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Psychological variables as predictors of quality of life

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The overall quality of life and quality of life in 22 specific life domains were examined on the sample of 536 adult subjects. Multiple regresssion analysis showed the predictability of different demographic variables (sex, age, family status, education and occupation), intelligence and basic personality dimensions measured by Eysenck's personality questionnaire. All predictor variables, taken together in a multivariate prespective, accounted for 12% of the overall quality of life variance, and varied amounts of variance of satisfaction with various specific life domains (from 2.4 to 18.0%). The greatest predictive value is attributed to personality variables, followed by demographic variables, whereas intelligence accounted for the least amount of criterion variance. Psychoticism and neuroticism were negatively, extraversion positively related to diverse quality of life measures. Females proved to be more content than males, younger subjects were more content than older.

The research on the quality of life has recently become the subject of growing interest among social and behavioral scientists, planners of social development, and also among the wide strata of inhabitants in highly developed countries. The quality of life is nowadays more and more accepted and understood as one of the main goals of social development, so the research on its determinants is not merely theoretically interesting but also practically important. Therefore, in the last two decades several large-scale national studies have been conducted concerning the problems of how different groups of people perceive the quality of their life in general as well as in some of its aspects (Rabier, 1974, in states of EEC; Allardt, 1976,in Scandinavian countries; Campbell, Converse & Rodgers, 1976, in USA; Atkinson, 1979, in Canada; Headey, 1981, in Australia; Shin, Kim & Lee, 1982, in South Korea, etc.). A number of studies on quality of life relationships with various demographic (social classification) and psychological variables is even larger. It is understandably so considering the scientific and practical importance of people's satisfaction with various aspects of their life. It is also important to find out why this satisfaction is as it is and which combinations of quality of life determinants are optimal for its advancement.

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Conceptualizations of the quality of life

Understanding of the quality of life concept has undergone a large evolution. Through the 50's and 60's quality of life has been mainly understood as a standard of living, so the research on quality of life has mostly been done in the domain of economics. However, with an increase in the standard of living the quality of life has started to be viewed not only as consumption, but also as a more evenly distributed access to material goods, depending on the way the relations within a given society were regulated. Therefore, along with economic research on quality of life there is a growing number of sociological studies dealing with objective possibilities for the expression and fulfilment of various human needs. "Third generation" of the quality of life research, beginning in the 70's, was directed at its "subjective side". Economists and sociologists agree that quality of life is not only an objective category consisting of material and social opportunities for the fulfilment of different needs, but that it is also subjectively determined. The subjective determinants of quality of life manifest themselves through the fact that different individuals and groups are not equally satisfied with the same or similar objective circumstances. This brings in question the relationship between objective and subjective determinants of quality of life, i.e., the problem of its comprehensive conceptualization. Yet Allardt (1976) has tried to solve this double meaning of quality of life concept by specifying its objective determinants as standard of living or economic well-being, and its subjective aspects as quality of life or happiness. Seferagi and Popovski (1989) hold

that quality of life, as an individual experience, primarily depends on the socio-economic position of a person's social group. Krizmanić and Kolesarić (1989) point out that quality of life is a subjective experience of one's own life determined by objective circumstances in which people live, personality characteristics influencing their experience of the reality, and their specific life experiences. It is quite obvious, therefore, that quality of life is primarily a psychological phenomenon, i.e., a kind of a general attitude towards one's own life and its various domains. Like any other attitude, quality of life comprises cognitive and affective evaluation of its object, where life satisfaction represents the affective component of the attitude towards life. This component of life attitude could be separated into positive and negative affect, so it seems reasonable to distinguish life satisfaction and life dissatisfaction as relatively independent variables (Bradburn, 1969; Andrews and Kennel, 1980; Warrand Brownbridge, 1983; Kamman, Farry and Herbison, 1984). Interestingly enough, these studies have not been connected with Herzberg's two-factor "hygienic" theory of work satisfaction although work represents one of the most important life areas.

Research findings on the subjective factors of quality of life

Hence the quality of life is a psychological phenomenon, it is an interesting question how particular types of personal variables are connected with the affective evaluation of one's own life, i.e., the appraisal of life satisfaction, and which are the most predictive combinations of these variables. If the factors whose presence or absence in a particular society represent a basis of a good life, are called "objective" (meaning all factors outside the individual), then subjective factors comprise all the factors that constitute the individual's personality in its broadest sense. Demographic characteristics like sex, age, race, or education are thus included within these factors, as well as cognitive and affective properties of a person. Above-mentioned national studies on the quality of life showed that demographic factors could explain relatively small portion of the perceived quality of life. Each of them, taken separately, accounts for just 1-2% of the total variance. Taken together, in a multivariate analysis they account for about 15% of general life satisfaction at the most. Intensive affective states like depression, anxiety or happiness seem to be the best predictor variables of quality of life. These variables, taken together, account for nearly 75% of life satisfaction variance (Abbey and Andrews, 1985). This is not surprising because states like these represent pronounced dissatisfaction/satisfaction, so the correlations between appraisals of contentment and certain measures of depression, anxiety and happiness are necessarily high. Significant but lower correlations are found between life satisfaction and lasting basic personality dimensions, such as extraversion and neuroticism (Dupuy, 1977; Kammann, Irwin and Dixon 1979; Costa and McCrae, 1980). To our knowledge, the relationship between cognitive personality characteristics (intelligence) and life satisfaction has not been studied. Moreover, afore-mentioned studies dealt with the predictability of just one group of personal variables (demographic or psychological), which limits the interpretability of results if there are interactions between these groups of variables. Therefore, the aim of this study was to examine the relationship between some demographic, cognitive and affective personality characteristics and appraisal of life satisfaction. Attempts have been made at exploring composite impacts of these factors on general life satisfaction and satisfaction in some important life domains. It seems reasonable to assume that the predictive power of a particular set of variables does not need to be equal for the satisfaction with different aspects of life.

METHOD

Participants were adult persons (N=536) engaged in some form of education: full time students of social sciences or students of various courses of vocational and non vocational education at the "Open University" in Zagreb. Because all subjects were enrolled in some kind of education, they were not representative of the adult population in Croatia in regard to their motivation for education. This has to be emphasized taking into account possible connections between motivation for education and some other relevant determinants of life satisfaction.

Mean age of participants was 32 years, 48% of participants were males, modal family status was "married", and mean education level was secondary school. The research was carried out during 1992. The set of predictor variables was consisted of demographic, cognitive and affective characteristics. The demographic variables were: sex, age, marital status, level of education and occupation. Sex was categorized in the following order: (1) male, (2) female. Categories for family status were: (1) married, (2) single, (3) divorced, (4) widowed; according to education level subjects were classified into categories: (1) with no formal education, (2) 4 or less grades of primary school, (3) 8 grades of obligatory primary education, (4) vocational secondary school lasting 2 years, (5) vocational secondary school lasting 4 years, (6) grammar school, (7) higher school

lasting 2 years, (8) undergraduate and graduate study. Occupation refers to the type of professional activity practiced by the individual. It is classified according to the level of professional autonomy which goes with the job. Using this criterion the occupations were classified as: (1) worker, (2) office worker, (3) junior executive, (4) senior executive, (5) expert, (6) self- employed, (7) retired, and (8) student.

The cognitive level was assessed by a nonverbal test of fluid intelligence (Test of series - TN-10, constructed in accordance with Cattell's theory of intelligence, and proven to be widely applicable because of its simple usage and acceptable psychometric properties), and one test of cristalized intelligence (7th subtest from the California Mental Maturity Test).

Affective variables were assessed by Eysenck's Personality Questionnaire (EPQ), measuring psychoticism (P), extraversion-introversion (E) and neuroticism (N).

The authors considered that the selection of these predictor variables representatively covered the three main types of lasting personal variables that are presumed to correlate with quality of life. They should, naturally, be treated in a multivariate perspective, because the amount of variance predicted by particular predictor variables would otherwise be artificially increased. The remaining part of unpredicted variance of life satisfaction could, in this case, be mostly attributed to objective circumstances, be they lasting ones or short-term specific situations (important events) causing acute emotional reactions.

The set of criterion variables was: subjectively evaluated overall quality of life, quality of life in the last two years, and the quality of life in 22 specific life domains, assessed by an ad hoc created questionnaire.

All variables measuring satisfaction with life were assessed by a numeric 5-point rating scale. Overall quality of life and life satisfaction in the last two years were assessed by following items: "Please mark on the scale how much are you generally satisfied with your life up to this moment", and "Please mark on the scale how much are you satisfied with your life in the last two years". The quality of specific life domains was assessed by asking the subjects to mark on a scale the degree of their satisfaction/dissatisfaction with a particualr life domain. The points of the scale were: (1) very dissatisfied, (2) quite dissatisfied, (3) neither dissatisfied nor satisfied, (4) quite satisfied and (5) very satisfied.

The application of the questionnaire was carried out in groups of 5 to 20 persons, and each question was additionally explained in order to secure participants' unequivocal comprehension.

Life domains were operationalized by values which were derived and corresponded to the hierarchical motivation theory. Each group of motives (economic-utilitarian, security motive, motive for achievement, motive for social prestige and motive for self-actualization) was represented by several objectives whose achievement leads to satisfaction of a respective motive. Such an operationalization of the satisfaction with specific life domains seems reasonable because the degree of satisfaction is dependent upon the degree in which important needs are satisfied. Prior to the application of the questionnaire it had been established that, taken on the average, all stated values were at least moderately important to our participants.

Participants evaluated the satisfaction with their achievement within following 22 life domains: (1) health, (2) economic standard, (3) job security, (4) hygienic work conditions, (5) natural environment, (6) security of property and personal integrity, (7) emotional attachment (love), (8) family life, (9) friends, (10) doing/not doing something good for other people, (11) entertainment, (12) social activity, (13) social prestige, (14) social influence, (15) education, (16) amount of free time, (17) interesting work, (18) apprehension of nature and society, (19) working/not working on new problems and ideas, (20) taking/not taking part in cultural activities, (21) opportunity for free political expression and (22) believes/not believes in something methaphysical (God...).

RESULTS AND DISCUSSION

Although our research problem was not to establish participants' degree of satisfaction, in the Appendix A we have presented main descriptive statistics for predictor and criterion variables.

The data (obtained in the described manner) were analyzed by a multiple regression analysis. It was necessary to apply multivariate techniques because of our intention to examine the relationship between quality of life and composite measures of more than two predictor variables. Multiple regression analysis implies successive adding of predictor variables with reference to their ability to account for the residue of unpredicted criterion variance. In this way it is possible to maximalize the predictive power of the least possible number of employed predictor variables. Regression analyses were performed by forward procedure for each criterion variable, i.e., for the two measures of general life quality, and for the quality of life in 22 specific life domains.

Results of multiple regression analyses are presented in the Appendix B. It contains values related to those predictor variables that reached statistical significance at $p<.05$.

Correlations among predictor and criterion variables showing the direction and strength of their relationship are presented in Table 1.

Multiple regression of predictor variables on life quality measures and beta weights are shown in Table 2. The first column of Table 2 contains criterion variables, two overall life quality measures, and 22 measures of the quality of specific life domains. The second column contains coefficients of multiple determination (R^2 in %) that reflect the amount of predicted criteria variance based on the optimal combination of selected predictor variables.

Significant beta weights ($p<.05$) for each predictor variable are presented in subsequent columns.

The results presented in Table 2 show that all predictor variables, taken together, accounted for approximately 12% of overall quality of life variance, whereas the amount of predicted variance of satisfaction with specific life domains varies in a wide range from 2.4% to 18.0%. Detailed information about contributions of particular predictor variables to the overall quality of life are given in the Appendix B, in columns on R^2 increment.

By inspection of the Appendix B observable differences can be found in the structure of predictor variables for the overall quality of life and the quality of life in the last two years. The main predictor for the overall quality of life is extraversion which is positively correlated with the quality of life, whereas neuroticism acts as the best negative predictor for the quality of life in the last two years. This is probably caused by a remarkable decline in the standard of living and by a decrease in the average quality of life of the population in the Republic of Croatia in the last two years (1991 and 1992), due to the war and transition processes. Significant decline in the average quality of life was established, amounting to 0.365 units of the 5-point scale, ($p<.001$). As neuroticism showed to be a better predictor for dissatisfaction, and extraversion for satisfaction, it is possible that in hard living conditions neuroticism becomes more important then extraversion. Furthermore, the extent to which employed predictor variables contribute to the prediction of criterion variance corresponds to the findings of other similar studies. Their predictability is, however, significantly lower than that of psychological states, such as depression, anxiety and happiness, as quoted in the literature (Abbey and Andrews, 1985).

In view of our research problem, there is another important question, namely, the relative predictive power of particular types of predictor variables: demographic, cognitive and affective. This relative predictive power could be established by following indicators: an index of how many times a predictor proved to be the first predictor, the number of significant beta weights of a particular predictor variable, and the total amount of variance of all criterion variables predicted by a certain predictor.

As our results show (Table 2), the greatest predictive value can be attributed to personality variables - psychoticism (P), extraversion (E) and neuroticism (N), as measured by Eysenck's personality questionnaire. These variables showed to be the best predictors in 13 out of 24 multiple regression analyses (see Appendix 2).

Demographic variables emerged as a first predictor for 10 criterion variables, whereas intelligence appeared as a first predictor only once. Likewise, affective characteristics were obviously superior in their predictive power to the remainder, with regard to the number of significant beta weights and the percent of predicted variance of all criterion variables as well.

Besides contributing to the prediction of the overall quality of life, psychoticism contributes to the prediction of the quality of 14 specific life domains with the total of 32.55% of predicted criterion variance. Extraversion accounts for the overall quality of life and the quality of 9 specific domains with the total of 40.05% of criteria variance, whereas neuroticism accounts for the overall quality of life along with 10 specific life qualities, and 30.00% of all criterion variables.

It should be emphasized that all criterion variables were negatively correlated to psychoticism and neuroticism, but positively to extraversion. Accordingly, psychoticism and neuroticism could be judged as subjective factors of dissatisfaction, and extraversion as a factor of life satisfaction. Moreover, this could speak in behalf of the hypothesis that life satisfaction is not a unique bipolar variable but that dimensions of satisfaction and dissatisfaction represent two relatively independent variables. Nevertheless, the results showing the predictive power of psychoticims are even more important because, to our knowledge, this has not been established up to now. As we mentioned previously, demographic variables showed to be of less predictive value than affective variables according to every indicator of predictability: frequency of emerging as a first predictor in multiple regression analyses, the number of significant beta weights, and the total amount of predicted criteria variance. Besides, the results on the kind of criterion variables accounted for by particular predictors, as well as the direction of relationships between demographic variables and the quality of specific life domains, are also interesting.

It was found that women scored higher on all criteria of life quality where sex differences were signifi-

Table 1

Correlations among predictor and criteria variables

Criteria variables	Predictor variables									
	Sex	Age	Marital status	Education	Occupation	Nonverbal test	CMMT	EPQ-P	EPQ-E	EPQ-N
General life satisfaction	.073	-.085*	-.051	.124**	.076	.118**	.081	-.130**	.261**	-.188**
General life satisfaction in last two years	.014	-.113**	-.035	.023	.088*	.109*	.058	-.113**	.206**	-.256**
Health	-.004	.059	-.046	.013	-.057	.048	-.034	-.183**	.118**	-.250**
Standard of living	.083	.021	-.011	-.067	.044	.022	-.037	-.085*	.083	-.161**
Job security	-.093*	.186**	-.065	-.178**	.076	-.128**	-.172**	-.117**	.097*	-.159**
Work conditions	.049	.013	.070	.079	.203**	.035	.014	-.026	-.028	-.070
Natural environment	.013	-.004	-.021	-.081	-.128**	-.037	-.095*	-.157**	.051	-.097*
Property security	.073	-.002	.014	.016	.025	-.064	-.059	-.156**	.093*	-.076
Attachment	.050	-.089*	-.235**	.020	-.118**	.078	-.011	-.158**	.114**	-.089*
Family life	-.034	-.090*	-.322**	-.024	-.216**	.059	-.068	-.224**	.179**	-.168**
Friends	.109*	-.129**	.002	.012	.041	.135**	.060	-.190**	.319**	-.185**
Good doing	.109*	.033	-.038	-.029	-.075	.018	-.024	-.151**	.129**	-.013
Entertainment	.043	-.191**	.054	-.108	-.003	.050	-.100*	-.120**	.212**	-.121**
Social activity	-.019	-.177**	.049	.130**	.146**	.154**	.161**	-.063	.073	-.108*
Social prestige	.041	-.053	.057	-.014	.054	.073	-.054	-.131**	.209**	-.182**
Social influence	.013	-.058	.072	.078	.046	-.002	-.121**	-.084	.143**	-.179**
Education	-.007	.102*	.035	.295**	.109*	.065	.050	-.095*	.145**	-.150**
Free time	-.048	.035	.157**	-.039	-.060	-.042	-.054	-.101*	.018	-.054
Interesting work	-.023	-.040	.063	.006	.172**	.058	.002	-.041	.025	-.121**
Nature and society	-.008	.066	.050	.134**	.014	.011	.083	-.153**	.123**	-.119**
New ideas	-.051	-.100*	.077	-.048	.099*	.070	-.015	-.027	.067	-.047
Cultural activities	-.039	.001	.140**	.003	.123**	.050	.075	-.003	.025	-.068
Political expressions	-.016	.016	.010	.007	-.057	-.045	.048	-.126**	-.003	-.109*
Methaphysical believes	.110*	-.088*	.060	.077	.029	.124**	.029	-.006	.031	.086*

** $p < .01$ * $p < .05$

Table 2

Multiple regression of predictor on life quality measures and beta-weights

Criteria variables	R^2 (%)	beta p < .05 Sex	Age	Marital status	Education	Occupation	Nonverbal test	CMMT	EPQ-P	EPQ-E	EPQ-N
General life satisfaction	12.5	.09			.13				-.11	.24	-.14
General life satisfaction in last two years	12.0		-.11			.12			-.11	.15	-.20
Health	8.2								-.14		-.22
Standard of living	4.4	.14									-.20
Job security	10.9		.15		-.21	.15			-.11		-.13
Work conditions	4.1					.20					
Natural environment	3.5					-.10			-.14		
Property security	3.4								-.16	.10	
Attachment	9.5	.10		-.24					-.13	.11	
Family life	17.9			-.27		-.10			-.18	.18	
Friends	18.0	.13					.12		-.19	.29	-.12
Good doing	5.3	.11							-.16	.13	
Entertainment	11.5		-.21	.10				-.12	-.15	.19	
Social activity	8.2		-.17			.14		.10	-.09		-.10
Social prestige	8.3			.09					-.13	.18	-.13
Social influence	6.6		-.10	.11				-.14			-.20
Education	15.5		.13		.36			-.10		.15	-.12
Free time	5.5	-.09		.22		-.10			-.11		
Interesting work	4.4					.17					-.12
Nature and society	5.9				.14				-.16	.14	
New ideas	2.8		-.11		-.09	.13					
Cultural activities	2.7			.11		.09					
Political expressions	2.4								-.11		-.09
Methaphysical believes	2.6	.10					.12				
Total number of significant beta weights		7	7	7	5	10	2	4	16	11	12
Sum R^2 Increment		.073	.147	.241	.158	.161	.034	.038	.326	.400	.300

cant, except for the satisfaction with the amount of leisure time. An interpretation for this exception could probably be found in a lesser amount of free time actually available to women, due to their greater load of housekeeping. On the contrary, age was inversely related to the majority of the quality of life measures, excepting the variables of job security and education.

The first exception could be explained by the fact that in the value system of the then non-market Croatian economy older employees had greater job security than young ones. Older subjects are, again, more satisfied with their education, probably because of their lower educational aspirations. These results could contribute to the better understanding of the relationship between age and quality of life, since no consistent findings exist on this matter (Larson, 1978; Staats and Stassen, 1987; Mookherjee, 1988).

The variable of marital status was categorized in this order: married, single, divorced, widowed. Being single is positively related to the satisfaction with opportunities for entertainment, social prestige, social influence, free time, and the possibility of taking part in cultural activities. This could be ascribed to the fact that single people have more leisure time, and more opportunities to take part in various activities. However, they are less satisfied with their emotional attachments and family life.

Education is positively related to the overall quality of life, to the satisfaction with one's own education and the apprehension of nature and society. It is inversely related to the satisfaction with job security, as well as with the work on new problems and ideas. Education accounts for approximately 2% of the overall quality of life variance, which corresponds to the findings of before cited studies on the relationship between demographic features and quality of life. Education evidently accounts for remarkably larger amount of variance related to the specific criterion variable "satisfaction with one's own education" (8.7%). Inverse relationship between education and satisfaction with job security could, hypothetically, be interpreted with anti-intellectualism, that was typical for socialist systems. Negative correlation obtained between education and satisfaction with the work on new problems and ideas could, however, be caused by inadequate disposal of educated people to working places where their innovative capability cannot be sufficiently expressed.

Occupation (job autonomy) is predictable by no less than 10 various satisfactions. Subjects with greater job autonomy had higher general life satisfaction in the last two years, and were more satisfied with their job security, working conditions, social activities, the degree in which they find their work interesting. They were also more satisfied with working on new problems and ideas, and opportunities for participating in cultural activities.

Variables with the least predictability for quality of life were the two intelligence measures - a test of fluid intelligence (TN-10) and a test of cristalized intelligence (7th subtest from the California Mental Maturity Test). Test of series was positively related to the satisfaction with friends, and with the belief in something methaphysical. This correlation is not interpretable due to the nature of the criterion variable. It refers to subject's satisfaction whether they believe or not in something methaphysical, so it is not clear whether more intelligent subjects are more content because they are believers or because they are not.

Cristalized intelligence proved to be significant predictor of 4 criterion variables, out of which 3 correlations were negative. It was inversely related to satisfaction with the amount and the way of entertainment, social prestige and education, and positively related to satisfaction with social activity.

Possible explanation for the obtained negative correlations could be that more intelligent subjects have higher expectations and are more critical towards ways of entertainment and available contents of education.

Hypotheses about unpredicted variance

It should be stressed that multiple regression analysis is suitable for prediction but less so for explanation of the researched phenomenon. Nevertheless, our results as well as the results of other quality of life studies explain only a smaller part of its variance, thus pointing out the lack of a comprehensive explanation of life satisfaction.

One could put a question regarding the nature of unpredicted criterion variance that, actually, comprises a very large portion of the total criterion variance. Certainly, an answer to this question can be just a hypothesis based upon some theory of quality of life. Conceptualization of quality of life that we refer to assumes that quality of life depends upon objective circumstances on the one hand, and person's reactivity to these circumstances, on the other hand. Objective circumstances represent relatively lasting conditions which determine the possibilities of satisfying important personal needs (socio-economic status of an individual and his/her family, natural environment, criminality, etc.), as well as actual events that are relevant for the fulfilment of person's objectives (loss of a job, illness, loss of a loved one, great material or social benefits, etc.).

Because human satisfaction is, at least partly, determined by objective circumstances, or more accurately, by people's reactions to various situations (lasting or short-termed) it follows that demographic, as well as psychological features of an individual are important only so far as they influence the objective situation and person's reactivity to it. Demographic characteristics determine, in part, socio-economic status of an individual, i.e., access to various resources, but also the reactivity of a person to successful/unsuccessful achievement of his/her important objectives. As it is well known, men and women differ in their sensitivity, as do younger and older persons. Emotional reactions are, by definition, dependent upon lasting personality dimensions, such as extraversion and neuroticism, and to a lesser extent, psyhoticism. Although all these factors represent relatively stable and enduring determinants of quality of life, specific important life events (i.e. significant health, material, social and psychological losses or benefits) could also have a strong impact on quality of life. Significant changes in opportunities for fulfilment of certain important needs evoke intense emotional reactions (happiness, stress, depression, anxiety) which are not permanent but have a substantial influence on life satisfaction in a certain time period. This has been demonstrated in some empirical studies (Abbey and Andrews, 1985). It is our opinion that a more thorough explanation of quality of life requires that we take into consideration not only a larger number of demographic and psychological variables, but also important life events, especially recent ones, because they have a significant impact on intense emotional states that could account for a large portion of quality of life variance.

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APPENDIX A

Descriptive statistics for predictor and criterion variabeles

Predictor variable	*M*	*SD*	*N*
Sex	1.483	.500	536
Age	32.480	12.407	535
Family status	1.659	.695	536
Education	6.654	1.853	535
Occupation	4.442	3.057	529
Fluid intell. TN-10	15.254	6.385	536
Crist. intell. CMMT	42.093	7.061	536
EPQP	5.360	2.659	536
EPQE	12.324	4.942	536
EPQN	10.925	5.236	536

Criterion variable	*M*	*SD*	*N*
General life satisfaction	3.517	.755	520
General life satisfaction in last two years	3.152	.979	520
Health	3.569	.874	534
Standard of living	2.901	1.022	535
Job security	2.913	1.308	401
Work conditions	3.293	1.010	464
Naturale environment	3.390	.987	534
Property security	3.090	1.024	531
Attachment	3.632	1.187	530
Family life	3.845	1.064	529
Friends	3.899	.832	533
Good doing	3.550	.819	531
Entertainment	3.197	.795	533
Social activity	3.053	.927	525
Social presige	3.357	.757	532
Social influence	3.117	.795	530
Education	3.313	.874	534
Free time	3.148	1.034	533
Interesting work	3.212	1.037	495
Nature and society	3.459	.776	527
Working on new ideas	2.948	.830	520
Cultural activities	2.969	.807	522
Free political expression	3.032	.989	529
Methaphysical believes	3.697	.971	529

APPENDIX B

Criterion variable: GENERAL LIFE SATISFACTION

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - E	.24	.26	6.83	
Education	.13	.12	8.80	1.97
EPQ - P	-.11	-.13	10.64	1.85
EPQ - N	-.14	-.19	11.77	1.13
Sex	.09	.07	12.46	0.69

Criterion variable: GENERAL LIFE SATISFACTION IN LAST TWO YEARS

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - N	-.20	-.26	6.53	
EPQ - E	.15	.21	8.76	2.23
Age	-.11	-.11	9.87	1.11
Occupation	.12	.09	10.79	0.92
EPQ - P	-.11	-.11	11.96	1.18

Criterion variable: SATISFACTION WITH HEALTH

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - N	-.22	-.25	6.25	
EPQ - P	-.14	-.18	8.24	.99

Criterion variable: SATISFACTION WITH STANDARD OF LIVING

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - N	-.20	-.16	2.61	
Sex	.14	.08	4.44	1.83

Criterion variable: JOB SECURITY

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Age	.15	.19	3.48	
Education	-.21	-.18	6.14	2.66
EPQ - N	-.13	-.16	8.33	2.19
Occupation	.15	.08	9.75	1.42
EPQ -P	-.11	-.12	10.94	1.19

Criterion variable: WORK CONDITIONS

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Occupation	.20	.20	4.14	

Criterion variable: NATURAL ENVIRONMENT

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - P	-.14	-.16	2.47	
Occupation	-.10	-.13	3.51	1.03

Criterion variable: PROPERTY SECURITY

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - P	-.16	-.16	2.43	
EPQ - E	.10	.09	3.40	.97

Criterion variable: ATTACHMENT

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Marital status	-.24	-.24	5.53	
EPQ - P	-.13	-.16	7.17	1.64
EPQ - E	.11	.11	8.51	1.34
Sex	.10	.05	9.53	1.02

Criterion variable: FAMILY LIFE

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Marital status	-.27	-.32	10.38	
EPQ - P	-.18	-.22	13.72	3.34
EPQ - E	.18	.18	17.04	3.32
Occupation	-.10	-.22	17.89	0.85

Criterion variable: FRIENDS

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - E	.29	.32	10.15	
EPQ - P	-.19	-.19	14.21	4.07
Crist. Intel.	.12	.14	16.06	1.85
Sex	.13	.11	16.89	0.83
EPQ - N	-.12	-.19	18.00	2.11

Criterion variable: GOOD DOING

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - P	-.16	-.15	2.29	
EPQ - E	.13	.13	4.11	1.82
Sex	.11	.11	5.29	1.18

Criterion variable: ENTERTAINMENT

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - E	.19	.21	4.48	
Age	-.21	-.19	7.25	2.77
EPQ - P	-.15	-.12	9.24	1.99
Crist. Intel	-.12	-.10	10.58	1.34
Marital status	.10	.05	11.52	.94

Criterion variable: SOCIAL ACTIVITY

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Age	-.17	-.18	3.13	
Occupation	.14	.15	5.34	2.21
EPQ - N	-.10	-.11	6.65	1.31
Crist. intel.	.10	.16	7.46	0.80
EPQ - P	-.09	-.06	8.21	0.75

Criterion variable: SOCIAL PRESTIGE

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - E	.18	.21	4.36	
EPQ - P	-.13	-.13	6.27	1.91
EPQ - N	-.13	-.18	7.53	1.26
Marital status	.09	.06	8.32	1.88

Criterion variable: SOCIAL INFLUENCE

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - N	-.20	-.18	3.21	
Crist. Intel.	-.14	-.12	4.64	1.43
Marital status	.11	.07	5.61	0.97
Age	-.10	-.06	6.58	0.98

Criterion variable: EDUCATION

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Education	.36	.30	8.68	
EPQ - E	.15	.15	11.37	2.68
Age	.13	.10	13.57	2.20
EPQ - N	-.12	-.15	14.78	1.21
Crist. Intel.	-.10	.05	15.48	0.70

Criterion variable: FREE TIME

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Marital status	.22	.16	2.45	
EPQ -P	-.11	-.10	3.96	1.51
Occupation	-.10	-.06	4.82	0.86
Sex	-.09	-.05	5.53	0.71

Criterion variable: JOB ATTRACTIVNESS

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Occupation	.17	.17	2.95	
EPQ - N	-.12	-.12	4.37	1.42

Criterion variable: NATURE AND SOCIETY

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - P	-.16	-.15	2.35	
Education	.14	.13	4.07	1.72
EPQ - E	.14	.12	5.94	1.87

Criterion variable: NEW IDEAS

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Age	-.11	-.10	0.99	
Occupation	.13	.10	2.01	1.02
Education	-.09	-.05	2.76	0.75

Criterion variable: CULTURAL ACTIVITIES

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Marital status	.11	.14	1.97	
Occupation	.09	.12	2.72	.75

Criterion variable: POLITICAL EXPRESSIONS

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
EPQ - P	-.11	-.13	1.59	
EPQ - N	-.09	-.11	2.36	.77

Criterion variable: METHAPHYSICAL BELIEVES

Predictor	Beta	r	% of predicted variance	Increment in predicted variance
Fluid intel.	.12	.12	1.54	
Sex	.10	.11	2.55	1.01