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SPIRITUAL NEEDS AND QUALITY OF LIFE IN ESTONIA

(Accepted 29 September 2005)

ABSTRACT. This paper reports on three field studies using the WHOQOL-100 and WHOQOL-BREF instruments that utilized three different samples ($N = 1,801$) to get a better understanding of how important the person's spiritual needs are for quality of life. The most striking negative difference between the Estonian and World Health Organization samples was in the WHOQOL-100 spirituality domain. We found that the quality of life index significantly correlated with the WHOQOL-100 spirituality score. Also, spirituality was related to all quality of life domains (physical health, psychological well-being, level of independence, social relationships and environment). Regarding psychological well-being, spirituality correlated with self-esteem, positive feelings, and thinking, learning, memory, and concentration, on the other. Our findings suggest that spirituality occupies an important place in the person's perception of their quality of life in a changing socio-economic environment as the one in Estonia.

KEY WORDS: meaningfulness of life, quality of life, spirituality

1. INTRODUCTION

1.1. Quality of Life

The World Health Organization defines “quality of life” as the individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns. “Quality of life” (QOL) is a broad concept affected in a complex way by the person's physical health, psychological state, spirituality, social relationships and their relationship to salient features of their environment. In close cooperation, the WHOQOL Group developed the QOL definition, the theoretical model of QOL, and the instrument for QOL research (WHO, 1997, 1998; The WHOQOL Group, 1998). The structure of the model of QOL comprises six broad domains, specifically, physical health, psychological well-being, level of independence, social relationships, environment, and spirituality/religion/personal beliefs. The instrument to measure QOL is the WHOQOL-100 questionnaire (WHO, 1995). If necessary, a shorter, abbreviated version of the four domains of

QOL, namely, physical health, psychological well-being, which includes spirituality, social relationships, and environment, can be used. This is the WHOQOL-BREF questionnaire (WHO, 1996).

Traditionally, researchers have measured QOL by using the WHOQOL-100 questionnaire in health related situations (Taeaki et al., 1998 Skfvington and Wright, 2001; Angermeyer et al., 2002). Over the past decade, there have been several studies focussing on the questions of how the various domains of a person's QOL interact with each other (Brady et al., 1999; Daaleman and Frey, 2004). Our study focus on spirituality and on its relations to other QOL domains

1.2. Spirituality

Researchers have not yet agreed on the definition of the concept "spirituality". Thus, the term "spirituality" has been used in various ways by different authors (Chiu et al., 2004). According to the relevant literature, there exist at least two forms of spirituality: some people express their spirituality in their religious practices; others express their spirituality exclusively in their relationship with nature, music, the arts, or through a set of philosophical beliefs, practices and the language that characterizes a community searching for transcendent meaning in a particular way (Culliford, 2002). Consequently, a broad, inclusive definition of spirituality could be as follows: spirituality is that which gives meaning to one's life and draws one to transcend oneself. Other expressions of spirituality include prayer, meditation, interactions with others or nature in a specific way, and acceptance of God or of a higher entity. For this reason, spirituality has been considered integral to the dying person's achievement of the developmental task of transcendence and an important issue for health care providers to recognize and foster (Highfield and Larson, 1992). However, spirituality is not identical to religion; spirituality is a broader concept that captures an individual's sense of peace, purpose, and connection to others, as well as beliefs about the meaning of life.

In the present study, we adopted the WHO conceptualization of spirituality (WHO, 1995), which represents the broader view of it and does not connect it to conventional religious beliefs. This conceptualization is close to what Elkins et al. (1988) expressed at the very beginning of spirituality studies. Spirituality was defined as the degree of involvement or state of awareness or devotion to a higher being or life philosophy. Based on the work of Elkins et al. (1988) and the relevant literature published in the later years, we assumed that spirituality can be understood as a phenomenon that

incorporates various spiritual needs (e.g., different personal beliefs about life, including meaningfulness of life, values, etc.) and activities to satisfy the unfulfilled needs (meditation, interactions with others or nature, religious practices, etc).

Following the WHO quality of life concept (WHO, 1995) we define spiritual needs as the need of the person to have a system of beliefs and values, and to keep this system in harmony (to prevent any dissonance in the system). Spiritual needs, if satisfied, help a person to cope with difficulties in his or her life and provide, more generally, to the person a sense of well-being. For many people religion, personal beliefs and spirituality are a source of comfort, well-being, security, meaning, sense of belonging, purpose and strength (WHO, 1995).

The WHOQOL-100 spirituality domain comprises personal beliefs about the meaningfulness of life and their impact on one's life. The following four questions refer to religion, spirituality and any other beliefs the person may hold:

Do your personal beliefs give meaning to your life?

To what extent does you feel your life to be meaningful?

To what extent does your personal beliefs give you the strength to face difficulties?

To what extent does your personal beliefs help you to understand difficulties in life?

1.3. The Shifting Paradigm of Spirituality in the Context of Estonia

Besides the WHO quality of life multi-dimensional and cross-cultural research, many researchers have claimed that the Western culture is undergoing a meaningful paradigm shift – from a materialistic view towards recognition of fundamental wholeness and interconnectedness of human beings (Lorimer, 1998, 2001; Findlay, 2000; Powell, 2001). These new ways of understanding human experience underscore the importance of a non-material or spiritual dimension of life. The new paradigm received a prominent place in the Estonian culture. According to a survey of the whole Estonian population, the number of people who have started thinking about the meaning of life has increased – the number of people thinking about it sometimes is 54%, whereas the number of people thinking about it often is 39% (Saar, 2001).

Recent solid sociological research, representative of the basic values of 1,500 Estonian citizens, clearly showed that people highly value world

peace, clean environment, happiness, as well as a spiritual balance including a beautiful world, equality, and salvation. Salvation was one of the most influential basic values in the whole value system (Kalmus et al., 2004). In the Western culture as well as in the Estonian culture the term “salvation” originally had a Christian orientation. However, research has shown a clear contradiction between Estonians’ personal beliefs and value system, on the one hand, and actual behaviour, on the other. A sociological study, representative of the Estonian population, showed that only 15% of Estonians consider religion as important or very important (Saar, 2001). In Estonia, there is a very small number of people who belong to religious groups, and only about 10% of people go to church. The majority of the Estonians declare being more agnostic and atheist (Saar, 2001).

The Estonian society is undergoing a fundamental transformation of industrial structures from labor-intensive to knowledge-based society, as well as a rapid social modernization in both work and lifestyle. During the past decade Estonia has made great progress in introducing political, social and economic reforms and joined as a full member the European Union and NATO. Estonian GNP has been increasing 4–6% per year during the past decade, but economic development does not automatically improve the QOL of the population or the person’s perception of their QOL. In an ironic way, Estonia is at the crossroads of shifting paradigms – we live in a transitional period from the socialist socio-economic relations to the economy of free market; the materialistic world is becoming all the more influential and has been playing an important role in the person’s perception of QOL. In addition, Estonians’ basic values include economic security, well-being, and spiritual matters (Kalmus et al., 2004). As reported in a study of the Center for Policy Studies Praxis (2002), the dual paradigms have existed in the society already for quite a long period and the Estonian people have come to value work focusing on economic status, consumerism, as well as on existential matters and religion, more highly than a decade ago.

Once free market economy relations were introduced in the Estonian society the variety of choices made available to the people increased; there are more products and services to choose from, more possibilities to develop one’s self, etc. Yet, the increase of the options or of the possibility to make choices does not always mean that people would actually perceive it this way. The spiritual stress – that is, unsatisfied spiritual needs, unresolved existential problems, and the changing patterns of life – is increasing. Since 1989, according to the Estonian Human Development Research (2001), the number of suicides has significantly increased – up to the level of 40 deaths per 100,000 inhabitants, which is one of the highest rates in Europe.

The aim of the present study was to get a better understanding of how important the population's spiritual needs are and how spirituality can affect one's QOL. The hypotheses tested were the following:

Hypothesis 1. Spirituality would be the most profoundly influenced domain in the persons' QOL in the changing socio-economic environment in Estonia.

Hypothesis 2. Spirituality, including meaningfulness of life, should be highly related with the persons' QOL index.

Hypothesis 3. Spirituality should be related to all the other domains of the QOL model (physical health, psychological well-being, level of independence, social relationships, environment).

2. METHOD

2.1. Participants – Procedure

In the present study, we present the data of a QOL research conducted in three Estonian samples. The data reported here was part of the Estonian quality of life research done by the Estonian Quality of Life Center, established in 1995 by the World Health Organization and located at the Chair of Psychology in Tallinn University of Technology. Our aim was to describe the changes in the community during the social and economic transition period of Estonia, and give a scientific basis for policy changes.

Sample 1. The data were obtained from a sample of young people entering university ($N = 741$) in 1996. The total sample consisted of 372 male (50.2%) and 369 female (49.8%) with an average age of 18.13 years ($SD = 1.18$) and all the participants had secondary education. All the participants of this sample were single. Each participant was given an anonymous questionnaire and asked to fill it in and return it in a prepaid envelope. The return rate of this survey was 100% as the questionnaire was filled in during the document processing at the university.

Sample 2. The second sample comprised Estonian rural inhabitants ($N = 1,010$). There was considerably more demographic variability of gender, marital status, educational level, and age. The constitution of the sample was representative of the Estonian rural inhabitants in 2000. The return rate was very high ($N = 999$), 98.9%, as the data

were collected by employed psychologists–interviewers. However, the answer rate for WHOQOL-100 questionnaire was 99.4% ($N = 1,004$) and for WHOQOL-BREF 98.9% ($N = 999$). This sample had an average age of 41.5 years ($SD = 15.87$), 301 males (30.1%) and 698 females (69.9%). The educational level was: primary school 16%, secondary school 64.7%, university degree 19.2%. The marital status was: single 21.5%, married 49.6%, unregistered marriage 13.0%, living separately 1.9%, divorced 6.5%, widowed 7.4%, and 4 persons did not answer. With respect to employment status 65% was working and 35% was officially unemployed, but did casual labor or worked in their household.

Sample 3. The data collection took place in October 2003 by Tartu University. The sample was drawn from one specific group of senior citizens ($N = 61$). This sample was specific as it consisted of seniors who needed continuous care and lived in nursing homes and stayed at hospitals. The return rate of this survey was 100% as the questionnaire was filled in with the assistance of students of the Tartu University. The total sample consisted of 15 males (24.6%), and 46 females (75.4%), the average age 74.43 years ($SD = 11.48$). The educational level was: primary school education 33.3%, secondary school 53.7%, university degree 13.0%. The marital status of 56 persons was: single 32.1% ($N = 18$), married 3.6% ($N = 2$), separated 3.6% ($N = 2$), divorced 8.9% ($N = 5$), widowed 51.8% ($N = 29$), and 5 did not answer this question; there were no unregistered marriages. No one from this sample was working.

2.2. Instruments

The instruments used in the study were cross-culturally developed by the World Health Organization (WHO, 1995, 1996). Specifically, WHOQOL-100 was developed simultaneously in field centres around the world (WHO, 1995). The total number of items of WHOQOL-100 is 100 (4 questions for demographic parameters and 96 items for measuring QOL); all the items were rated on a five-point scale (1–5). WHOQOL-100 produces scores related to six larger domains: (a) Physical health (facets incorporated within domain: energy and fatigue; pain and discomfort; sleep and rest). (b) Psychological well-being (bodily image and appearance; negative feelings,

positive feelings; self-esteem; thinking, learning, memory, and concentration). (c) Level of independence (mobility; activities of daily living; dependence on medicinal substances and medical aids; work capacity). (d) Social relationships (personal relationships; social support; sexual activity). (e) Environment (financial resources; freedom, physical safety and security; health and social care; home environment; opportunities for acquiring new information and skills; participation in and opportunities for recreation/leisure; physical environment; transport). (f) Spirituality (spirituality, religion, personal beliefs). Finally, it produces an index representing the overall QOL. This is the WHOQOL-100 index.

Based on data from the field-trial version of WHOQOL-100, an abbreviated 26-item version of WHOQOL-100 was developed, the WHOQOL-BREF (WHO, 1996). In this approach the domains, with which WHOQOL-BREF is related, have been merged and four major domains are assessed: physical, psychological, social relationships, and environment. The domain scores produced by WHOQOL-BREF have shown a correlation of about $r = .90$ with the WHOQOL-100 domain scores (WHO, 1997). The reliability and validity of the domains of WHOQOL-100 and WHOQOL-BREF have been demonstrated in previous cross-cultural studies by the WHOQOL Group (1998).

Both WHOQOL-100 and WHOQOL-BREF questionnaires were originally written in English. Four professional Estonian psychologists translated the questionnaires into Estonian and four professional Estonian translators retranslated the questionnaires into English to assure the quality of translation. Words that were improperly translated were retranslated and retested until the Estonian version matched the original English version of WHOQOL-100. In the Estonian Quality of Life Centre this work was done during 1995. Additional questions were added about the demographics (age, education, gender, marital and employment status) and other parameters according to the specific purpose of different studies. In Sample 1 and Sample 2 the WHOQOL-100 was used, whereas in Sample 3 the WHOQOL-BREF. For comparison reasons, Sample 1 and Sample 2 data were converted to the equivalent items of WHOQOL-BREF.

3. RESULTS

3.1. *Statistical Treatment*

The raw scores of WHOQOL-BREF domains and the WHOQOL-BREF index were used in the analyses according to the WHO instructions (WHO,

1996). The scores of WHOQOL-100 are presented according to the WHOQOL user manual (WHO, 1998). Cronbach's alphas were calculated for the reliability analysis. Pearson's correlation coefficients were calculated for all parameters of the three samples of the WHOQOL-100 and WHOQOL-BREF data sets.

Tables I and II present the reliability coefficients, and the range of values of the main variables. All the domains in the present study had satisfactory internal consistency, $\alpha > 0.70$ (Nunnally, 1978) except for spirituality. In this case, alphas were on the minimally acceptable level, about .60.

To test Hypothesis 1, we used the WHOQOL-100 data of Sample 1 and Sample 2. We estimated the mean scores of the 6 domains as well as the WHOQOL index. As compared to the respective mean scores given by the WHOQOL Group (1998) the WHOQOL-100 index in Estonia is 3.05% lower than in the WHOQOL Group sample.

The differences of the WHOQOL-100 six domains, in descending order, were as follows: spiritual domain -9.78% , physical health domain -9.21% , environment domain -8.89% , psychological well-being domain -7.47% , social relationships domain -2.85% , and level of independence domain -2.33% . The biggest negative difference between the Estonian and the WHOQOL Group sample was in the spirituality domain (Table III).

According to the WHOQOL-100 instrument, the low mean score of spirituality shows that the persons believe that their personal beliefs do not give so much meaning to their lives, they perceive their lives less meaningful, their personal beliefs do not give them sufficient strength to cope with difficulties, and their personal beliefs do not help them much to understand difficulties in life.

TABLE I

Cronbach's alphas of the main variables in the studies using WHOQOL-100

Domains	N	Sample 1				Sample 2			
		Mean	SD	Range	α	Mean	SD	Range	α
Physical health	12	12.77	1.60	6.67–17.00	0.77	11.29	2.17	3.33–17.33	0.81
Psychological well-being	20	13.37	1.64	7.20–18.60	0.87	12.26	1.68	4.80–17.60	0.88
Level of independence	16	14.56	1.64	7.00–18.00	0.79	13.47	2.24	4.00–18.00	0.78
Social relationships	12	13.86	2.25	6.33–19.33	0.81	13.73	2.23	4.67–19.33	0.76
Environment	32	12.97	1.62	5.13–18.13	0.79	11.72	1.73	6.50–17.25	0.75
Spirituality/Religion/ Personal beliefs	4	12.71	3.42	0.00–20.00	0.61	12.01	3.18	4.00–20.00	0.57

Note: n = number of items. Sample 1: $N = 741$; Sample 2: $N = 1,004$.

TABLE II

Cronbach's alphas of the main variables in the studies using WHOQOL-BREF

Domains	n	Sample 1			Sample 2			Sample 3					
		Mean	SD	Range	α	Mean	SD	Range	α	Mean	SD	Range	α
Physical health	7	16.06	1.58	10.29–20.00	0.82	14.51	2.11	6.40–20.00	0.83	11.19	2.05	4.00–17.71	0.79
Psychological well-being	6	14.10	1.64	7.33–20.00	0.89	12.74	1.80	4.80–19.33	0.88	11.20	2.84	6.40–18.67	0.84
Social relationships	3	14.54	1.91	5.33–20.00	0.83	14.31	2.68	4.00–20.00	0.80	14.38	3.18	4.00–20.00	0.71
Environment	8	13.56	2.77	5.00–20.00	0.83	12.29	1.94	6.00–18.00	0.79	12.87	3.14	6.29–19.50	0.82

Note: N = number of items. Sample 1: N = 741; Sample 2: n = 999; Sample3: N = 61.

TABLE III

Mean scores of WHOQOL-100 and differences of Estonians as compared to WHOQOL Group sample as a function of domain

WHOQOL-100	Sample 1	Sample 2	Mean of sample 1 and sample 2	WHOQOL Group sample	Difference*
WHOQOL-100 Index	13.38	12.41	12.90	13.30	-3.05%
Physical health	12.77	11.29	12.03	13.25	-9.21%
Psychological well-being	13.37	12.26	12.82	13.85	-7.47%
Level of independence	14.56	13.47	14.02	14.35	-2.33%
Social relationships	13.86	13.73	13.80	14.20	-2.85%
Environment	12.97	11.72	12.35	13.55	-8.89%
Spirituality/Religion/ Personal beliefs	12.71	12.01	12.36	13.70	-9.78%

Note: WHOQOL Group sample = 0%.

To test Hypothesis 2, we computed the correlations of WHOQOL-100 index and WHOQOL-BREF index with the WHOQOL-100 domain of spirituality and the WHOQOL-BREF question about the meaningfulness of life (see Table IV). Correlations were significant in all three samples meaning that spirituality and, specifically, the meaningfulness of life occupy an important place in the respondents' perception of their QOL.

Furthermore, all the items of the spirituality domain significantly correlated with the WHOQOL-100 index (see Table V). The highest correlation was between the item about meaningfulness of life and the QOL index in all samples.

TABLE IV

Within-sample correlations of WHOQOL-100 and WHOQOL-BREF indexes with domain of spirituality and meaningfulness of life

	WHOQOL-100 index		WHOQOL-BREF index
	Sample 1	Sample 2	Sample 3
Spirituality/Religion/Personal beliefs	0.64**	0.53**	–
Meaningfulness of life	0.43**	0.46**	0.55**

** $p < .01$ (2-tailed).

TABLE V

Within-samples correlations of WHOQOL-100 and WHOQOL-BREF indexes with the items of the domain of spirituality

Items	WHOQOL-100 index		WHOQOL-BREF index
	Sample 1	Sample 2	Sample 3
Personal beliefs give meaning to your life	0.41**	0.36**	–
Meaningfulness of life	0.57**	0.57**	0.55**
Personal beliefs give you the strength to face difficulties	0.55**	0.47**	–
Personal beliefs help you to understand difficulties in life	0.49**	0.41**	–

** $p < 0.01$ (2-tailed).

To test Hypothesis 3, the correlations between the WHOQOL-100 spirituality domain score and the scores of the other domains of WHOQOL-100 were computed (see Table VI). Inspection of Table VI reveals some important tendencies. In Samples 1 and 2, there were significant, although low to moderate, correlations of the spirituality domain with all the domains of WHOQOL-100. The highest correlation in both samples was between spirituality and psychological well-being, $r = .29$ and $r = .23$ in Sample 1 and 2, respectively. The results also show that spirituality was moderately related to the domain of social relationships and of environment. Thus, the data presented in Table VI, provide support to the idea that the person's spirituality is important not only for one's self – psychological well-being – but also for the relations with others as well as with the environment.

TABLE VI
Inter-correlations between domains and index of WHOQOL-100

Domains	Index	1	2	3	4	5	6
<i>Sample 1</i>							
WHOQOL-100 index	1.00						
1. Physical health	0.63**	1.00					
2. Psychological well-being	0.78**	0.54**	1.00				
3. Level of independence	0.67**	0.54**	0.51**	1.00			
4. Social relationships	0.76**	0.39**	0.58**	0.42**	1.00		
5. Environment	0.66**	0.38**	0.49**	0.38**	0.54**	1.00	
6. Spirituality/Religion/Personal beliefs	0.64**	0.11**	0.29**	0.20**	0.28**	0.17**	1.00
<i>Sample 2</i>							
WHOQOL-100 index	1.00						
1. Physical health	0.73**	1.00					
2. Psychological well-being	0.80**	0.62**	1.00				
3. Level of independence	0.70**	0.66**	0.58**	1.00			
4. Social relationships	0.67**	0.36**	0.49**	0.33**	1.00		
5. Environment	0.62**	0.36**	0.46**	0.27**	0.43**	1.00	
6. Spirituality/ Religion/ Personal beliefs	0.53**	0.07*	0.23**	0.09**	0.19**	0.16**	1.00

** $p < 0.01$ (2-tailed); * $p < 0.05$ (2-tailed).

When focusing on WHOQOL-BREF in all three samples, where only one item for spirituality is included, namely, meaningfulness of life, a quite different picture emerged (see Table VII). In Samples 1 and 2 there were significant correlations between meaningfulness of life and all four domains of quality of life in WHOQOL-BREF. In Sample 3 there were only two significant correlations – namely, with the domains of physical health and psychological well-being– and two nonsignificant correlations – namely, the domains of social relationships and environment. However, the highest correlation in all three samples was with psychological well-being, $r > .60$. These findings support the contention that meaningfulness of life, as part of spirituality, is an important parameter in the QOL, particularly for those who are not in good health.

To further investigate the relationship between spirituality and psychological well-being, as measured in WHOQOL-100, we correlated the spirituality domain score with the subscores of the psychological well-being domain, namely the scores on bodily image and appearance, positive and negative feelings, self-esteem, and thinking, learning, memory, and concentration of (see Table VIII). In the two samples there were three items – namely, positive feelings, self-esteem, and thinking, learning, memory and concentration – that correlated significantly, albeit moderately, with

TABLE VII

Within-samples correlations between meaningfulness of life and domains of WHOQOL-BREF

Domains	Sample 1	Sample 2	Sample 3
Physical health	0.27**	0.24**	0.46**
Psychological well-being	0.63**	0.63**	0.77**
Social relationships	0.27**	0.29**	0.12
Environment	0.18**	0.25**	0.18

** $p < 0.01$ level (2-tailed).

TABLE VIII

Within-sample correlations between spirituality domain score and psychological well-being items of WHOQOL-100

Items of the psychological well-being domain	Sample 1	Sample 2
Bodily image and appearance	0.15**	0.07
Positive feelings	0.33**	0.36**
Negative feelings	0.04	0.05
Self-esteem	0.28**	0.20**
Thinking, learning, memory, and concentration	0.25**	0.17**

** $p < 0.01$ (2-tailed).

spirituality. The highest correlation was with positive feelings. There was no significant correlation with negative feelings and a very low correlation with bodily image and appearance. This is an important finding because it shows that spirituality contributes to psychological well-being mainly through positive feelings, enhanced self-esteem, and cognition.

Finally, it should be mentioned that in Sample 1 and Sample 2, when we compared the WHOQOL-100 and WHOQOL-BREF index, a difference was found. In Specifically, in Sample 1, the WHOQOL-100 index was 13.38 and the WHOQOL-BREF index was 14.57; in Sample 2, the WHOQOL-100 index was 12.41 and the WHOQOL-BREF index 13.46. This suggests that WHOQOL-BREF shows higher QOL than WHOQOL-100. The differences between the WHOQOL-100 and WHOQOL-BREF indexes are probably due to the use of raw scores in displaying WHOQOL-BREF data, but this assumption should be further investigated.

4. DISCUSSION

Our study focused on spirituality and its relations with QOL. Hypothesis 1 predicted that in Estonia spirituality would be the most profoundly influenced domain of QOL. The findings suggest that this was the case. They also suggest a meaningful paradigm shift in the Estonian culture. The Estonian society is undergoing a transition from socialist socio-economic relations to free market economy where the materialistic values have important place in people's perception of their QOL. Nevertheless, according to the Estonian Human Development Research (2001), the great economic success has not yet produced the expected result – Estonians' living standard is still much lower than in Western countries. This probably explains why Estonians perceive their overall QOL to be lower than that of the WHO sample.

Yet, the difference in the spirituality domain is even greater. This suggests that Estonians are aware of a lack of meaningfulness in their life as well as a lack of a personal belief system that gives strength in everyday life. On the other hand, the Estonian society seems to be sensitive to the new paradigm of the Western culture that promotes the concept of a non-materialistic or spiritual dimension of life. The existential questions and worries have become more and more important during the past decade. This explains why spirituality is so much related to the people's perception of their QOL in the Estonian culture.

The oversimplified and almost traditional way of thinking about Estonia's transition period is in terms of economy development. However, rapid changes take place not only in economy. The transition period also means changes in people's values and in the system of personal beliefs. Some of the values and beliefs have already changed; others not yet. This is a potential source of confusion, disorientation, discomfort, as well as of potential conflict between the various values and beliefs and the other spiritual needs that calls for re-establishing the harmony in the values and beliefs system. As sociological research has shown (Kalmus et al., 2004), salvation is one of the most important basic values in the whole value system of Estonians, and an increasing number of people start thinking about the meaning of life.

This leads us to interpret the results of the present study based on the theory of cognitive dissonance, formulated by Festinger (1957). The basic notion of the theory is that if a person holds two or more cognitions (ideas, thoughts, beliefs, values) simultaneously that contradict each other, the person experiences a state of cognitive dissonance. Dissonance produces a state of psychological tension (nowadays we identify it as stress), which motivates the person to reduce the dissonance. The resolution of dissonance

is assumed to serve as a basis for attitude change in that belief patterns are generally modified so as to be consistent with behaviour or with other cognitions.

It seems that in the changing socio-economic environment of Estonia the person's spirituality and personal beliefs are negatively affected to a greater extent than other domains, although the Estonians scored lower than the WHO sample also in the psychological well-being and physical health domains. This finding is in accordance with the Sparks et al. (1999) study who found that developing nations scored the highest on sources of pressure and reported the worst mental and physical health. Our results suggest that persons with higher spirituality report higher psychological well-being and QOL. It is plausible that the person's spirituality plays an adaptive role in the person's interaction, because it seems to help people cope with difficulties in their life.

Hypothesis 2 predicted that spirituality, including the meaningfulness of life, should be correlated with the person's QOL index. The results of the present study showed that spirituality occupies an important place in the person's perception of their QOL in a changing socio-economic environment. The WHOQOL-100 index significantly correlated with the WHOQOL-100 domain spirituality. All the items tapping the person's spiritual needs were also significantly correlated with the WHOQOL-100 index. This leads to the conclusion that the changes in the society put hard pressure on various aspects of people's QOL and not only on their spirituality.

Hypothesis 3 predicted that spirituality is an important component in person's QOL structure and it is related to all QOL domains (physical health, psychological well-being, level of independence, social relationships, and environment). The present study did not provide strong support for this hypothesis. We found, when using the WHOQOL-100 instrument, that there were significant, although moderate, correlations between spirituality and all the other QOL domains; however, when using the WHOQOL-BREF instrument, spirituality was related only to two domains in Sample 3.

There are at least three possible methodological explanations for the failure to support Hypothesis 3. First, according to a common Estonian dictionary, the term "spirituality" is defined as "mental as well as spiritual" and is not widely used in everyday spoken language. Of course, this term was used only in the general title of the WHOQOL-100 domain and there was a commentary on the term. On the other hand, all four items inside the domain were more common – three of them asked for personal beliefs and one question addressed meaningfulness of life. As spirituality is not a

common word in the Estonian language, some people might have misunderstood it and this might have affected their responses.

Second, we did not find a good agreement between the two instruments, WHOQOL-100 and WHOQOL-BREF. Our results showed a difference between the WHOQOL-100 index and the WHOQOL-BREF index. Also, spirituality as measured in WHOQOL-100 is not equivalent to the one item used in WHOQOL-BREF, namely, meaningfulness of life. The meaningfulness of life is just one of the components of spiritual needs, whereas spirituality is a much broader term. This means that WHOQOL-BREF did not measure the spiritual needs as a whole.

Third, although we attempted to make our samples as representative as possible, in Sample 3, we had a comparatively small sample size and all participants had significant health problems. So, this might have affected the responses of Sample 3 as compared to those of Sample 1 and 2.

Despite the possible methodological flaws, in all our samples spirituality was mainly related to the person's psychological well-being and, particularly, to positive feelings. It is plausible that the person's spirituality plays an adaptive role in person's perception of their QOL through the positive feelings that are associated with it. What is intriguing about the findings regarding psychological well-being, is that there is also relationship between the person's spirituality and self-esteem and cognitive functioning, as indicated by the domain thinking, learning, memory, and concentration. Why this happens requires further investigation.

The present study is not without limitations. First, the results presented here are specific to Estonia and cannot be generalized to other countries, even if they also undergo a transition period as post-soviet or other rapidly changing countries do. Cross-cultural research is needed to support our contention that economic and political transition in Estonia is related to Estonians' QOL and spirituality. There are also some other limitations that should be kept in mind when interpreting the results, namely, that these data came from self-report measures that preclude any causal inferences. However, the evidence from Estonia may help future research to disentangle the role of spirituality in QOL and the ways in which it affects people's lives.

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