

VOCATIONAL REHABILITATION IN NORTHERN SWEDEN. III

Aspects of Life Satisfaction

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ABSTRACT. Levels of global (1 item) and domain-specific (8 items) life satisfaction were explored at the commencement of vocational rehabilitation and two years later in a consecutive series of subjects who were partly or completely vocationally disabled with a diagnosis of bodily impairment. At the onset of vocational rehabilitation, global life satisfaction (satisfaction with life as a whole) and satisfaction derived from performance- and provider-related (instrumental) domains of life were significantly lower than satisfaction derived from socio-emotional (expressive) facets of life. The eight domain-specific items of life satisfaction described a characteristic three-factor pattern (76% of variance) which resembled quite closely that of non-impaired subjects, one factor being expressive. The other two factors were instrumental and separated recreative from vocational domains of satisfaction. Successful vocational rehabilitation resulted in increases in vocational satisfaction. For those subjects who were successfully rehabilitated, satisfaction with other instrumental aspects of life and with life as a whole also increased. The results indicate that successful vocational rehabilitation leads to increased social well-being.

Key words: vocational rehabilitation, disability, life satisfaction, quality of life, outcome.

As the third part of a prospective study of a consecutive series of vocational rehabilitation clients this investigation brings into focus various aspects of life satisfaction and analyses the extent to which these aspects are related to outcome of vocational rehabilitation.

The Swedish system for vocational rehabilitation has been described briefly in other parts of the investigation (2, 3). In Part I it was demonstrated that 64% of those who were not working when referred were, at follow-up two years later, gainfully employed (44%) or undergoing vocational re-training (20%). Nearly all (91%) of those who were vocationally active when

referred—but due to partial vocational disability needed assistance with their rehabilitation—were still gainfully employed (80%) or were undergoing re-training (11%) at follow-up. Nine per cent of them had become vocationally inactive. Vocational rehabilitation was financially beneficial for those subjects who were re-integrated into working life. Hence, from the financial point of view vocational rehabilitation appeared to be quite successful. In Part II it was demonstrated that the outcome of vocational rehabilitation two years after its initiation was predictable for 57%. Predictors were a sub-set of the data registered at the commencement of vocational rehabilitation. Whereas the outcome of vocational rehabilitation is reasonably successful and predictable (2, 3), its effect on a subject's social well-being, remains, however, to be analyzed.

SUBJECTS AND METHODS

The sample has been described in detail earlier (2). In brief: 149 of 175 recently referred vocational rehabilitation clients volunteered to participate in a structured interview which included filling in several questionnaires when initially seen at their local employment office. All interviews/completion of questionnaires were conducted/supervised by the same investigator (ME). Two years later it was possible to locate all the subjects and using a mailed questionnaire to obtain information from 126 (85%) on their current vocational situation and life satisfaction. There were no significant differences as regards sex, vocational outcome or rehabilitative measures between the respondents and the 23 non-respondents. Nor were there any significant differences concerning these parameters for those 26 (175-149) who initially declined to participate.

The pre-postvocational rehabilitation status of the 126 subjects included in this investigation was as follows: Group A¹ ($n=24$, 19%) were those who had the same job both at

¹ Please observe that in this report Groups A-D below are somewhat smaller than the corresponding groups in our previous reports (2, 3).

Table I. Life satisfaction questionnaire

How satisfactory are these different aspects of your life? Indicate the number which best suits your situation.

1: Very dissatisfying 4: Rather satisfying
2: Dissatisfying 5: Satisfying
3: Rather dissatisfying 6: Very satisfying

Life as a whole is	1	2	3	4	5	6
My ability to manage my self-care (dressing, hygiene, transfers, etc.) is	1	2	3	4	5	6
My leisure situation is	1	2	3	4	5	6
My vocational situation is	1	2	3	4	5	6
My financial situation is	1	2	3	4	5	6
My sexual life is	1	2	3	4	5	6
My partnership relation is	1	2	3	4	5	6
My family life is	1	2	3	4	5	6
My contacts with friends and acquaintances are	1	2	3	4	5	6

referral and at follow-up; group B ($n=50$, 40%) contained two subgroups, namely the 18 subjects who were vocationally active at referral but for whom new jobs were provided and 32 subjects who were on sickness benefit or on unemployment allowance when referred but were vocationally active at follow-up. Group C ($n=21$, 17%) included those who were undergoing vocational training or education at follow-up; while clients in group D ($n=31$, 24%) were on sickness benefit or on unemployment allowance on both occasions.

When first seen, the level of life satisfaction experienced was reported by the clients on the form given (in English translation) in Table I. At the two-year follow-up an identical form was mailed to the clients.

Statistics. Wilcoxon's signed rank sum analysis was used to compare pairs of data. The chosen level of significance was $p \leq 0.05$. A factor analysis was performed to deduce whether, at referral, the 8 domain-specific items of life satisfaction formed a pattern. A three-factor option was used (varimax). The cut-off limit for a variable to be considered to contribute significantly to a factor was set at 0.50. In all the analyses the life satisfaction items were used unchanged (6-grade). A discriminant analysis was performed to estimate the effect of change in the domain-specific items of life satisfaction, from admittance for vocational rehabilitation to follow-up, on change in satisfaction with life as a whole. The criterion for accepting this analysis was that the multivariate F -statistic yielded a $p \leq 0.05$. All computations were performed with SYSTAT® using a Macintosh SE computer®.

RESULTS

The levels of life satisfaction as reported on the 6-grade scale are given in Table II. At the commencement of vocational rehabilitation the level of vocational satisfaction was systematically lower ($p \leq 0.00$) than levels for all other life satisfaction items. As shown in the table levels of satisfaction with economy and leisure were also lower than were levels of satis-

faction with sexual life, partnership relations, family life and contacts with friends and acquaintances. Levels of satisfaction derived from the four latter domains were higher while levels of satisfaction with vocation and economy were lower than was level of satisfaction with life as a whole. For all 9 items the 23 non-respondents at the 2-year follow-up were statistically inseparable from the 126 respondents.

The factor analysis (cf. statistics) was performed on the 100 subjects (50 males and 50 females) who had a spouse and who could therefore report their level of satisfaction with partnership relations (cf. Table III). Three factors explained 76% of the variance; the major factor (35% of variance) being clearly emotion-related (expressive) including satisfactions with sexuality, partnership relations (uniquely loaded) and family life. Factor II (23% of the variance) was predominantly performance-related (instrumental); the highest loadings occurring for satisfaction with ADL and leisure. Just at the cut-off limit (0.50) in both factors (I and II) was satisfaction derived from contacts with friends and acquaintances and in Factor II also vocational satisfaction. This item, however, attained considerably greater factor load in Factor III (17% of the variance), a provider related (instrumental) factor, which included only satisfaction with vocation and with financial situation.

Changes in life satisfaction. At the two-year follow-up (Table IV) no significant changes whatsoever appeared in levels of life satisfaction for groups A and D. Moreover, satisfaction with all the emotion-related domains: Sexual life, partnership relations, family life and contacts with friends and acquaintances had

Table II. Levels of life satisfaction in 149 subjects at the commencement of vocational rehabilitation

	Very satisfied (%)	Satisfied (%)	Rather satisfied (%)	Rather dissatisfied (%)	Dissatisfied (%)	Very dissatisfied (%)
Life as a whole	10	29	30	18	7	6
Self-care ADL	31.5	31.5	21	7	4	5
Leisure	9	23	34	21	5	8
Vocational situation	7	15	15	14	19	30
Financial situation	4	24	35	15	7	15
Sexual life	23	32	23	11	7	4
Partnership relations ^a	37	38	14	6	3	2
Family life	28	42	18	8	3	1
Contacts friends/ acquaintances	25	40	23	8	1	3

^a $n=100$ with spouse.

not changed significantly for groups B and C. In contrast these two groups reported significantly higher levels of satisfaction with life as a whole and of vocational satisfaction. In addition, group B had higher levels of satisfaction with ADL, economy and leisure than reported by them at admittance.

For groups B and C significant changes in vocational situation had occurred while group A had the same job throughout the investigation (cf. 3). The latter group consisted of partially disabled subjects the majority of whom were furnished with aids and/or required only a few counselling sessions to enable them to continue in their former occupation. Therefore, one more analysis including only groups B and C was performed. This showed that significant increases had

occurred for *all* performance- and provider-related domains and for satisfaction with life as a whole.

In an attempt to evaluate the combined effect of change/no change in domain-specific items of life satisfaction on change/no change in satisfaction with life as a whole, a discriminant analysis was performed. This analysis included only those ($n=80$) who had a steady partner and, therefore, could answer all 8 domain-specific questions.

As shown in Table V the hierarchic trichotomy: decrease/no change/increase in domain-specific life satisfaction from admittance to the program to follow-up could classify change (similarly trichotomized) in satisfaction with life as a whole for about 3/4 of those who had decreased and for about 2/3 of

Table III. Factor analysis (rotated loadings, varimax) on life satisfaction levels (6-grade scale) reported by 100 subjects with a partner, referred for vocational rehabilitation

	Factor I	Factor II	Factor III
Eigenvalue	3.4	1.6	1.0
Satisfaction with			
Self-care ADL	0.0	0.9	0.0
Leisure	0.2	0.8	0.2
Vocational situation	0.0	0.5	0.7
Financial situation	0.2	0.0	0.9
Sexual life	0.9	0.1	0.0
Partnership relations	1.0	0.1	0.1
Family life	0.9	0.2	0.1
Contacts friends/ acquaintances	0.5	0.5	0.2
% variance explained	35.3	23.1	17.4
Total variance explained	75.8%		

Table IV. Comparison (by Wilcoxon analyses) of levels of life satisfaction (6-grade scale) in 126 subjects at the commencement of vocational rehabilitation and 2 years later

Subjects are classified according to outcome of rehabilitation

Satisfaction with	Group				
	A (n=24) p	B (n=50) p	C (n=21) p	D (n=31) p	B-C (n=71) p
Life as a whole	NS	0.02	0.03	NS	0.00
Self-care ADL	NS	0.04	NS	NS	0.01
Leisure	NS	0.05	NS	NS	0.02
Vocational situation	NS	0.00	0.05	NS	0.00
Financial situation	NS	0.01	NS	NS	0.01
Sexual life	NS	NS	NS	NS	NS
Partnership relations	NS	NS	NS	NS	NS
Family life	NS	NS	NS	NS	NS
Contacts friends/ acquaintances	NS	NS	NS	NS	NS

p-values are given only if ≤ 0.05 . NS = non-significant (> 0.05).

those who had increased satisfaction with life as a whole. Considerably fewer (not fully 50%) of those who reported no change in the latter variable were correctly predicted. The major predictor was vocational satisfaction followed, at some remove, by satisfaction derived from contacts with friends and relatives and satisfaction with family life. Finally, ADL satisfaction and financial satisfaction also had some predictive power (using a cut-off at 0.2 for the discriminant coefficients).

DISCUSSION

The levels of vocational, financial and leisure satisfaction found in this investigation are clearly lower

than those reported from the US (1), from the Federal Republic of Germany (5) and by ourselves from a non-selected population (4). This was particularly true for vocational satisfaction and agrees well with Campbell et al. (1) who pointed out that the small sample of unemployed subjects ($n=75$) in their investigation were "considerably less satisfied with most aspects of their lives than were respondents with full-time jobs". The combination of relatively low levels of both vocational and global (life as a whole) satisfactions is in congruence with several other reports (8, 12, 14) and may reflect the statement of Haberman (quoted by Lahelma, 7) that in industrialized Western societies, employment becomes the normal way of life—a norm.

Table V. Discriminant analysis for prediction of change/no change in satisfaction with life as a whole by change in 8 domain-specific items of life satisfaction

Subjects were 80 men and women, all with partner relations, assessed on admission to vocational rehabilitation and two years later

Actual group membership	n	Predicted group membership (%)		
		Decreased	Unchanged	Increased
Decreased	18	78	11	11
Unchanged	27	19	48	33
Increased	35	11	23	66

Standardized discriminant coefficients: Vocational satisfaction (0.7) > satisfaction with contacts friends/acquaintances (0.4), satisfaction with family life (0.4) > satisfaction with self-care ADL (0.3) > satisfaction with economy (0.2). All other coefficients ≤ 0.1 . All items trichotomized into: Decreased, unchanged, increased level of satisfaction.

It cannot reasonably be suggested that vocational disability as such alone accounts for the low levels of global and instrumental life satisfaction. Rather, it can be assumed that impairments which lead to vocational disability also lead to ADL- and leisure disabilities. Leisure satisfaction is sensitive to a decreased level of leisure activities in chronic back-pain (11) and after stroke (10). And the fact that 16% of the population were at least to some extent dissatisfied with their ability to manage ADL (as compared with 0% in the above-mentioned non-selected population), could simply mirror some degree of ADL-disability due to impairments.

The three factors which might be seen as captions for three different domains of life satisfaction were very similar to those found in the non-selected population (4). In that investigation, however, satisfaction with sexuality, partnership relations and family life, were combined with satisfaction with ADL, while vocational satisfaction made no significant contribution to the recreative factor which included only satisfaction with leisure and contact with friends and acquaintances. This shift in ADL-satisfaction from a predominantly emotion-related to a performance-related factor may best be explained by the fact that a reasonable ADL-ability is a prerequisite for fully sufficient leisure and vocational participations. The close similarity of the domain-specific life satisfaction factors for vocational rehabilitation clients and for the non-selected population indicates that the instrument used for assessing life satisfaction is reasonably valid. A suggestion which finds support in Shaffer's (9) factor analytic study of work and non-work satisfaction, where a dissociation similar to the one found here of recreative and work items was demonstrated.

Coping (i.e. adaptation under existential threat = stress, 6) had apparently not been successful at the time of referral, particularly concerning instrumental life goals. On the other hand, the evident dissociation between the relatively low levels of satisfaction derived from provider- or performance-related goals and the levels of satisfaction derived from emotion-related goals shows that a great proportion of Northern Swedish vocational rehabilitation clients do not perceive that their family life and their communication with friends and acquaintances is suffering.

From the coping point of view, successful vocational rehabilitation interventions are important elements for the coping process. This is evidenced by the fact that not only was vocational satisfaction increased,

but also satisfaction with other instrumental domains of life and, perhaps most importantly, satisfaction with life as a whole. In accordance with Tatarkiewicz (13) we postulated earlier (4) that satisfaction with life as a whole is a measure of happiness. The present findings therefore indicate that increased vocational satisfaction which follows successfully initiated or accomplished vocational rehabilitation serves to establish a higher level of happiness: *per aspera ad astra*.

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