

# Happiness and domain-specific life satisfaction in adult northern Swedes

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Levels of satisfaction with life as a whole (happiness) and with eight different domains were investigated using mailed questionnaires in four age cohorts (25-, 35-, 45- and 55-year-olds) of men and women. With a few exceptions (vocational and financial satisfaction) levels of global and domain-specific satisfaction were not age-dependent and few gender differences were found. The generally high levels of satisfaction correspond well to those found in the USA and in Germany. Satisfaction with expressive (emotion-related) domains was greater in women than in men, and the provider items – satisfaction with vocational and financial situation – were influenced by age. The eight domains formed three meaningful factors: the first characterized satisfaction derived from expressive goals; the second from spare-time goals; and the third factor was instrumental (performance-related), characterizing satisfaction derived from provider goals. The three factors predicted gross level of happiness (happy/not happy) for 82% of subjects with complete answers, all three factors being significant predictors.

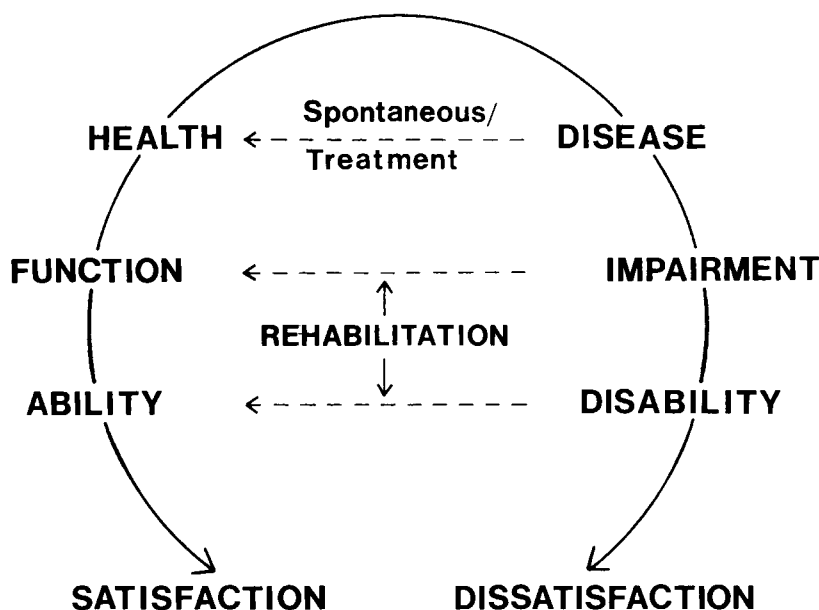
## Introduction

We have previously suggested that rehabilitation should ultimately be aimed at securing social wellbeing or life satisfaction for rehabilitees and those close to them (Figure 1).<sup>1</sup> We define a healthy person as one who can act – utilizing abilities – in order to satisfy vital goals.<sup>2</sup> An impairment (loss or abnormality of psychological, physiological or anatomical function<sup>3</sup>) may lead to loss or restriction of premorbid

abilities. These can be measured normatively, but they must be seen in the light of previous, as well as possible new, goals. They are therefore person-related. Like Whitbeck<sup>4</sup> we regard disease as a psychophysiological process, which limits the person's coping abilities (coping = adaptation under existential threat/stress<sup>2</sup>). Health is therefore a person's psychophysiological ability to act in a way that is supportive of the person's aspirations and goals.<sup>4</sup> McCrae and Costa<sup>5</sup> found that subjects who used effective coping strategies reported higher subsequent general life satisfaction. The aim of rehabilitation should therefore be to mobilize the resources of individuals with impairment(s) so that, by having realistic goals,

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**Figure 1** A conceptual model which suggests (left side of diagram) that for an *individual* health implies function which provides ability to satisfy personal goals. Disease (right side of diagram) may lead to loss of function at the organ level<sup>3</sup> which in turn may lead to disability, i.e. inability to reach premorbid goals. Inadequate coping with the new life situation, i.e. the individuals' inability to reorientate himself towards realizable and rewarding goals, will result in dissatisfaction.

they may achieve optimal life satisfaction.

In agreement with Democritus, Tatarkiewicz<sup>6</sup> considers satisfaction with life as a whole to be synonymous with happiness. To be so, satisfaction with life as a whole must be justifiable and of reasonable duration. Surface experiences, however pleasurable, do not provide happiness in themselves.<sup>7</sup> With these considerations in mind this investigation was designed to elucidate to what extent levels of happiness (satisfaction with life as a whole) and with eight different facets of life, are age- and/or gender-dependent between the ages of 25 and 55 years. The investigation also aimed to answer the following questions: are these eight domain-specific life satisfactions (i.e. level of satisfaction with a particular facet or goal<sup>8</sup>) included in characteristic factors? If so, to what extent do such factors predict level of happiness? Another aim was to obtain reference values of life satisfaction and of happiness for comparison with rehabilitation clientele.

## Subjects and methods

The investigation was carried out in Umeå, in northern Sweden (approximately 85 000 inhabitants). Data were obtained using a mailed questionnaire. The aim was to analyse self-reports on life satisfaction for at least 2% of men and women aged 25, 35, 45 or 55 years, and also to have reasonably large age cohorts for statistical comparisons. With the co-operation of the official census bureau subjects from the four age strata were randomly selected. A total of 214 subjects responded. Among these, 13 questionnaires were too incompletely filled in to permit further analysis. The 201 respondents included in the investigation were sufficient to fulfil our statistical criteria (Table 1). Due to the fact that all respondents were guaranteed full anonymity it was not possible to follow up nonrespondents. As shown in Table 2 the respondents were representative for the 25–64-year-old population

**Table 1** Number of subjects included and their proportion of the Umeå population in each age cohort

Age	Men		Women	
	<i>n</i>	%	<i>n</i>	%
25	18	2.8	23	3.3
35	18	2.6	25	3.5
45	27	4.2	35	5.9
55	29	7.4	26	6.3
Total	92	3.9	109	4.5

of the city<sup>9</sup> concerning the four sociodemographic aspects included in the questionnaire. Among the 201 respondents a total of 20 had no steady partner or, for other reasons, could not report level of life satisfaction for all nine items. This left 181 reports available for multifactorial statistics.

Besides questions on life satisfaction, marital and vocational status and number of children, the questionnaire contained questions on perceived health, functional roles and activity preferences. The functional roles and activity preferences will be presented elsewhere.<sup>10,11</sup>

A translation of the questionnaire used for self-reported levels of happiness (satisfaction with life as a whole) (one item) and domain-specific (eight

items) life satisfaction is shown in Table 3. For each item subjects were asked to report their actual level of satisfaction on a six-grade ordinal scale. For the analysis of subsamples the scale was dichotomized into 1–4/5–6. This dichotomy was intended to separate those who were satisfied (5–6) from those who were not satisfied (1–4). In this context it should be pointed out that the phrasing 'rather satisfying' (in Swedish '*ganska tillfredsställande*') is a diminutive of satisfaction between fairly and slightly which implies that the subject is not truly satisfied.

Subjects also reported whether they perceived themselves as physically and/or mentally healthy (yes/no alternative).

## Results

For comparison of groups of data, simple cross-tabulations (chi-square tests) were computed. The chosen level of significance was  $p < 0.05$ . Generally, differences or covariances will be mentioned only if the criterion of significance is fulfilled.

The 39 subjects who reported that they did

**Table 2** Some sociodemographic characteristics of the 201 respondents and the Umeå population aged 25–64

	Gender	Marital status	Children at home		Vocational status
	Men/women (%)	Cohabiting/single (%)	0–6 years (%)	7–12 years (%)	working/not working (%)
Respondents	46/54	77/23	21	18	87/13
Population*	50/50	74/26	24	23	87/13

\* For subjects with children at home: 25–59 years

**Table 3** Life-satisfaction questionnaire

How satisfactory are these different aspects of your life? Indicate the number which best suits your situation						
1 = Very dissatisfying						
2 = Dissatisfying						
3 = Rather dissatisfying						
				4 = Rather satisfying		
				5 = Satisfying		
				6 = Very satisfying		
Life as a whole is	1	2	3	4	5	6
My ability to manage my self-care (dressing, hygiene, transfers, etcetera) 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

not perceive themselves as being healthy did not differ significantly (chi-square statistics) in any aspect of life satisfaction from the remaining population. Hence, experienced health was not considered in further computations.

Table 4 shows that the majority were satisfied or very satisfied with life as a whole (i.e. happy). Nearly all were satisfied with their ability to manage self-care activities (ADL). The respondents were also characterized by quite high levels of satisfaction with sexuality, partnership relation, family life and contacts with friends and acquaintances. Cross-tabulations showed that satisfaction with the vocational situation (chi-square = 24.1, 9 *df*;  $p < 0.005$ ) and with the financial situation (chi-square = 29.1, 9 *df*;  $p < 0.001$ ) was systematically greater with increasing age. In contrast the younger subjects were more satisfied with self-care ADL (chi-square = 16.4, 6 *df*;  $p < 0.002$ ) than were the relatively older ones.

The women were more satisfied than were the men within four of the domains: satisfaction with ADL, sexual life, partnership relations and family life. However, comparing gross levels of

satisfaction (grades 5–6 versus 1–4) for men and women within each age cohort, only one marked gender difference emerged. This was a lower level of leisure satisfaction (chi-square = 11.08, 1 *df*;  $p < 0.001$ ) for the 35-year-old women than for their male contemporaries.

Of the total sample, 155 individuals (72 men and 83 women) reported that they cohabitated with their partner; the remainder (20 men and 26 women) were single. Cross-tabulations by gender of all life-satisfaction items, with the obvious exception for partnership relations, demonstrated that cohabiting men and women had higher levels of satisfaction (3 *df*) than those not cohabiting for sexual satisfaction (chi-square = 13.6 and 17.3 for men and women respectively;  $p < 0.001$ ) and for satisfaction with family life (chi-square = 19.2 and 27.44 for men and women,  $p < 0.001$ ).

Of the males, 26 had children younger than 13 years and 19 of these had children aged under seven at home. The corresponding numbers of children in these two age groups for the women were 36 and 23 respectively. For each gender all life-satisfaction items were cross-tabulated by having versus not having children at home. For

**Table 4** Self-reported levels (in %) of life satisfaction (nine items) in a randomized sample of subjects living in Umeå from age cohorts 25, 35, 45 and 55. The number of subjects answering each item (*n*) is given

	Men/women ( <i>n</i> )	Satisfied		Not satisfied		Chi-square ( $p <$ )
		Very satisfied (6) Men/women (%)	Satisfied (5) Men/women (%)	Rather satisfied (4) Men/women (%)	Dissatisfied (3–1) Men/women (%)	Men/women
Life as a whole	92/109	30/28	40/39	20/26	10/7	<b>2.0</b>
ADL	92/109	61/84	28/14	11/2	0/0	15.72 (0.0005)
Leisure	92/109	22/23	38/28	25/35	15/13	<b>2.78</b>
Vocational situation	91/104	22/20	38/33	25/32	15/15	<b>1.08</b>
Financial situation	92/109	8/9	41/30	38/38	16/23	<b>3.01</b>
Sexual life	92/104	26/30	30/40	19/20	25/10	8.40 (0.05)
Partnership relation	87/97	34/55	34/28	16/11	16/6	8.95 (0.05)
Family life	90/106	39/51	40/32	7/15	14/2	14.43 (0.001)
Contacts friends/acquaintances	92/109	19/25	40/36	27/26	14/13	1.26

the women, having children in these age groups led to significantly lower leisure satisfaction (0–6 year old children: chi-square = 14.7, 3 df;  $p < 0.01$ ; 0–12 year old children: chi-square = 10.0, 3 df;  $p < 0.05$ ). For the men, having children aged 0–6 was associated with lower financial satisfaction (chi-square = 14.0, 3 df;  $p < 0.005$ ). No other (significant) differences were found.

Among the 201 respondents, 181 answered each of the life-satisfaction questions. There were no statistical differences between answers from the 20 subjects with incompletely and the 181 with completely filled-in questionnaires. These (87 men and 94 women) were included in a factor analysis to deduce whether a pattern of satisfaction with the eight domains existed. Only factors with Eigen values of at least 1.0 were considered, and the chosen cut-off level for factor loadings to be considered significant contributors to a factor was 0.5. Using these factors, discriminant analyses were then applied to analyse the combined effect of the domain-specific items on happiness. In this analysis satisfaction with life as a whole was dichotomized into 'happy' (grades 5 and 6) and 'not happy' (grades 1–4).

Three factors emerged (Table 5). *Factor I* (which was mainly expressive, i.e. emotion-related) incorporated – in order of magnitude of rotated loadings – satisfaction with partnership relations, family life, sexual life and ADL. This factor accounted for nearly half the explained variance. Factors II and III accounted for equal proportions of the variance. *Factor II* (a mixed expressive/instrumental, i.e. performance-related factor) incorporated two similarly loaded items, satisfaction derived from contacts with friends and acquaintances and leisure satisfaction. The two remaining items – satisfaction with present vocational and financial situation – included in the instrumental *factor III* also had similar loadings. Together these factors explained 68% of the variance.

The predictive power of these three factors for level of happiness is given in Table 6. A total of 82% of the subjects was correctly predicted. All three factors had considerable predictive power (discriminant coefficients); the major predictor being factor I. Whereas no particular predictor (function coefficients) emerged in classifying those who were happy, the coefficients for those who were not happy had negative connotations.

**Table 5** Rotated (varimax) loadings and Eigen values for factor analysis of eight domain-specific items of life satisfaction (six-grade ordinal scale) in 181 subjects

	Factors		
	I	II	III
ADL	0.5	– 0.4	0.4
Leisure	<b>0.2</b>	0.7	0.4
Vocational situation	<b>0.2</b>	0.0	0.8
Financial situation	– 0.2	0.4	0.7
Sexual life	0.7	0.2	0.1
Partnership relation	<b>0.9</b>	0.1	0.1
Family life	<b>0.8</b>	0.2	0.0
Contacts friends/acquaintances	0.3	0.8	0.0
Eigen value	3.0	1.4	1.1
Explained variance ( $\Sigma$ 68%)	30,2%	19,6%	18,2%

Among the 'happy' subjects, 22% were satisfied (grades 5 and 6) with all domains, while only 4% of the 'not happy' subjects reported satisfaction for all domains. The proportion of subjects satisfied with each domain in relation to levels of happiness is given in Table 7. More than two-thirds of the happy subjects reported themselves to be satisfied within seven of the eight domains. The only exception was satisfaction with financial situation, which did not differ significantly between happy and not happy individuals. For the happy group, 50% or less reported satisfaction for six of the eight domains and only a slightly greater number (58%) were satisfied with family life.

**Table 6** The actually reported and statistically predicted (by three factors entered into discriminant analysis) gross levels of satisfaction with life as a whole for 181 subjects. Group classification coefficients and discriminant coefficients are given.

	Actually reported by (n)	Predicted	
		Happy (5–6)	Not happy (4–1)
Happy	128	86%	14%
Not happy	53	29%	71%
Group classification coefficients			
Factor I		<b>0.4</b>	–1.1
Factor II		<b>0.2</b>	–0.6
Factor III		0.3	–0.8

Discriminant coefficients: factor I 0.8 > factor III 0.6 > factor II 0.5

**Table 7** Proportion of 'happy' (grades 5–6) versus 'not happy' (grades 1–4) subjects who could answer all questions and who reported themselves at least satisfied (grades 5–6) within each of eight different domains of life satisfaction. For each domain chi-square is given for cross-tabulations between satisfied (grades 5–6) and not satisfied (grades 1–4). For chi-square  $> 12.12 = p < 0.0005$  and chi-square  $< 3.84 = p > 0.05$ .

Domains	Happy ( $n = 128$ ) Satisfied % (5–6)	Not happy ( $n = 53$ ) Satisfied % (5–6)	Chi-square (1 df)
ADL	98	83	13.44
Leisure	66	29	20.57
Vocational satisfaction	67	27	24.67
Financial satisfaction	47	38	1.17
Sexual life	75	44	15.90
Partnership relation	87	50	27.74
Family life	92	58	30.41
Contact with friends and acquaintances	68	33	19.20

## Discussion

### Levels of life satisfaction

Comparisons between the present data and the results of other studies are somewhat difficult due to the use of different items and scales. The present results of generally quite high levels of life satisfaction, whether global or domain-specific, are, however, reasonably congruent with the levels found in Germany<sup>12</sup> for satisfaction with life as a whole, leisure, vocational and financial situations, partnership relation and family life. That the cohabiting or married subjects in this investigation had higher levels of satisfaction with life as a whole, family life and sexual life also confirms the findings of others.<sup>13</sup> The present results appear similar to those reported by Campbell *et al.*<sup>14</sup> in the USA concerning levels of satisfaction with life as a whole, vocational satisfaction, satisfaction with partnership relations and family life, and satisfaction derived from contacts with friends and acquaintances.

Satisfaction with life as a whole (happiness) was not dependent on either age or gender – a finding which, for the age span studied, corresponds to that of many other studies.<sup>12–15</sup> The age independence found here for satisfaction with leisure, sexual life, partnership relations, family life and contacts with friends and acquaintances also seems to agree with other authors.<sup>12–16</sup> On the other hand, the present findings of a higher level of satisfaction for women than for men concerning partnership relations, sexual and family life are somewhat controversial.

Shichman and Cooper<sup>17</sup> found that choice of and level of enjoyment derived from socioemotional aspects of life were feminine characteristics. This gender difference appears to be supported by other investigators,<sup>13</sup> although other studies have found similar levels of satisfaction for men and women concerning family life, partnership relations<sup>12,13</sup> and sexual life.<sup>12,13,18</sup> Satisfaction with sexual life is positively associated with sexual wellbeing within a wide range of sexual functions and experiences.<sup>18,19</sup>

We have not been able to locate any report on satisfaction with ADL performance in nonimpaired subjects. We suggest that the gender difference in this respect is due to the social learning of men, who generally conform in dress and do not use make-up. In contrast women are relatively more colourful in dress and use cosmetics. In other words, self-care ADL may merely subserve other goals for men, whereas for many women, and perhaps particularly for the relatively younger ones (c.f. the greater ADL satisfaction for the younger than for the relatively older individuals), self-care ADL may be a goal in itself. We do not believe that the age-dependency of ADL satisfaction implies disability, as no subject declared dissatisfaction (grades 1–3) with these items.

Gender roles may also be a reason why the 35-year-old women were less satisfied with leisure but more satisfied with family life than their male contemporaries. In northern Sweden women with small children spend a relatively large amount of their time raising and caring for their children.

This may explain the finding that women with children aged under 13 at home had significantly lower levels of leisure satisfaction. On the other hand this greater involvement in family life apparently leads to increased satisfaction in that domain.

The age-dependent levels of financial and vocational satisfaction may be explained by the relatively older people having more fulfilling jobs and higher salaries. To same extent, however, this age-dependency may be caused by the fact that men – but not women – with small children had a relatively low level of vocational satisfaction.

The finding that the (gross) level of happiness was correctly classified by the three factors which contained all eight domain-specific items indicates that the instrument considers a major part of the domains pertinent both to satisfaction and dissatisfaction with life as a whole. The construct validity of the instrument thus appears to be reasonable. In preliminary reports on life satisfaction and happiness in parents of children with Down's syndrome<sup>20</sup> and in a successful vocationally rehabilitated clientele<sup>21</sup> we have found an identical three-factor construct – findings which also support the construct validity of the instrument. In the latter investigation, 53 men and women first answered the mailed life-satisfaction questionnaire and two months later answered the questionnaire by telephone. Spearman analyses showed significant correlations between the two measurements. For most pairs the  $r_s$  was greater than 0.547 ( $p < 0.001$ ). The  $r_s$  for satisfaction with financial situation was 0.443 ( $p < 0.01$ ) however, and 0.306 ( $p < 0.02$ ) for leisure satisfaction. These results indicate that the instrument is reasonably reliable (or valid over time). This also appears to be true over longer periods of time (4–6 years) as reported by Viitanen *et al.*<sup>22</sup>

### Organization of domain-specific satisfactions

The factor analysis showed that the domain-specific items were classifiable into three distinct and interpretable factors. Although we do not suggest that the eight domain-specific items of life satisfaction necessarily cover the whole jigsaw puzzle of domains of concern in relation to (functional) life roles and activities, we believe that the three factors can be regarded as major headings/categories for goals from which

to derive satisfaction. Hence, we suggest that there are three areas of domain-specific goals, each circumscribing a subset of vital goals.

Factor I, which accounts for nearly half the explained variance, circumscribes a set of life satisfactions (self-care ADL, sexual life, partnership relations and family life) which are derived *intra mures*. The three expressive (i.e. emotion-related) items which characterize interpersonal communications have similar emphasis (loadings). In contrast, factor III may be regarded as an instrumental (i.e. performance-related) factor, while factor II is mixed instrumental/expressive. Factors II and III appear to describe satisfactions derived from *extra mures* activities, where factor II represents spare-time goals, and factor III provider goals.

### Happiness and domain-specific satisfactions

Several authors have studied the association between global and one or a few domain-specific satisfaction variables. Leisure satisfaction has been found to be closely correlated with life satisfaction<sup>23–25</sup>; others have found that vocational satisfaction has a significant impact on life satisfaction.<sup>26–28</sup> Emmons *et al.*<sup>15</sup> reported that satisfaction with love-life was closely associated with overall life satisfaction. The findings of the discriminant analysis that all three factors were sizeable predictors for subjects being happy or not happy appear to be in agreement with those of Tate,<sup>29</sup> who found that 60% of the variance in general life satisfaction was accounted for by a linear combination of leisure, dyadic and vocational satisfaction.

Campbell *et al.*<sup>14</sup> demonstrated that satisfaction with partnership relations and with family life constitutes a combination which is closely related to satisfaction with life as a whole, a finding which is substantiated by the major predictive impact of factor I on level of happiness. Furthermore, the present findings that cohabiting respondents had higher levels of happiness and of satisfaction with sexual and family life (which agree well with other investigations<sup>13</sup>) underscore the positive effect of a partnership relation.

We shall now briefly consider some lines of reasoning in conceptualizing the impact of domain-specific satisfactions on happiness. One line implies that a happy person is satisfied with *all* domains. Such an 'aggregation' theory, to which, for instance, Saint Thomas Aquinas<sup>30</sup>

adhered, evidently does not agree with the present findings as only a minority of the happy subjects were satisfied with all eight domains.

Another line of reasoning would be a 'loss' theory, where happiness characterizes a basic state of mind. People may be predisposed to feel happy,<sup>15,31</sup> and happiness cannot be gained but may be lost. This theory appears supported by the finding that all three factors were particularly powerful predictors for not being happy. It appears to us, however, that too many of the happy subjects were not satisfied with one or more of the domains – in particular with the domains included in factors II and III – to fit the 'loss' theory to our experimental data.

The third line of reasoning, which we at present – and in apparent agreement with Nordenfelt<sup>32</sup> – favour, implies greater complexity and involves intraindividual structuring of domains. For an individual the level of satisfaction with life as a whole may be greater or less than the sum of domain-specific satisfactions seems to indicate – this is because the individual weights his goals. The three factors found here suggest that he does so within conglomerations of goals. One consequence of this weighting principle is, as previously suggested by us,<sup>2</sup> that a main issue of rehabilitation is to support disabled subjects (i.e. those who cannot expect to reach their preimpairment goals) to reorientate themselves towards modified or new but realizable goals.

From a holistic point of view the American philosopher Whitbeck<sup>4</sup> suggested that health is something over and above the absence of disease, injury and impairment and a high degree of health is comparable with some degree of disease, injury and impairment. She also argued that to be happy a person must be able to act in ways that serve many goals, aspirations and projects simultaneously. We agree with her and consequently offer this definition of rehabilitation:

Rehabilitation is ensuring that subjects with impairment(s) which may lead to disabilities have their happiness secured or restored.

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