QUALITY OF LIFE VIEWED IN TERMS OF EMPIRICAL DATA

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Introduction

From the psychological viewpoint, quality of life (QoL) is seen as a subjective phenomenon without general validity. This is why methods of determining quality of life are based on an individual's subjective perception of his/her quality of life, or the way in which the individual understands or defines QoL. One of the methods for representing this subjective perception is SEIQoL (Schedule for the Evaluation of Individual Quality of Life), which identifies an individual's QoL priorities.

The SEIQoL method is based on the identification of five areas that are of key importance for a particular individual because they give his/her life meaning and represent life goals and tasks. (Křivohlavý, 2001) Drawing on this conception, we are dealing with the 'basis' for the life satisfaction of an individual. Although there are certain changes in priorities during the course of an individual's life – affecting the priorities that form the core of the SEIQoL method – it appears that an individual's priorities measured by this method remain relatively stable compared with some situational factors. In addition to the factors presented by SEIQoL, there also exists a range of other factors that may exercise a current or time-limited influence over QoL by means of merely reducing or increasing the degree of an individual's experience and evaluation of QoL. These factors, which fluctuate over time, may influence the current experience of QoL as well as dynamicity and variability in its evaluation. These aspects are more clearly projected into the evaluation of overall life satisfaction and QoL using a second type of method: graphic and numerical scales which see QoL as a monolithic entity. Evaluation of QoL using a third type of method – offering the respondent choices from various goals and situations – may help the respondent to select answers, and it is highly probable that the goals/situations will include those from SEIQoL plus those linked with the respondent's current situation. This type of method is used e.g. in the WHOQOL questionnaire. However, a disadvantage of this method is the subjective way in which the respondent may be guided to select factors which are not currently important for him/her, and which would probably not have been chosen if the subject was not reminded of their existence. We expect that this type of method for evaluating QoL will incorporate the advantages and drawbacks of both of the other types.

Problem

This paper presents a comparison of various methods and techniques for diagnosing quality of life. We set out to answer this question: to what extent does the evaluated degree of QoL and life satisfaction depend on the method used to measure these variables? The following methods were examined:

- SEIQoL;
- Multi-item scales in which individual factors are named;
- Methods used for the evaluation of overall life satisfaction as a monolithic entity, on both graphic and numerical scales anchored verbally at the extreme points.

Another area of interest was the relation of evaluated QoL with other important factors, such as the subjective perception of the individual's state of health, evaluation of work-related stress, resilience against psychological stress, and social support.

Methods used

1. SEIQoL questionnaire, giving five life goals and stating the level of life satisfaction on a graphic scale (QLG) anchored verbally at the extreme points. The graphic scale is generally part of SEIQoL.
2. WHOQOL questionnaire – 30 QoL-related items. For each item, the respondent evaluates (on a scale of 0–6) the importance of the item and their satisfaction level with regard to that item. The resulting WHOQOL value is the sum of the scores for each individual item for importance and level of satisfaction.
3. One numerical scale used is part of the ŠSS set – the SS8 scale evaluating overall life satisfaction. This 7-point scale is anchored at extreme points.
4. A symptomatological questionnaire capturing health complaints (Kasielke, Möbius & Scholze). This study used the following scales: physical problems (FO), psychological problems (PO) and neurasthenic-psychasthenic problems (NP).
5. Evaluation of work stress (D. J. Abramis), including the following stressors: uncertainty roles (RN), internal conflict (KR1), external conflict (KR2), depression (DE), anxiety (UZ), anger (ZL), technical performance (TeV), social performance (SoV), application of creativity (Tvoř), personal satisfaction (SPOK), work stress (ZAT).
6. Hardiness questionnaire (S. Kobasa), including the following items: control – powerlessness (HCO), identification – alienation (HCM), challenge – threat (HCO).
7. Social support scale PSSS (J. A. Blumenthal), including the following: level of overall social support – SP, support from significant other – SPA, support from family – SPB, support from friends – SPC.
8. Work stress evaluation (HPZ) using a graphic scale (HFI) verbally anchored at extreme points (I feel no stress – stress is exceptionally high).

Data set

Data was collected using the available sample method. Completed questionnaires were used from 108 respondents. The respondents were female teachers at level 1 of primary schools.

Results

Table no. 1 shows the relation between the evaluation of QoL a) by using the SEIQoL method and b) by marking the importance of 30 items in the WHOQOL questionnaire. The connections were monitored on the basis of respondents' stated perception of their QoL level and the results of the numerical scale of the SS8 life satisfaction questionnaire. The table captures the closeness of the mutual relations expressed via Pearson's correlation coefficient. The correlations are relatively low (from r=0.428 to r=0.117). The level of significance is marked with asterisks. SEIQoL correlates on a statistical significance level of 0.01 with the graphic scale and WHOQOL. The relation between SEIQoL and the numerical scale is statistically insignificant. The graphic scale correlates significantly with WHOQOL and the numerical scale.

CORRELATION MATRIX OF RESULTS N = 104				
Variable	SEIQoL	Graphic scale	WHOQOL	SS8 numerical scale
SEIQoL	1.000	0.347**	0.333**	0.117
Life satisfaction (graph. scale)		1.000	0.204*	0.428**
WHOQOL			1.000	0.154

* P = 0.05   ** P = 0.01

Table no. 1 Correlation matrix of results N=104

Statistically significant relations to overall levels of health complaints (SDC), physical problems (FO), psychological problems (PO) and neurasthenic-psychasthenic problems (NP) were captured only using the graphic scale. The numerical scale correlates significantly only with neurasthenia and psychasthenia. The higher the level of life satisfaction, the lower the levels of these problems. The graphic scales are more sensitive to the respondent's subjectively perceived state of health.

QUALITY OF LIFE AND HEALTH COMPLAINTS Correlation matrix N = 104				
Variable	SDC	FO	PO	NP
SEIQoL	-0.159	-0.189	-0.097	-0.061
Graphic scale	-0.193*	-2.208*	-0.139	-0.262**
WHOQOL	-0.098	-0.097	-0.090	-0.183
SS8 – numerical scale	-0.165	-0.115	-0.081	-0.312**

Table no. 2 Quality of life and health complaints

Psychological resilience (hardiness) measured using the questionnaire by S. Kobasa displays a relation between this scale and the SEIQoL questionnaire, but also between Kobasa's method and life satisfaction expressed via the QLG graphic scale. The results positively correlate with the ability to control the situation (HCO), identification (HCM), acceptance of stress as a challenge (HCA) and overall level of hardiness (H). The 'control of situation' variable shows a strong correlation with SEIQoL and

with overall hardiness (H). The strongest connections were found between the graphic scale and all subfactors of hardiness as well as overall H. WHOQOL correlates only with identification with stimuli received (HCM), which expresses a need to feel that an activity is worth doing. Life satisfaction expressed via the SS8 numerical scale is shown to be independent of hardiness.

QUALITY OF LIFE AND HARDINESS (Correlation matrix) N = 104				
Variable	HCO	HCM	HCA	H
SEIQoL	0.209*	0.228*	0.073	0.200*
Graphic scale	0.226**	0.338**	0.283**	0.316**
WHOQOL	0.171	0.239*	0.078	0.169
SS8 – numerical scale	0.057	0.114	-0.055	0.111

* $P = 0.05$ ** $P = 0.01$

Table no. 3 Quality of life and hardiness

A further tested factor was the level of perceived work stress (HPZ), which shows a statistically significant correlation with QoL measured via SEIQoL and life satisfaction measured using SS8. This is an indirectly proportional relationship. Social support and the variables tested in this study show that this factor or at least one of its aspects (support from significant other – SPA, support from family – SPB, support from friends – SPC) correlate with all variables. SEIQoL significantly correlates with SPA, SPC and overall support (SP). Life satisfaction measured using the graphic scale is in a statistically significant relationship with SPA, SPB and SP. WHOQOL correlates with social support from SPA and SP. The SS8 numerical scale shows no significant relation with social support.

The level of work-related stress (HPZ) correlates only with the SS8 numerical scale and with SEOQoL. The other items show no significant relation.

QUALITY OF LIFE AND WORK STRESS (measured using HFI), SOCIAL SUPPORT (Correlation matrix) N = 104					
Variable	stress HFI	SPA	SPB	SPC	SP
SEIQoL	-0.206*	0.259**	0.186	0.226*	0.274**
Graphic scale	-0.021	0.229*	0.352**	0.111	0.298**
WHOQOL	0.056	0.225*	0.185	0.121	0.237*
SS8 – numerical scale	-0.336**	0.025	0.057	0.045	0.057

Table no. 4 Quality of life and work stress, quality of life and social support

Work-related stress measuring using the HFI scale shows a significant correlation only with SEIQoL and the SS8 numerical scale. The correlation is negative, with an indirectly proportional relationship between the variables. The higher the stress, the lower the value of SEIQoL and the lower the life satisfaction measured via the SS8 numerical scale. Overall social support SP correlates significantly with SEIQoL and with life satisfaction evaluated on the graphic scale. It also shows a significant correlation with.

FACTOR ANALYSIS					
Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
FO – physical problems	0.9290				
PO – psychological problems	0.8819				
NP – neurotic symptoms	0.8819		-0.2545		
H – total hardiness	-0.6308				0.3485
SP – total social support					0.9419
COPE 9 turning to faith				-0.9319	
SEIQoL	-0.2487	0.8265			
Graphic scale	-0.2366		0.4827	-0.5006	0.3769
WHOQOL		0.7769	0.3273		
SS8 – life satisfaction			0.9401		
Variation %	18.73%	11.90%	9.92%	6.92%	6.65%
	Health	Core QoL	Current QoL	Choice COPE 9	Social support

Table no. 5 Factor analysis

The first factor has been termed 'health', as it is saturated mainly with subjective health-related problems – physical, psychological and neurotic. This factor is also negatively saturated with SEIQoL and the graphic life satisfaction scale. Another variable negatively saturating this factor is total hardiness.

The second factor is primarily the variable SEIQoL and WHOQOL. Other variables do not contribute significantly to this factor. Both SEIQoL and WHOQOL are based on the evaluation of important values for each respondent. WHOQOL is based on the evaluation of up to 30 aspects which exercise a major influence on quality of life, and SEIQoL is based on the respondent stating his/her 5 most important life goals and the degree of their importance for the respondent. It is our opinion that these two methods – especially SEIQoL – represent the core basis of QoL with a lower dynamic of change. We expect that the list of 30 goals includes some of the goals and values used in the SEIQoL method.

The third factor is saturated mainly by the evaluation of life satisfaction as a monolithic entity and measured via graphic and numerical scales, as well as – to a certain degree – evaluated via the WHOQOL method. The fourth factor is saturated by the rejection of coping of the type 'turning to faith' and low levels of life satisfaction on the graphic scale. The fifth factor could be termed 'high level of social support' and is saturated by the level of overall life satisfaction on the graphic scale and by the overall hardiness level. It could also be seen – though this would be somewhat imprecise – as the level of resilience.

Conclusions

1. Methods based on the evaluation of the importance and level of satisfaction of individual QoL factors capture precisely what has here been termed the 'core' QoL. This applies most of all to the SEIQoL method, based on the selection of only five items that are considered of key importance by the individual.
2. Graphic and numerical scales evaluating the overall level of life satisfaction as a

monolithic entity are probably influenced not only by what is most important for the individual, but also by the current situation and satisfaction-related factors linked with this situation. These factors may exercise a positive or negative influence over the evaluation of life satisfaction. Factor analysis of the existence of two QoL factors confirms this fact.

3. Currently, the authors are compiling a much larger data set based on a larger sample of respondents, who will provide data using all four of the methods used to date, plus other variables that can be used in the evaluation of QoL and life satisfaction. The results given here are to be seen as suggesting hypotheses that will be confirmed or rejected in the course of further ongoing research.

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