidies are usually calculated so that the beneficiaries pay 25 percent of their income as rent, the remainder being covered by the subsidy. In practice, people with schizophrenia receiving SSI report significant work disincentives from the rapid decrement in pension compounded by the decrease in rent subsidy; people on SSDI may work part-time for years, earning less than \$500 per month while maintaining their pension, and those receiving VA pensions are most likely to be employed in general (Warner and Polak 1995; R. Rosenheck, personal communication 1993).

In Germany, the disability pension ("Erwerbsunfähigkeitsrente" and "Berufsunfähigkeitsrente") is a federally run insurance scheme, in which equal contributions are made by the employer and employee. The pension award is calculated on the basis of the length of time contributions have been made, total contributions, and the recipient's most recent wage. The pension is usually awarded for an initial 2-year period and for an unlimited period thereafter. The recipient may earn up to \$265 a month in U.S. dollar equivalents corrected for the cost of living (Organization for Economic Cooperation and Development 1995) without loss of pension. After exceeding the earnings limitation, the recipient may negotiate an arrangement with the Social Welfare office: for example, the recipient may switch to a profession-specific disability, which allows unlimited earnings. Consequently, patients with schizophrenia very rarely lose their benefits, though the amount of the award may be reduced. If the disability income is lower than the official minimum subsistence income, additional welfare payments are provided for an unlimited period. Medical insurance is always provided.

The disability pension in Switzerland (“Invalidenrente”) is a federally administered program partially run as an insurance scheme. The allowance is based on the degree of working incapacity (25%, 50%, or 100%). The degree of disability is reassessed at 2-year intervals. The recipient may earn up to one-third of the expected income of a healthy person with the same level of education without any loss of pension, up to one-half with a 50 percent reduction in pension and up to 60 percent with a 75 percent reduction. In practice, relatively few people with schizophrenia exceed that one-third mark. If necessary, the disabled persons can apply for a supplementary allowance as well (“Ergaenzungsleistungen”).

Methods

Subjects were randomly selected from outpatients in treatment at the three psychiatric treatment agencies described in the next section. All subjects had schizophrenia or schizoaffective disorder, had previously received inpatient psychiatric care, were aged 18 to 45 years, and were living independently, with family, or in professionally supervised accommodations. At each site 24 subjects were selected, 12 who had been continuously employed for 10 or more hours a week for the preceding 3 months (subjects who were working at any paying job—and not necessarily in competitive employment—were included) and 12 who had been completely unemployed for the previous 3 months but who had in the past worked successfully at least part-time for a 3-month period. To select the samples in Berlin and Boulder, all open cases of both genders fulfilling selection criteria were listed by employment status and, using random number tables, 12 employed and 12 unemployed cases were selected: gender distribution was random. In Berne, the sample source was the psychiatric hospital, and the pool from which subjects were drawn—also randomly—consisted primarily of patients who had been discharged from the hospital within the past year.

Subjects were interviewed in the latter half of 1994 using the Lancashire Quality of Life Profile developed by Oliver (1988, 1991), which is a structured interview based on the work of Lehman (1983). In Berlin and Berne, the “Berliner Lebensqualitaetsprofil,” the German version of the Lancashire Quality of Life Profile in all parts relevant to this study, was applied (Priebe et al. 1995). The questions included subjective ratings of satisfaction in the nine different life domains and objective questions about employment, income, housing, and so on. An additional item questioned the rate of pay the respondent needed to make working worthwhile (subjective reservation wage). The interview was conducted by independent, trained

interviewers, including, in Boulder, some who had had serious mental illness themselves.

A short (approximately 3-minute) tape-recorded interview about attitudes toward work was conducted, using three standardized open questions: (1) What is positive about work? (2) What is negative about work? (3) In what way is work important in your life? Additional questions were asked if the main questions did not elicit sufficient material. The interview tapes were rated by a bilingual German who was blind to the subjects' employment status. The material was then assessed in a content analysis. When all contents were coded, categories were formed *a posteriori*: seven relating to positive aspects of work, six to negative aspects, and five to the importance of work.

Subject psychopathology was rated by psychiatrists trained in the use of the anchored version of the Brief Psychiatric Rating Scale (BPRS), expanded version (Ventura et al. 1993). No interrater reliability tests were conducted. Subjects were diagnosed by psychiatrists using *DSM-III-R* (American Psychiatric Association 1987) criteria.

The Sites

Boulder, Colorado. Boulder county's economy is based on a mixture of agrarian and high-technology industries, and government employment. Food production companies, the computer industry, research establishments, and the University of Colorado are all large employers. The two largest towns in the county are Boulder (population 83,000) and Longmont (52,000). In addition, there are a variety of smaller mountain and plains communities ranging from suburban to distinctly rural. The unemployment rate in Boulder County during the period of the study averaged 4.3 percent.

The Mental Health Center of Boulder County provides a complete range of inpatient and outpatient services for children and adults to a catchment area of 230,000 people. At any given time, the center is actively serving about 2,000 clients, more than 600 of whom have some form of psychosis. The agency has an extensive community support system for adults (Mosher and Burti 1989) and operates a sheltered workshop and a clubhouse with supported employment placements (Huxley and Warner, submitted for publication).

Berlin, Germany. Berlin has a population of approximately 3.5 million. The city has a mixed economic base, including light industry, services, and administration. In 1994, the unemployment rate in Berlin averaged 13.4 percent.

The community mental health system operated by the Free University of Berlin serves Charlottenburg, an inner district of the city with a population of 180,000. The system emphasizes services for people with severe, chronic mental disorders and includes three partial hospitalization programs (a day hospital, a night clinic, and a therapeutic printing workshop); various outpatient facilities; and community-based psychosocial rehabilitation services (a day center, a drop-in center, and single and group sheltered living apartments). Inpatient treatment services are provided in cooperation with local psychiatric hospitals. Continuity of care is ensured by clinical case managers (psychiatrists and social workers) who follow the patient through the different programs and make the therapeutic decisions (Priebe and Gruyters 1995).

Berne, Switzerland. The catchment area of the University Psychiatric Clinic in Berne is primarily urban and comprises 330,000 people, living mostly in Berne and Biel, two administrative centers with a service-oriented economy. The local unemployment rate in 1994 was 4.5 percent.

A single psychiatric hospital with 300 beds provides all the inpatient care in the area. There is a well-developed network of community treatment facilities including outpatient clinics, day hospitals, sheltered workshops, and sheltered living facilities. Berne has about 160 psychiatrists in private practice.

Results

Our sample size was not large enough to detect small effects. Power tables indicate that with sample sizes of 24 and a small effect size ($F = 0.10$), analysis of variance (ANOVA) will reveal differences at the 0.05 level of significance in only 10 cases out of 100. A medium effect ($F = 0.30$) would be detected with 50 percent power. Table 1 lists the characteristics of the sample at each site. Berne subjects were more disturbed (higher negative, positive, and depressive and cognitive disorganization scores) and more likely to have been hospitalized in the past year. This is presumably because most Berne patients, unlike subjects at the other two sites had been recruited within a few months after hospitalization treatment. Berne patients also had fewer years of education. Boulder subjects were rated higher in disorientation and hostility and were less likely to have married.

Income and earnings were converted to comparable figures using 1994 purchasing-power parities—rates of currency conversion that eliminate the differences in price levels (cost of living) between countries (Organization for Economic Cooperation and Development 1995). After

this correction, only total income was found to be greater in Berne subjects.

Employment. When subjects from all three sites were combined, unemployed patients scored higher on total psychopathology, negative symptoms, bizarre behavior, and blunted affect (table 2). When interviewed about attitudes toward work, unemployed patients also reported fewer important aspects of work.

Attitudes Toward Work. When ANOVA was used, no significant differences were found between sites in the overall ratings of subjects' expressed attitudes about the positive and negative aspects and importance of work. When individual scale items were submitted to ANOVA using the Scheffe correction, two items relating to the importance of work (just important: $p = 0.033$; and provides structure: $p = 0.037$) were found to be more frequently expressed by Berne subjects than Berlin subjects; significance levels, however, did not exceed Bonferroni limits.

Subjective Reservation Wage. For employed subjects at all sites, the median hourly subjective reservation wage (corrected for purchasing parity) was higher than the median actual wage earned (Berlin, \$9.00 vs. \$6.14; Berne, \$10.68 vs. \$8.47; Boulder, \$5.12 vs. \$4.83). Note that median estimates were used, rather than means, to minimize distortion from outliers. This finding indicates that the subjects' report does not reflect the realistic minimum financially worthwhile wage but is an inflated estimate. In Berlin and Berne, unemployed subjects reported a lower median hourly subjective reservation wage than employed subjects, while the reverse was true in Boulder (Berlin, employed \$9.00 vs. unemployed \$7.35; Berne, \$10.68 vs. \$9.39; Boulder, \$5.12 vs. \$6.00).

Subjects in Boulder were entitled to receive one of two alternative disability pensions—SSI or SSDI. Boulder subjects receiving SSI established a higher reservation wage (SSI, \$8.74 vs. SSDI \$7.80) and were less likely to be employed ($\chi^2, p = 0.041$).

Quality of Life. As table 3 indicates, employed subjects displayed significant advantages in their objective and subjective measures of quality of life. They had a greater income ($t = 3.30$; $p = 0.002$) and were less likely than the unemployed to have been assaulted in the past year ($\chi^2 = 6.24$; $df = 1$; $p = 0.012$). Employed subjects reported greater global well-being ($t = 2.22$; $p = 0.029$) and satisfaction with their employment situation ($t = 5.34$; $p = 0.001$), leisure at home ($t = 2.13$; $p = 0.037$), and finances ($t = 3.07$; $p = 0.003$). In logistic regression or ANOVA

Table 1. Characteristics of the sample: Employed and unemployed combined

Variable	Berlin, Germany (n = 24)	Berne, Switzerland (n = 24)	Boulder, Colorado, United States (n = 24)	p
Age, mean (years)	35.7	34.5	36.8	NS ¹
Gender, female (%)	50.0	33.3	41.7	NS ²
Education, mean (years)	15.0	11.5	13.5	0.001 ¹
Age at first hospitalization, mean (years)	26.5	22.4	24.7	NS ¹
Marital:				
Never married (%)	50.0	70.8	91.7	0.006 ²
Married/partner (%)	25.0	20.9	4.2	NS ²
Children: none (%)	75.0	83.3	79.2	NS ²
Ethnicity:				
U.S. Caucasian	0	0	91.7	
U.S. Hispanic	0	0	8.3	
German/Swiss nationals	91.7	91.3	0	
Foreign nationals	8.3	8.7	0	
Physical handicap (%)	29.2	25.0	4.2	NS ²
Working 20+ hours/week (%)	41.7	37.5	33.3	NS ²
Accommodations:				
Rent apartment (%)	87.5	66.7	62.5	NS ²
Living independently (%)	54.2	66.7	70.8	NS ²
Living in supervised accommodations (%)	0	4.2	12.5	NS ²
Living with family (%)	45.8	29.2	16.7	NS ²
Living alone (%)	43.5	58.3	41.7	NS ²
Months in present accommodations (mean)	95.0	55.9	46.6	NS ¹
Contact with relatives:				
Daily (%)	25.0	29.2	33.3	NS ²
Weekly (%)	45.8	29.2	37.5	NS ²
In mental hospital in past year (%)	54.2	83.3	37.5	0.005 ²
BPRS total score	40.8	60.57	48.04	0.001 ¹
BPRS negative symptoms, mean	1.61	3.02	1.98	0.001 ¹
BPRS positive symptoms, mean	1.53	2.49	1.93	0.001 ¹
BPRS manic symptoms, mean	1.64	1.90	1.84	NS ¹
BPRS depressive symptoms, mean	2.01	2.64	2.22	0.028 ¹
BPRS disorganization, mean	1.56	2.33	1.81	0.023 ¹
BPRS disorientation, mean	1.12	1.08	1.75	0.001 ¹
BPRS hostility, mean	1.17	1.29	1.79	0.005 ¹
Global well-being score	4.54	5.00	4.62	NS ¹
Income/month, mean (U.S. \$) ³	608.98	1294.52	645.96	0.001 ¹
Hours worked/week, mean	33.1	27.7	24.2	NS ¹
Earnings/week, mean (U.S. \$) ³	214.85	244.32	114.75	NS ¹
Wage/hour, mean (U.S. \$) ³	6.30	10.89	4.92	NS ¹
Subjective reservation wage, mean (U.S. \$) ³	10.24	12.35	8.31	NS ¹
Accused of crime in past year (%)	12.5	29.2	8.3	NS ²
Assault victim in past year (%)	20.8	37.5	12.5	NS ²

Note.—NS = not significant; BPRS = Brief Psychiatric Rating Scale (Ventura et al. 1993).

¹Analysis of variance.

² χ^2 .

³Income figures converted to parity price using purchasing power parities—the rates of currency conversion that eliminate the differences in price levels (cost of living) between countries. (The 1994 rate from the Organization for Economic Cooperation and Development Main Economic Indicators, April 1995, is used here.)

Table 2. Employed and unemployed subjects compared: All sites combined

	Employed (n = 36)	Unemployed (n = 36)	p
Age, mean, years	34.78	36.53	NS ¹
Gender, male, n (%)	20 (55.6)	22 (61.1%)	NS ²
Education, mean, years	13.06	13.63	NS ¹
Marital, single, n (%)	23 (63.9)	28 (77.8)	NS ²
Physical handicap, n (%)	10 (27.8)	5 (11.4)	NS ²
Independent living, n (%)	20 (55.6)	26 (72.2)	NS ²
Living with family, n (%)	14 (38.9)	8 (22.2)	NS ²
In psychiatric hospital in past year, n (%)	20 (55.6)	22 (61.1)	NS ²
Age at first hospitalization, mean, years	24.28	24.81	NS ¹
BPRS total score, mean	44.91	53.91	0.026 ¹
BPRS negative symptoms, mean	1.86	2.50	0.018 ¹
BPRS positive symptoms, mean	1.78	2.15	NS ¹
BPRS manic symptoms, mean	1.70	1.88	NS ¹
BPRS depressive symptoms, mean	2.09	2.47	NS ¹
BPRS bizarre behavior, mean	1.74	2.51	0.010 ¹
BPRS blunted affect, mean	2.17	3.19	0.006 ¹
Work: positive attitude, mean score	0.427	0.361	NS ¹
Work: negative attitude, mean score	0.345	0.313	NS ¹
Work: importance, mean score	0.370	0.273	0.035 ¹

Note.—NS = not significant; BPRS = Brief Psychiatric Rating Scale (Ventura et al. 1993).

¹t-test.

²χ².

Table 3. Quality of life for employed and unemployed subjects: All sites combined

	Employed (n = 36)	Unemployed (n = 36)	p	p ¹
Objective measures				
Assaulted in past year, n (%)	4 (11.1)	13 (36.1)	0.0125 ²	NS ³
Accused of crime in past year, n (%)	3 (8.3)	8 (25.0)	NS ²	
Parity price income/month, mean (U.S. \$)	1082.53	617.35	0.002 ⁴	0.002 ⁵
Number of other people in accommodation, mean	1.42	0.63	NS ⁴	
Subjective measures				
Global well-being, mean score	5.08	4.36	0.029 ⁴	0.036 ⁵
Satisfaction with (mean score):				
Employment situation	5.28	3.51	0.001 ⁴	0.001 ⁵
Leisure at home	5.03	4.36	0.037 ⁴	NS
Leisure outside home	5.06	4.64	NS ⁴	
Financial situation	4.49	3.33	0.003 ⁴	0.033 ⁵
Living situation	4.83	4.81	NS ⁴	
Privacy at home	5.06	4.89	NS ⁴	
People in accommodations	5.06	5.10	NS ⁴	
Long stay in accommodations	4.75	4.25	NS ⁴	
Personal safety	5.17	4.51	NS ⁴	
Neighborhood safety	5.61	5.14	NS ⁴	
Lacks \$ to enjoy life, n (%)	18 (50.0)	22 (61.1)	NS ²	
Unable to change accommodations, n (%)	21 (58.3)	20 (55.6)	NS ²	

Note.—NS = not significant.

¹Significance after controlling for total psychopathology.

²χ².

³Logistic regression.

⁴t-test.

⁵Analysis of variance.

models in which total psychopathology was entered as a covariate, most of these variables retained a significant relationship with employment: income ($F = 5.64$; $p = 0.002$), global well-being ($F = 3.51$; $p = 0.036$), satisfaction with employment status ($F = 13.46$; $p = 0.001$), and finances ($F = 3.59$; $p = 0.033$). No significant advantages relating to accommodations were identified.

Discussion

Employment. Unemployed patients scored higher with respect to total psychopathology, negative symptoms, bizarre behavior, and blunted affect, possibly because more disturbed patients are less likely to obtain work, because work helps patients achieve greater symptomatic stability, or both. Unemployed patients were less likely to emphasize the importance of work. This may be a result of cognitive dissonance—if unemployed, the subject downplays the importance of work to avoid damaging his or her self-esteem. Alternatively, those who do not consider work important may be less likely to seek employment.

Attitudes Toward Work. The notion that there are national differences in patients' expressed opinions on the importance of work was not supported. Sites did not differ significantly in the overall ratings of subjects' attitudes about the positive and negative aspects and importance of work. However, because the sample size at each site was small, we cannot exclude the possibility that national differences in job availability, disability pension plans, or national character influence attitudes toward work in people with schizophrenia.

Subjective Reservation Wage. For employed subjects at all sites, the median subjective reservation wage was higher than the median actual wage earned, suggesting that subjects' report of what they considered the minimum financially worthwhile wage to be was inflated. The subjective reservation wage may be a reasonable measure of the subject's *perception* of financial barriers to work, but it does not accurately measure the actual minimum wage rate that gives a subject sufficient incentive to work. The extent to which patients' statements on this question were affected by the social desirability of the answers or by the features of the interview situation is unclear.

The subjective reservation wage was lower in Boulder than in Berne or Berlin, reflecting the generally lower prevailing wages in Boulder. The minimum hourly wage in Boulder is \$4.25. In Switzerland and Germany, there are no legally fixed minimum wages; nevertheless, the lowest actual wages are \$12.00 per hour in Berne and \$7.50 per hour in Berlin (not adjusted for cost of living).

The subjective reservation wage may also be influenced by national disability pension policy. In Berlin and Berne, unemployed subjects reported a lower median subjective reservation wage than employed subjects. The reverse was true in Boulder. It is likely that unemployed subjects in Berlin and Berne set a lower reservation wage because, being unemployed, they have a greater incentive to accept low-paying work and increase their income. U.S. subjects may differ because they are entitled to one of two disability pensions—either SSI, which has significant financial disincentives to work, or SSDI, which has less severe disincentives, at least to part-time work. Consequently, Boulder subjects receiving SSI (1) establish a higher reservation wage (to overcome disincentives) and (2) are less likely to be employed than subjects receiving SSDI. An alternative possibility is that because jobs that are available to the mentally ill tend to pay less in Boulder than in Berne or Berlin, better qualified subjects with higher earning expectations choose to stay out of the labor market in the United States rather than accept low-paying jobs. Parties on SSI receive a lower monthly pension than those on SSDI, and one might, therefore, expect that they would establish a lower reservation wage. The fact that they established a higher reservation wage suggests that they are influenced by the lower earnings allowance for SSI recipients (\$65 to \$85 a month) as compared to SSDI recipients (no earnings limitation until the period of extended eligibility, when it drops to \$499). It should be noted, however, that our interpretation of work disincentives is somewhat speculative because there are other possible explanations for the results and because the subgroups of SSI and SSDI recipients in Boulder were small.

Quality of Life. The employed display significant advantages with respect to objective and subjective measures of their financial situation and their personal safety, to subjective measures of global well-being, and to satisfaction with work, leisure, and finances. Several of these advantages hold true after controlling for psychopathology. There are no significant advantages related to accommodations. A significant association between employment and leisure satisfaction was found for only one of the two measures of leisure satisfaction and was no longer present when psychopathology was controlled. Nevertheless, the association suggests that the hypothesized spillover effect of work satisfaction into leisure activities (Kremer and Harpaz 1982; Furnham 1991) holds true for people with schizophrenia. The reasons for this association are various: Work demands may increase the perceived benefits of leisure, work success may increase leisure activity and involvement, increased income may make expanded or more attractive leisure activities possible, or common psy-

chological variables may enhance both work and leisure activity or satisfaction with them.

The association between employment and global well-being is not accounted for by the lower levels of psychopathology in those who are employed. Employment status appears to be significantly associated with quality of life for people with schizophrenia in these three countries, independent of cultural differences in attitudes toward work and national differences in the cost of living, rate of earning, mechanisms for disability support, and local unemployment level. It seems likely that employment improves personal well-being by enhancing such subjective elements as self-esteem and positive affect, as well as objective factors such as income. However, it remains to be determined which aspects of employment (such as status, social contacts, money, or structured activities) account for the more favorable quality of life in employed patients. Furthermore, it should be taken into account that this study followed a naturalistic design: The association between employment and quality of life does not necessarily reflect a causal relationship. Both the ability to find and maintain work and higher satisfaction ratings may be influenced by other cognitive, behavioral, or social factors that were not assessed in this study.

Conclusion

The results suggest that work is associated with significant benefits for people with schizophrenia but that disability pension programs in the United States may introduce work disincentives. Efforts to improve vocational rehabilitation for people with schizophrenia are well directed but should include a reevaluation of benefit-plan-induced work disincentives in the United States. The association between employment and quality of life seems to be similar in Western industrialized countries. Thus, findings from one country may to some extent be generalized to others. Further international studies might be necessary to aggregate data in this field and to validate conclusions.

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