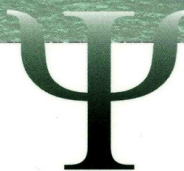


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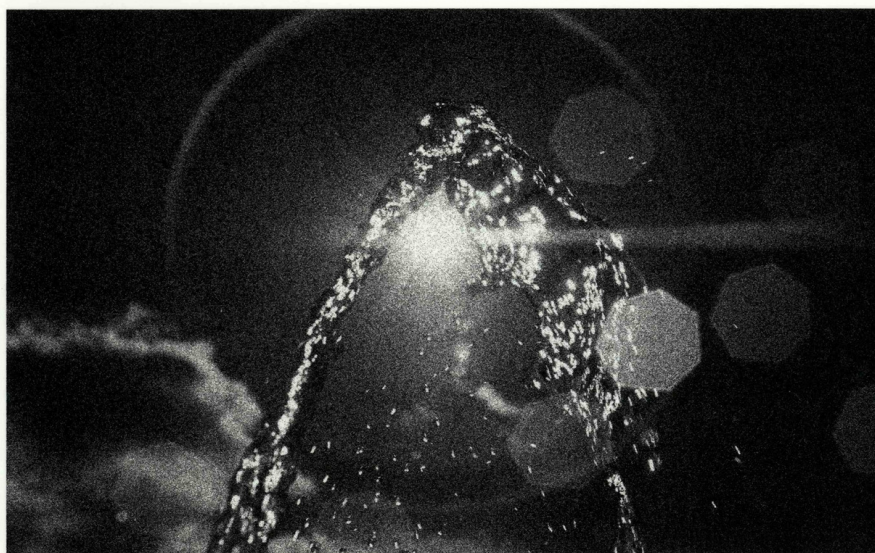


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Editorial

Psychologists from the Baltic states every year take part in diverse international conferences. The following important conferences will take place in Europe next year:

9th European Congress of Psychology

Crossroads of psychology in a world without borders

July 3 – 8, 2005

Granada – Spain

27th International School Psychology Association Colloquium 2005

Promoting the well-being of children and youth: A challenge for the school, the family and the school psychologist

July 13 – 17, 2005

Athens – Greece

12th European Conference on Developmental Psychology

August 24 – 28, 2005

La Laguna, Tenerife – Spain

The school psychologists of Latvia are organizing a group tour to the Athens for ISPA's Colloquium. Persons willing to join us, please, contact us via the e-mail address of the "Baltic Journal of Psychology".

The organizers of the conferences usually offer to publish only the abstracts of the papers not the entire text, therefore you are welcome to submit your papers to the peer-reviewed Baltic Journal of Psychology.

Editor of the Baltic Journal of Psychology
Malgožata Raščevska

The Structure and Gender Differences of Self-evaluation Practical Skills

Malgožata Raščevska
University of Latvia

This research clarifies the structure and gender differences of self-evaluation practical skills based on data from 946 participants, ages 16 through 50 (50% female, 50% male). The two constructs are related to practical skills: adaptive behavior and practical intelligence. For research purposes an original Practical skills self-evaluation questionnaire was used. The first version of questionnaire contains 95 practical skills which after item and component analysis were reduced to 53 and grouped in five categories: Household skills, Use of technical equipments and repair skills, Sports skills, Hobbies/ artistic skills, Communication skills. The component analysis showed that there are gender differences in the order of components in the structure. The Cronbach alpha and test-retest reliability for Practical skills scales was within acceptable range.¹

Key words: practical intelligence, practical skills, adaptive behavior, gender

Introduction

The following two constructs: adaptive behavior and practical intelligence are related to practical skills. Both categories are important for the understanding of functioning in real life settings and neither is so far sufficiently operationalized. Practical skills refer to a narrower construct than adaptive behavior and practical intelligence, but the relationships among these constructs is yet not clear. There are no special studies of the structure of practical intelligence or practical skills in real life contexts. This study is devoted to this theme.

Many researchers have investigated adaptive behavior from theoretical and measurement points of view. McGrew and Bruiniks (1990) summarized the main ideas on adaptive behavior and concluded that there is not an unified notion of adaptive behavior. One definition of this category includes sensorimotor skills and development, communication skills, self-help skills, social skills, functional academic and cognitive skills, and vocational skills. This conception includes similar factors from the Adaptive Behavior Assessment System (ABAS) perspective (Harrison, Oakland, 2003a): communication, community use, functional academics, home living/school living, health and safety, leisure, self-care, self-direction, social, and work (and option area). “These skill areas encompass the practical everyday skills required to function and meet environmental demands, including those needed to effectively and independently care for oneself and to interact with others” (Harrison, Oakland, 2003b, p. 1). I agree with McGrew and Bruiniks’ (1990, p. 2) conclusions “that most adaptive behavior research has been atheoretical in nature and that most conceptions of adaptive behaviour only provide

¹ Author’s note. Correspondence concerning this article should be addressed to Malgožata Raščevska, e-mail: malgozata.rascevsk@lu.lv

a vague idea of the basic concept” and that adaptive behavior and practical intelligence are closely related concepts.

The concept of practical intelligence has also been investigated in the context of intelligence. Many scientists recognized that intelligence is a much broader concept than what the traditional measuring instruments of intelligence can grasp – it is the human being’s ability to adapt to the changing surrounding environment (Brody, 1992; Cattell, 1987; Carroll, 1993; Neisser, et al. 1996; Sternberg & Detterman, 1986). Carroll (1993) summed up the results of analytic intelligence studies most clearly, establishing a three strata intelligence model that attempted to systematize the main factors of intelligence. However, the list of these factors continued to show that measured intelligence still does not reflect the essence of the phenomenon functioning in the actual environment. Sternberg’s theory of successful intelligence (Sternberg, 1996, 1997a, 1997b, 1997c, 1998, 1999a, 1999b) provides logical continuation of his previously developed triarchic theory (Sternberg, 1985, 1988), particular attention is paid to three aspects of intelligence: analytical, creative and practical. Sternberg extended intelligence research area, including in it not only analytic, but also creative and practical intelligence, basing this on the fact that they are not linked by the G factor (Sternberg, 1997d, 2000).

Compared to analytic, creative intelligence, and other kinds of intelligence the concept of practical intelligence is relatively new. Historically references to several studies that include separate practical intelligence aspects into the intelligence model can be found, e.g., Vernon’s practical-mechanical-spatial-physical factor (Vernon, 1950/1967). Practical knowledge and skills are necessary for each individual in daily life, so that the individual can function normally in the present day world of social and material things.

Sternberg and his co-researchers have been practically the only ones researching practical intelligence for more than 15 years (Sternberg & Wagner, 1988; Sternberg, Okagaki & Jackson, 1990; Grigorenko, Gil, Jarvin & Sternberg, 2001). “Crucial to practical intelligence is tacit knowledge, which is what one to know to adapt to, shape, and select environment, that is not specifically taught and that often is not even verbalized” (Grigorenko, Gil, Jarvin & Sternberg, 2001, p. 4). Sternberg included this concept in his intelligence model and offered some instruments for measuring it: (a) The Everyday Situational Judgment Inventory that consists of descriptions of various situations encountered by many people and 8 opinions for handling the each situation. (b) College Student Tacit-Knowledge Inventory that contains 30 stories with problem scenarios that require ratings on a 1 to 7 points (Grigorenko, Gil, Jarvin & Sternberg, 2001). (c) Test of Tacit Knowledge for Natural Herbal Medicines (for Kenya children) that consists of 30 brief stories about specific manifestations of a given illness and provided children with options regarding how to treat the illness (Sternberg, Nokes et al., 2001). (d) Self-report instrument of practical skills in social and family domain and in the domain of effective solution of sudden problems (Grigorenko, Sternberg, 2001). In the first part the respondents evaluated the effectiveness of their communication with other people and success in everyday domestic situations. In the second part they evaluated the effectiveness of solving sudden, surprise problems. In the third part they were asked to choose their typical way of behaving out of 4 vignettes, which showed behaviours

reflected by Russia's most popular magazines. The behavior which was most frequently chosen was evaluated as most adaptive. (e) Sternberg Triarchic Ability Test (STAT) that includes Practical intelligence scale. STAT measures everyday thinking in practical verbal, practical quantitative and practical figural tasks, from which to choose the correct answers. The measurements also include the evaluation of essays on a definite theme (Sternberg, 1999b).

The practical intelligence measurement instruments created by Sternberg and his co-researchers has been developed mostly for specific social and cultural groups (e.g.: students, managers, Kenya children) taking into consideration the specific conditions of their activities and it investigates how the people surveyed use their knowledge in practical learning and working situations. Some instruments are self-report questionnaires that use Likert scales. All the studies revealed that practical intelligence is relatively independent of analytical intelligence (Sternberg, Wagner, Williams & Horvath, 1995; Sternberg, 1999b).

However, a different the approach to the definition and research on practical intelligence can also be.

All of us perform daily household tasks and carry out some recreational activities. These activities also require from us some specific innate and acquired skills to perform, coordinate and plan different motions, experience and even some mastery, so that we can be comfortable in dealing with everyday challenges or can adapt to everyday conditions in the social environment. Most frequently this preparation for life initially takes place in the family during childhood. Later it develops in association with friends, in groups, or while performing various tasks. These are practical skills necessary for daily life and the skills' development level, undeniably, could seriously promote or hamper successful adaptation to the surrounding material or social environment. Therefore, practical intelligence could also be defined as follows: practical intelligence consists of the skills gained by a person performing everyday activities that help to adapt to the daily mode of life, recreation/sports and communication. In every period of history and in every cultural environment these skills will be different. They will change with changes in our mode of life, with changes in people's recreation traditions, and with the intensity and content of mutual relationships. It is possible that this type of intelligence is more subject to historical and socio-economic changes than analytical or creative intelligence, which is more dependent on the regularity of cognitive functioning.

Previous researchers did not investigate the structure of practical intelligence or gender differences. Sternberg with co-researchers offered different instruments for the investigation of practical intelligence and thus he showed that practical intelligence was a real phenomenon whose nature has still not quite clear. Research of practical skills could expand knowledge about practical intelligence and adaptive behavior constructs. Therefore, it is important to broaden practical intelligence research by exploring several other approaches.

Research questions: (a) What is the structure of practical intelligence in the age group 16 to 50? (b) What are the gender differences in practical skills level? (c) What are differences in practical skills between ages 16–20 and 21–50? (d) Can a risk group with low practical skills be identified?

Method

Participants

The sample consisted of 946 participants between the ages 16 to 50 (50% females and 50% males; 16–20 years olds, $n=718$, and 21–50 years olds, $n= 228$). All the young people were students in secondary schools, technical secondary schools or universities in Riga. The adults live and work in different occupations (labourers and clerks in Telephone Company, sales people, waitresses, waiters, teachers, economists, and engineers).

Instrument

For research purposes a self-evaluation questionnaire about practical skills necessary to adapt to the circumstances of daily life in Latvia's socio-economic and cultural situation was developed. Each person can acquire these skills in the family, in sports, in trade education or housekeeping activities, after school interest groups and in other in-formal contacts and activities with other people. A self-evaluation questionnaire of practical skills (95 items) was developed, psychometrically analyzed and refined based on previous studies (Rascevska & Berzina, 2001a; Rascevska & Berzina, 2001b). The participants evaluated each skill on the Likert scale from 0 (don't know how to do it) to 4 (can do it very well) or to 5. The participants could choose the value 5 if they felt that they had acquired this skill on a professional level, e.g.: could prepare food professionally, or play hockey, or dance, etc.

Earlier studies (with sample $N= 348$) showed that the test-retest reliability varies from .74 to .94 (Rascevska, Berzina, 2001a). A list of individual skills will be provided in the Results section of this paper.

Procedure

The Practical skills questionnaire was administrated in groups. Data were collected between 1999 and 2003.

Results

The structure of Practical skills

Table 1 and 2 provides the results of a five components analysis which was considered the best solution among the various types of analyses (from 2 to 7 components) with diverse combinations of items for three samples: both genders sample, female and male samples. The tables show all factor loadings (above .40 are in bold, see Table 1 and 2). After qualitative analysis of items in each component, the following factors were obtained: (a) Household skills (11 skills, HOU), (b) Use of technical equipment and repair skills (10 skills, T&R), (c) Sports skills (11 skills, SP), (d) Hobbies or artistic skills (10 skills, H&A), (e) Communication skills (11 skills, CO).

Table 1. *Components structure of Practical skills in both genders sample*

No.	Items of Practical Skills Questionnaire	Component loadings after varimax rotation					
		Both genders or combined sample N=946					
		C1	C2	C3	C4	C5	
C1. USE OF TECHNICAL EQUIPMENTS AND REPAIR SKILLS (T&R)							
1	Repair bicycles, motorcycles	.84	-.07	.25	-.10	-.11	
2	Repair cars	.82	-.01	.16	-.02	-.16	
3	Use drill, lath or mill	.82	-.06	.24	-.08	-.06	
4	Repair household technical equipments	.81	.02	.11	.00	-.00	
5	Repair furniture	.80	.01	.15	.02	.06	
6	Redecorate an apartment	.73	.02	.18	.25	.02	
7	Ride motorcycle	.67	-.04	.37	-.03	-.12	
8	Repair shoes	.67	-.01	.03	.12	.15	
9	Drive a car	.58	-.05	.31	.12	-.25	
10	Drive a motor boat, yacht	.54	.04	.33	.02	-.02	
C2. COMMUNICATION SKILLS (CO)							
11	Organize social events	.13	.76	.11	.17	.12	
12	Speak at a meeting	.02	.74	.09	-.02	.16	
13	Convince others	.09	.72	.14	.11	.11	
14	Solve conflict situations	.14	.71	.11	.13	.12	
15	Organize parties	.08	.69	.12	.35	.08	
16	Acquire admirers	-.02	.63	.21	.16	.10	
17	Acquire new friends	.02	.62	.22	.24	.01	
18	Act in a play	-.09	.59	.08	.07	.28	
19	Narrate stories	-.13	.48	-.16	-.04	.43	
20	Dance	-.19	.46	.25	.28	.16	
21	Sing	-.21	.43	.01	.14	.24	
C3. SPORTS SKILLS (SP)							
22	Play basketball, handball	.18	.08	.70	.01	.07	
23	Play volleyball	.13	.14	.67	.03	.17	
24	Skate	.13	.05	.67	.13	-.01	
25	Use roller skates, skateboard	.01	.15	.63	-.10	.14	
26	Play football	.39	.04	.62	-.07	.04	
27	Ski	.23	.02	.62	.22	.08	
28	Play tennis, ping-pong	.27	.14	.61	-.04	.14	
29	Play hockey	.41	.02	.60	-.09	.00	
30	Swim	.07	.17	.57	.14	-.06	
31	Play billiard or novus	.33	.24	.51	.02	-.03	
32	Ride a bicycle	.30	.07	.40	.10	-.04	
C4. HOUSEHOLD SKILLS (HOU)							
33	Make presures	.11	.02	-.07	.67	.08	
34	Prepare daily meals	.05	.15	.07	.64	-.01	
35	Wash and iron clothes	-.16	.18	.04	.63	.02	
36	Bake cakes, bun	-.14	.15	.01	.62	.15	
37	Plant and care of plants	.18	.01	-.02	.59	.24	
38	Take care of an apartment	-.02	.16	.15	.54	.02	
39	Make clothes	-.10	.03	-.01	.52	.36	
40	Lay a banquet table	-.10	.39	.03	.52	.16	
41	Take care of domestic animals	.32	-.02	.03	.49	.14	
42	Bring up a child	.12	.34	.03	.47	.10	
43	Give first aid	.33	.26	.15	.44	.05	
C5. HOBBIES AND ARTISTIC SKILLS (H&A)							
44	Make jewelry	.05	.12	-.03	.16	.66	
45	Paint, draw, do graphics	-.09	.19	.14	.04	.65	
46	Make pottery	.11	.06	.06	.12	.59	
47	Interior design	-.02	.36	.08	.28	.57	
48	Model making	.27	.10	.17	.08	.57	
49	Floral design	-.29	.25	-.01	.40	.56	
50	Model clothes	-.20	.17	.03	.33	.54	
51	Write poetry	-.10	.45	-.09	-.05	.46	
52	Collect something	.01	.17	.12	.06	.42	
53	Woodworking	.69	.02	.16	-.07	.30	
		Eigenvalue	7.31	5.53	5.02	4.48	3.89
		% of variance	13.79	10.44	9.48	8.45	7.33

Table 2. *Components structure of Practical skills in female and male samples*

No.	Items of Practical Skills Questionnaire	Component loadings after varimax rotation										
		Female sample n=473					Male sample n=473					
		C1'= C2*	C2'= C4	C3'= C3	C4'= C5	C5'= C1	C1'= C3	C2'= C2	C3'= C1	C4'= C5	C5'= C4	
C1. USE OF TECHNICAL EQUIPMENTS AND REPAIR SKILLS												
1	Repair bicycles, motorcycles	-.02	-.01	.22	.09	.70	.24	.03	.75	-.02	.08	
2	Repair cars	.05	.12	.04	-.18	.60	.11	.08	.82	-.04	.07	
3	Use drill, lath or mill	-.05	.16	.14	.08	.43	.26	.05	.56	.20	.22	
4	Repair household technical equipments	.10	.01	.08	.05	.70	.03	.09	.65	.16	.24	
5	Repair furniture	.05	.11	.04	.23	.56	.15	.07	.60	.26	.30	
6	Redecorate an apartment	.03	.44	.14	.23	.36	.13	.11	.62	.11	.41	
7	Ride motorcycle	.01	.12	.39	.03	.32	.36	.05	.65	-.10	.00	
8	Repair shoes	.02	-.04	-.02	.27	.53	.02	.01	.48	.25	.39	
9	Drive a car	.06	.40	.28	-.17	.18	.26	.18	.65	-.21	.04	
10	Drive a motor boat, yacht	.01	.09	.19	-.06	.35	.36	.11	.49	.08	.04	
C2. COMMUNICATION SKILLS												
11	Organize social events	.74	.18	.10	.08	.14	.14	.77	.15	.13	.19	
12	Speak at a meeting	.70	-.01	.05	.09	.14	.16	.74	-.03	.19	.02	
13	Convince others	.66	.04	.11	.10	.03	.22	.72	.13	.13	.16	
14	Solve conflict situations	.67	.12	.09	.15	-.01	.16	.70	.16	.14	.15	
15	Organize parties	.65	.38	.08	.05	.00	.20	.70	.20	.12	.29	
16	Acquire admirers	.61	.08	.20	.04	-.08	.29	.61	.13	.16	.14	
17	Acquire new friends	.59	.19	.19	.01	-.11	.28	.62	.17	.04	.22	
18	Act in a play	.62	.04	.11	.18	.07	.12	.57	-.08	.33	.04	
19	Narrate stories	.49	-.12	-.11	.31	.12	-.11	.48	-.06	.44	-.09	
20	Dance	.49	.12	.26	.12	-.14	.34	.42	.10	.12	.22	
21	Sing	.46	.04	.05	.05	.00	.08	.37	.02	.32	.04	
C3. SPORTS SKILLS												
22	Play basketball, handball	.04	.11	.70	.10	-.03	.73	.15	.05	.10	.05	
23	Play volleyball	.10	-.02	.66	.16	.08	.70	.17	.10	.18	.09	
24	Skate	.07	.11	.57	-.01	.10	.69	.06	.20	-.01	.11	
25	Use roller skates, skateboard	.18	-.12	.55	.08	.14	.66	.14	.00	.13	-.09	
26	Play football	.10	.04	.61	.16	.13	.73	.07	.06	.07	.12	
27	Ski	.06	.27	.59	.10	-.06	.61	.02	.29	.15	.17	
28	Play tennis, ping-pong	.13	.00	.59	.10	.16	.64	.18	.09	.19	.05	
29	Play hockey	.02	-.08	.51	.04	.33	.70	.08	.19	.06	.04	
30	Swim	.20	.09	.55	-.09	.00	.53	.18	.18	-.02	.12	
31	Play billiard or novus	.26	.10	.45	.10	.16	.53	.31	.26	.05	.06	
32	Ride a bicycle	.02	.20	.36	.08	.00	.42	.19	.26	-.02	.09	
C4. HOUSEHOLD SKILLS												
33	Make presures	.00	.65	-.03	.09	.23	-.05	.00	.15	.06	.68	
34	Prepare daily meals	.11	.72	-.02	.01	.10	.18	.16	-.01	-.01	.65	
35	Wash and iron clothes	.09	.59	.08	-.01	-.18	.10	.18	.14	.01	.57	
36	Bake cakes, bun	.13	.62	.00	.05	.12	.10	.11	-.03	.17	.61	
37	Plant and care of plants	-.02	.54	.08	.21	.03	-.02	.00	.34	.30	.53	
38	Take care of an apartment	.20	.50	.20	-.02	-.20	.14	.10	.15	.10	.49	
39	Make clothes	-.02	.45	.08	.39	.01	-.06	.04	.29	.31	.37	
40	Lay a banquet table	.33	.53	.03	.10	.08	.11	.41	.01	.19	.47	
41	Take care of domestic animals	-.06	.44	.09	.24	.09	.03	.01	.36	.15	.49	
42	Bring up a child	.36	.37	.01	.13	.04	.05	.27	.27	.09	.47	
43	Give first aid	.27	.47	.14	.07	.24	.18	.23	.37	.08	.44	
C5. HOBBIES AND ARTISTIC SKILLS												
44	Make jewelry	.13	.02	.00	.63	.12	.03	.06	.19	.68	.16	
45	Paint, draw, do graphics	.16	.01	.16	.68	-.04	.15	.24	-.05	.58	-.04	
46	Make pottery	.01	.09	.11	.55	.10	.08	.08	.07	.64	.11	
47	Interior design	.32	.23	.13	.56	.01	.10	.38	.14	.58	.20	
48	Model making	.18	.10	.12	.56	.07	.20	.07	.12	.63	.16	
49	Floral design	.24	.26	.08	.58	-.02	.11	.19	.07	.59	.31	
50	Model clothes	.17	.25	.10	.57	-.02	.03	.19	-.04	.50	.27	
51	Write poetry	.49	-.13	-.02	.34	.11	-.07	.42	-.05	.47	-.07	
52	Collect something	.23	.08	.16	.26	-.04	.13	.13	-.05	.53	.04	
53	Woodworking	.06	-.03	.04	.53	.28	.17	.06	.40	.55	.09	
		Eigenvalue	5.29	4.34	4.30	3.79	3.19	5.72	5.49	5.41	4.61	4.34
		% of variance	9.98	8.19	8.12	7.14	6.02	10.79	10.36	10.22	8.70	8.18

* C1', C2', C3', C4', C5' – new order of the components in female or male sample,
C1, C2, C3, C4, C5 – previous order of the components in both genders sample.

In the combined sample the five factors model explains a total of 49.49 % of the variance, 39.45% in the female sample, and 48.19% in the male sample. The order of components is different in each gender sample. For example, the first component with the highest eigenvalue in the combined sample is T&R, CO in the female sample, and SP in the male sample. The second component in the combined and male samples is CO, and in the female sample HOU. The third component in the combined and female sample is SP and in the male sample T&R. The fourth component in the combined sample is HOU and in the female and male samples H&A. The fifth component with the lowest eigenvalue in the combined sample is H&A, in the female sample T&R and in male sample HOU. Although the five components are common for all samples, relationships among the components in the combined sample differ from those in separate gender samples. Three items of practical skills (Woodworking, Write poetry, Redecorate an apartment) belong to different components in different samples (see Table 1, 2). The item positions in the five component model are based on their belonging to one and the same component in at least two samples. Many items involving important practical skills (42) were not included in the model of Practical Skills (e.g., to play chess and checkers, to take photographs, to fish etc.) because their component loadings were lower than .40 or had no definite position in one and the same component in at least two samples. Therefore, first-order component analysis results for 53 items (see Table 1) could be used as the basis for the establishment of the Practical skills scales.

The second-order confirmatory factor analysis for five grouped practical skills in all samples showed that five factors could be yielded (see Table 3 for the combined sample). Although only one factor has eigenvalues above 1 in female and male samples and two factors in the combined (both genders) sample (see Table 4).

Table 3. *Confirmatory factor analysis of the Practical skills scales in the both genders sample*

Practical Skills Scales	Factor loadings after varimax rotation				
	F1	F2	F3	F4	F5
Household skills	.05	.95	.21	.06	.21
Use of technical equipment and repair skills	.96	.05	.00	.28	-.03
Sports skills	.31	.06	.10	.93	.14
Hobbies and artistic skills	.00	.22	.93	.10	.27
Communication skills	-.03	.23	.28	.15	.92
Eigenvalue	1.02	1.01	0.99	0.98	0.98
% of variance	20.32	20.27	20.04	19.68	19.68

Table 4. *Explanatory factor analysis of the Practical skills scales in all samples*

Practical Skills Scale	Both genders sample		Female sample	Male sample
	F1	F2	F1	F1
Household skills	.76	.10	.71	.77
Use of technical equipment and repair skills	-.06	.91	.65	.73
Sports skills	.26	.85	.69	.71
Hobbies and artistic skills	.83	.06	.74	.72
Communication skills	.85	.07	.71	.78
Eigenvalue	2.06	1.56	2.46	2.77
% of variance	41.24	31.16	49.17	55.35

In the unrotated factor matrix of grouped practical skills, the G factor (named – general practical intelligence) was extracted only in the male and female samples. In the combined sample the first factor could be called Communication-art-household skills (see Table 4). These three skills groups are more highly developed in the female sample (see Table 5). The second factor could be called Use of technical equipment-repair-sports skills. These two types of skills are more prominent in the male sample (see Table 5).

Table 5. *Descriptive statistics and t-test of Practical skills scales for female and male samples*

Practical Intelligence Scale	Female sample (n=473)		Male sample (n=473)		Comparison of female and male samples	
	M	SD	M	SD	Mean difference	t-test
Household skills	2.32	0.67	1.91	0.63	0.41	8.52**
Use of technical equipments and repair skills	0.67	0.47	2.30	0.93	-1.63	-34.14**
Sports skills	1.98	0.70	2.55	0.85	-0.57	-11.34**
Hobbies and artistic skills	1.34	0.72	1.02	0.75	0.32	6.78**
Communication skills	2.37	0.76	1.93	0.87	0.44	8.36**
Total	1.76	0.47	1.95	0.61	-0.19	-5.35**

** p < .01

There are gender differences in the intercorrelation matrices of Practical skills scales (Table 6). The intercorrelations between subscales are higher in the male than in the female sample. The correlations often are lower in the combined sample than in the subsamples. Sometimes these correlations in the combined sample do not resemble those in the female or male samples. This means that the particular components models of Practical skills obtained with the combined sample could not be used for understanding the structure of practical skills in the separate gender groups. Gender is an important factor that influences the structure of practical intelligence because the relationships among practical skills components are different in each gender group even though five almost identical components were extracted for both female and male samples by component analysis.

Table 6. *Correlations matrices of the Practical skills scales for all samples*

Practical Skills Scales	Sample*	Correlations**				
		HOU	T&R	SP	H&A	CO
Household skills (HOU)	F+M		.11	.19	.47	.48
	F		.40	.29	.41	.39
	M		.56	.33	.46	.48
Use of technical equipments and repair skills (T&R)	F+M	.11		.56	–	–
	F	.40		.45	.29	.19
	M	.56		.51	.31	.34
Sports skills (SP)	F+M	.19	.56		.24	.30
	F	.29	.45		.34	.36
	M	.33	.51		.34	.49
Hobbies and artistic skills (H&A)	F+M	.47	–	.24		.57
	F	.41	.29	.34		.51
	M	.46	.31	.34		.58
Communication skills (CO)	F+M	.48	–	.30	.57	
	F	.39	.19	.36	.51	
	M	.48	.34	.49	.58	
Total scale	F+M	.64	.58	.73	.65	.68
	F	.71	.59	.70	.74	.74
	M	.75	.74	.74	.70	.78

*F+M – both genders sample, F– female sample, M – male sample

** for all correlations p < .01

Internal consistency

Cronbach's alphas are high for the five scales of Practical Skills Questionnaire ($\alpha_{\text{HOU}} = .81$, $\alpha_{\text{T\&R}} = .92$, $\alpha_{\text{SP}} = .87$, $\alpha_{\text{H\&A}} = .79$, $\alpha_{\text{CO}} = .88$, $\alpha_{\text{Total scale}} = .91$). Mean correlations between items and subscale scores are above .50 ($r_{\text{HOU}} = .60$, $r_{\text{T\&R}} = .77$, $r_{\text{SP}} = .66$, $r_{\text{H\&A}} = .54$, $r_{\text{CO}} = .67$).

Gender differences at the practical skills level

The scores for grouped practical skills were calculated by summing the values of the separate skills and then dividing the sum by the number of skills in the corresponding scale. There were significant differences between the female and male samples (see Table 5.) in all five groups of practical skills. Women show a higher skills level than men in Household skills, Hobbies/artistic skills and Communication skills and men surpass women in Use of technical equipment and repair skills and Sports skills.

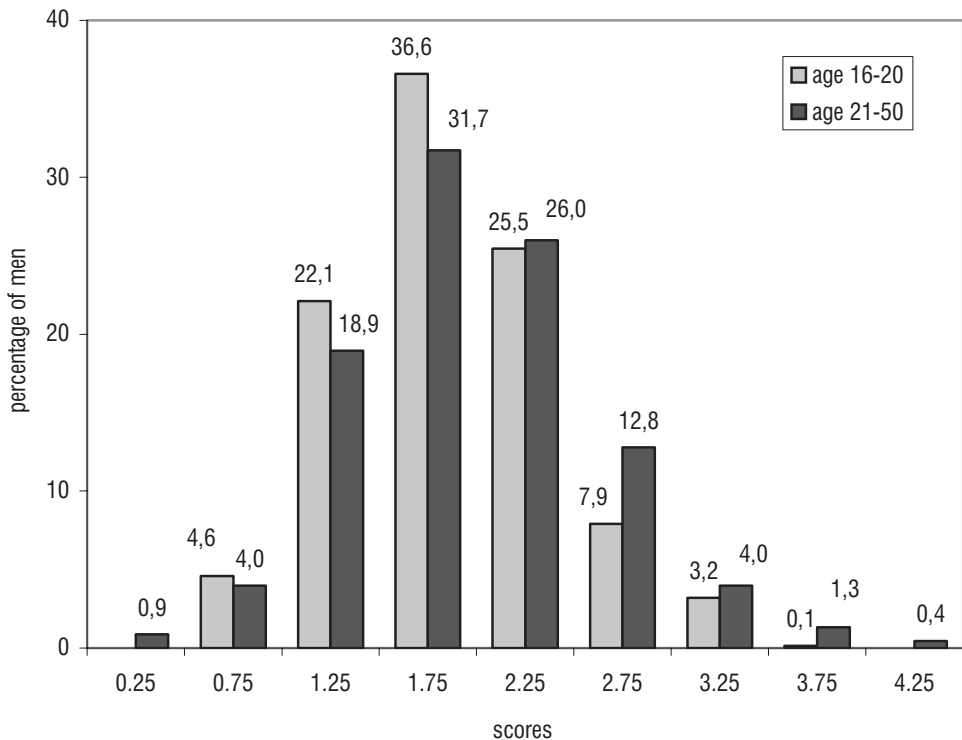


Figure 1. *Distribution of total scores of Practical skills for 16–20 and 21–50 age samples*

Calculating average points for each individual in all 53 skills produced a score distribution with a minimum value of 0.32 and a maximum value of 4.23. 4.4% of participants on average rated their practical skills as “know how poorly” (1 point), 21.4% of participants in both genders sample (aged 16–50) on the average rated their practical

skills lower than 1.5 points, which can also be interpreted as closer to “poor” rather than as “almost know how well”. The average score variation shows that there was greater variation in practical skills level among youths than adults (see Figure 1). These youths (27%) and adults (24%) can be considered as a potential risk group who might have adaptation difficulties in daily life.

A comparison of practical skills between these age groups in the combined sample showed that (a) only the average level of Household skills and Use of technical equipments and repair skills were significantly lower in youths than in adults, (b) youths’ H&A and CO skills are more developed than the corresponding practical skills in adults, (c) SP skills levels are the same for both groups (Table 7). These results make it possible to conclude that in each age group different practical skills develop more rapidly than others. It is possible that for youths H&A, CO and SP skills are more relevant practical skills for adaptation in daily life than HOU and T&R skills. Unfortunately these conclusions cannot apply exactly to female and male practical skills because female and male practical skills patterns for the two age groups are different (Table 7).

Table 7. *Descriptive statistics and t-test of Practical skills scales for the age of 16 – 20 and 21 – 50 samples*

Practical Intelligence Scale	Sample	16–20 age sample		21–50 age sample		Comparison of the age samples	
		M	SD	M	SD	Mean difference	t-test
Household skills (HOU)	F+M	2.05	0.71	2.32	0.76	-0.27	-4.80**
	F	2.28	0.67	2.49	0.66	-0.21	-2.53*
	M	1.78	0.65	2.23	0.80	-0.45	-6.00**
Use of technical equipments and repair skills (T&R)	F+M	1.33	1.01	1.97	1.22	-0.64	-7.18**
	F	0.66	0.48	0.72	0.40	-0.06	-1.06
	M	2.13	0.88	2.70	0.91	-0.57	-6.38**
Sports skills (SP)	F+M	2.28	0.81	2.22	0.88	0.06	0.86
	F	2.01	0.70	1.84	0.67	0.17	1.98*
	M	2.60	0.81	2.44	0.92	0.16	1.88
Hobbies and artistic skills (H&A)	F+M	1.23	0.74	1.03	0.75	0.20	3.57**
	F	1.37	0.74	1.23	0.62	0.14	1.48
	M	1.07	0.72	0.99	0.79	0.08	2.18*
Communication skills (CO)	F+M	2.19	0.81	2.03	0.93	0.16	2.21*
	F	2.37	0.74	2.35	0.85	0.02	0.21
	M	1.96	0.83	1.84	0.93	0.12	1.32
Total scale	F+M	1.83	0.53	1.93	0.62	-0.10	-2.09*
	F	1.74	0.47	1.76	0.45	-0.02	0.16
	M	1.92	0.57	2.03	0.69	-0.11	-1.74

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

Only the mean of HOU skills was higher in both female and male adults than in both youth groups. The mean of SP skills is higher in female youths than in female adults. The other practical skills (T&R, CO, and H&A skills) are at same level in both female age groups. There is no difference in CO and SP skills but there are differences in T&R and H&A skills in male youth and adult samples. The study shows that there are differences in the developmental levels in the five groups of practical skills for 16–20 and 21–50 years olds.

Discussion

As a result of the research several essential conclusions have been drawn about the structure of practical skills and gender differences, grouped practical skills development levels in female and male samples, and age differences.

The five components of Practical skills were extracted using a component analysis with a varimax rotation from 53 items for different practical skills. Each of the five components contains only specific type of practical skills: Household skills, Use of technical equipment and repair skills, Sports skills, Hobbies or artistic skills, Communication skills. The names attributed to these components are very closely related to concepts that Latvian people use in everyday conversation. Two components (HOU and T&R skills) involve practical skills such as “actions involving things”. The component of SP skills could be named “physical actions”. The component of H&A skills is centred on “actions with creative elements” and CO skills – “actions involving others”. These actions are purposefully directed towards the external world. The above actions cover the spectrum of most of the purposeful actions of daily life. Sternberg and Grigorenko wrote that crucial of practical intelligence is tacit knowledge (Sternberg, 1997b; Grigorenko, Gil, Jarvin, & Sternberg, 2001). The results of this study suggest a point of view that crucial to practical intelligence could also be practical skills that are necessary to adapt to, select or shape the environment. Further studies could explore the relationships between practical skills and measurements of Sternberg practical intelligence, and ABAS and Practical skills scales.

Compared to the single gender samples, the combined sample displayed different relationships among the same five components in the female and male factor matrix. This suggests gender differences in characteristic of the practical skills. Even more, in the combined sample, the results of component analysis (first and second order) do not characterize either the female or the male practical skills structure very well. These kinds of problems have not been encountered in scientific publications in analytical intelligence structure (Carroll, 1993; Cattell, 1987; Sternberg & Detterman, 1986). Thus the common structure of practical skills does not characterize the structure of practical skills specific to each separate gender. It is possible that such results reflect genders stereotyping of duties commonly assigned to males and females in daily life of Latvian society.

Analytical intelligence research results up to now have shown only a small gender differences. In the literature it has been frequently mentioned that female students show a slightly higher level of development in verbal abilities, and male students, in turn, have a higher level in visualization, space relations, rotation and quantitative reasoning (Halpern, 1997). At some age levels these relationships between verbal and non-verbal abilities differ between the genders. It has been stated in the literature, that approximately up to the age of 20 the analytic ability development dynamic is rapid for both genders and after the age of 20 fluid abilities decrease and verbal abilities continue to increase, although total IQ does not change significantly in later life (Cattell, 1987). In the area of practical skills such a dynamic was not recognized. Some practical skills (e.g., HOU and T&R skills) continue to develop after the age of 20, others such as CO and H&A skills decrease a little, and SP skills do not change in adult life in either gender sample. Critical analysis of these results introduces the idea that they reflect the prevailing situation in

Latvian people's daily lives. I question the result that SP skills do not change from the age 16–20 to 21–50. Observations show that adults estimate their sport skills based on their youth self-concepts and their achievement level at an earlier age. Because of this, the self-evaluation questionnaire of Practical skills is not a sufficiently precise instrument for development research on practical skills.

Undeniably, the practical skills gender differences could be linked to a great extent to the peculiarities of Latvian's socioeconomic conditions and cultural history. For example, in Latvia it is characteristic that the woman takes care of the household, but the man carries out the heavier physically work connected to technology. The differences in the various developmental levels of skills indicate not only differences of specialization in the area of practical skills for both genders, but also at the same time, the mutual interdependence of both genders or developmental trends. In addition to the biological differences between men and women that partly determine stereotyping in practical skill learning. There are gender differences in physical abilities that enable men and women to carry out the diverse actions.

The main goals of the research were met, showing that the structure of practical skills, skill development levels and in part also the dynamic are linked to gender.

The new conceptual approach to practical intelligence research gave the opportunity to draw several conclusions about the practical skills of both genders: (a) there is the G component of practical skills or a general ability to master practical skills that is necessary for daily life; (b) the component model of practical skills for both genders and separate male and female samples includes five groups of practical skills: Household skills, Use of technical equipments and repair skills, Sports skills, Hobbies or artistic skills and Communication skills; (c) all groups of practical skills intercorrelated significantly; (d) intercorrelations among groups of practical skills are different for the combined sample than for female and male samples; (e) there are significant gender differences in the development levels of all five groups of practical skills; (f) there is a different dynamic in groups of practical skills between ages 16–20 and 21–50 in females, males and the combined sample; (g) a risk group with poorly developed practical skills can be identified in both youth and adult samples; (h) the Practical skills questionnaire is research instrument that meets acceptable psychometric criteria of face validity, factorial validity, inter consistency and test–retest reliability.

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Goal Directedness in Relation to Life Satisfaction, Psychological Immune System and Depression in First-semester University Students in Latvia

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In order to explore the relationship of goal directedness with life satisfaction, psychological immune system and depression, Goal Scale, Satisfaction With Life Scale, Psychological Immune System Inventory, and Beck Depression Inventory II were administered to 253 students (182 female, 71 male), with the mean age of 19.5, drawn from seven faculties of the University of Latvia. Hope of attaining goals was found to be positively correlated with life satisfaction and with the approach-belief and monitoring-creating-executing subsystems within the psychological immune system. Life satisfaction was positively correlated with the psychological immune system. Goals and psychological immunity were negatively correlated with depression. These results suggest that university services designed to enhance incoming university students' quality of life should include programs focused on helping students choose career-related goals and work toward their attainment.¹

Key words: goals, life satisfaction, psychological immunity, first year university students.

Introduction

Young people beginning university studies must develop a new identity in order to fit their goals to university standards, and they have to adopt a student's role in order to learn what is required in their new and unfamiliar environment. In their novel environment, situation, and role, young students may overestimate their abilities, set unrealistically high goals, and overexert themselves in attempting to adjust to the environment and succeed in the chosen field of study. Conversely, they may be beset by doubts about their goals, abilities, prospects, and programs of study.

According to the 2002 survey of the Professional Orientation Center of the University of Latvia (<http://www.karjerascentrs.lv>), 56 percent of high school graduates express the wish to continue their studies. Of these, 34 percent plan to enroll in a university. Ever increasing is the interest to combine work with study, voiced by 34 percent of respondents. In choosing future profession, parents have been identified as being the major influence by 61 percent of high school graduates, followed by friends and teachers in 40 and 34 percent of cases, respectively. Approximately 7 percent of high school graduates had not yet decided on the institution of learning that they wanted to attend in order to continue their studies. Of those who had chosen their field of studies, 71 percent expressed the desire for additional information about the institution of their choice. Indirectly, these figures highlight the uncertainty and indecision that many young people experience concerning their choices of courses of study and subsequent careers, which may contribute to their anxieties about enrolling in a new school.

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To study successfully, it is important for students to have specific goals and to be motivated to work toward their attainment. Clearly articulated goal influence upon study habits and learning strategies and promote independent and self-regulated learning. Motivation and goals for the chosen field of studies ensure students' perseverance in overcoming difficulties encountered in the learning process and in adjusting to the new social environment. The principal factors that facilitate goal attainment are the significance of the goal for the individual and the belief in his or her ability to attain the goal, which is linked to the feeling of self-efficacy. Internal goals ensure a more thoroughgoing cognitive and learning process based on intrinsic interest, curiosity, and quest for information. External goals are linked to restriction of learning to meeting requirements, superficial cognitive strategies, and the consequent necessity of repeating the learning effort (Schapiro & Livingston, 2000).

Young people with more clearly defined goals participate more actively in the learning process, which enables them to enjoy lectures and activities and to experience interest in the subjects studied, thereby increasing the probability of higher grades. Goals tend to have an energizing function; higher goals stimulate a stronger effort than lower goals. Goals influence persistence, which manifests itself in the time and effort spent in working on attaining a goal. Strategies of resource monitoring, such as effective time management, control of study environment, joint learning, and seeking assistance, facilitate the learning process. Success in goal implementation generates feelings of gratification while inadequate strategies of goal attainment produce dissatisfaction with self, environment, and goal (Brackney, & Karabenick, 1995; Harackiewicz & Barron, 1998; Locke & Latham, 2002).

The prerequisites for successful academic activities are the reliance on person's skills and abilities and the realization of his or her own effectiveness. At the beginning of studies, young people may experience feelings of inadequacy about their work. Feeling of self-efficacy imply confidence in the individual's ability to organize and conduct efforts towards achieving success and reaching one's intended goal. Self-efficacious individuals manage time better and use the learning environment more effectively. When encountering difficulties they do not experience increasing anxiety or depression, because they rely on themselves and evaluate optimistically their ability to resolve difficulties (Bandura, 1994; Chemers, Litze Hu & Garcia, 2001; Boulter, 2000; Kling, Ryff & Essex, 1997; Hall, 2003; Panori & Wong, 1995; Fischer, 1989).

An individual's expectation of goal attainment is indicative of hope and goal directed thinking and activities, and this realization plays an important role in the subsequent realization of positive outcomes. Hope-goal directed thinking consists of two interrelated components, agency and pathways. Agency is the individual's perceived capacity for initiating and maintaining the actions necessary to reach a goal. Pathways refer to the perceived ability to generate routes to the goals. Snyder et al. (1991) defined hope as "a cognitive set that is based on a reciprocally – derived sense of successful agency (goal-directed determination) and pathways (planning to meet goals)" (p. 571). Agentic and pathway thinking are necessary for higher levels of hopeful thought (i.e., they are additive), and they are reciprocally interactive (i.e., they interact in the thoughts of people as they entertain their goals). They refer to different aspects of the goal-directed thinking

process. There may be occasional instances in which a person may be relatively higher in either agentic or pathways-related thoughts. Persons who have higher disposition toward hope are likely to place themselves in situations in which they tend to experience successful goal-related outcomes and not to experience unsuccessful event sequences (Snyder et al., 1996; Snyder, 2000).

Robbins, Lese, and Herrick's (1993) research demonstrated that young people with vaguely defined goals exhibit greater difficulties in psychological adaptation in universities and receive less social support than young people with a higher sense of goals. Young people with a high sense of goals adapt more easily and faster and develop feelings of belonging to the new environment. Individuals with vaguely defined goals, as opposed to those whose goals are well defined, are more self-centered and experience more anxiety and doubt. Robbins et al. have also shown that these young people are interested in discussing their existing problems, seeking help in specifying their choices, and in readily taking advantage of the opportunities provided by career orientation specialists.

Within the framework of quality of life theory, life satisfaction is equated with quality of life and refers to a person's subjective evaluation of the degree to which his or her most important needs, goals, and wishes have been fulfilled. Thus, the perceived gap between what a person has and what he or she wants to have in valued areas of life determines his or her degree of satisfaction or dissatisfaction (Frisch, 2000).

Quality of life, or satisfaction with life, is a subjective evaluation of the degree to which an individual feels that he or she has realized his important goals, needs and wishes in real achievements in fields of his or her choice, as well as in social interactions and in maintaining personal or close romantic relationships (Diener & Diener, 1995).

Research based on quality of life theory has identified the following factors that make an individual vulnerable and increase the likelihood of mental and physical health problems: 1) lack of social support, especially the lack of close friends or people sharing similar views; 2) inadequate strategies in significant spheres of life for overcoming stress and shortcomings in socialization; 3) any of the following personality characteristics: vague identity, low self-efficacy, low self-esteem, external locus of control, introversion, pessimism, depressive cognitive scheme, self-focused attention, self-blame for any negative outcomes, neuroticism, tendency to set too high standards for oneself, and high expectations of satisfaction in significant areas of life; 4) repeated frustrations in connection with life satisfaction, genetic factors, tendency to depressive reactions and elevated neurochemical reactivity to stress; 5) low incidence of happy event experiences, life satisfactions related to optimistic expectations, and of constructive problem solving (Frisch, 2000).

Emotions provide a permanent reversible link in an individual's progression toward his or her personal goals. Positive emotions are generated if an individual's significant needs, goals, and wishes are about to be fulfilled. Negative emotions inform the person about shortcomings in carrying out significant goals and the difficulty in fulfilling goals and wishes. Young people who cannot easily fit into the university environment experience lack of support from close friends and tend to be disappointed in themselves and their new situation. They may become dissatisfied with life and with themselves, which impacts adversely their quality of life. Negative emotions and stress level affect

their academic work success (Sax, 1997). Long-term dissatisfaction with oneself, social environment, and life's demands is reflected in both performance and morale. Thus, attitude toward one's responsibilities causes problems in activities, affects mental and physical health, and lowers young people's quality of life (Frisch, 2000; Voitkane, 2003). Dissatisfaction with life and with oneself can constitute early signs of depression. It is linked to pessimism, poor problem solving skills, and a variety of psychological symptoms (Olason & Roger, 2001). As dissatisfaction persists, probability of developing depression is increased (Baruffol et al., 1995; Diener & Larsen, 1993).

Olah (2000) has formulated a model of an integrated structure of protective personal resources in responding to environmental stress. Effective adaptation and coping with changing environment depends on personal competencies. The psychological immune system is an integrated system of cognitive, motivational and behavioral personality dimensions that provide immunity against stress, promote healthy development, and serve as stress-resistance resources.

The psychological immune system functions as a superordinate system with three interacting subsystems: (1) Approach-belief subsystem (ABS) guides the organism's orientation towards environment; (2) Monitoring-creating-executing subsystem (MCES) initiates the search for information and its eventual assimilation and puts into action the resources necessary to influence and create possibilities within the environment; (3) Self-regulating subsystem (SRS) ensures the functioning of the first two subsystems by stabilizing the individual's emotional life.

ABS facilitates the appraisal of the environment on a continuum from positive, manageable, and meaningful to chaotic and threatening. Components within this subsystem provide a positive definition of the self as a competent, goal oriented, continuously growing agent. Preconditions for an approaching orientation are the anticipation of successful or positive behavioral outcomes (positive thinking), a belief in the manageability, comprehensibility and meaningfulness of the environment (sense of control and coherence), and a strong motivation for self-actualization and self-expansion (sense of self-growth).

MCES includes components that instigate the exploration of physical (change and challenge orientation), social (social monitoring capacity), and intrapsychic environments for challenges and new experiences. Its creating components direct the actualization of inner personal and social resources (creative self-concept, social mobilization capacity) in order to reach a balance between environmental demands and long-term individual aims. In addition, the executing components of the MCES consist of abilities to work out alternative solutions, generate new ideas and possibilities (goal orientation, problem solving capacity, self-efficacy,) which are suitable tools for handling social and adaptation difficulties (social creation capacity).

SRS guarantees the stability of the approaching, monitoring, creating, and executing functions by regulating tensions and emotions that interfere with planned actions. The regulation of approaching is directed by impulse control, effective and flexible monitoring is controlled by synchronicity, and the maintenance of mobilizing, creating, and executing behaviors is guaranteed by emotional and irritability control.

The psychological immune system is a multidimensional but integrated unit of personal resilience resources or adaptive capacities that provide immunity against damage and stress, contribute to the maintenance and facilitation of healthy individual functioning, and protect and foster the process of coping. At the optimal level of approaching and creating tendencies and capacities, when there is enough personal competence to assimilate the results of approaching, the person feels positive emotions, satisfaction with life. If human self-regulation capacity is able to maintain such a state of equilibrium, feelings of personal expressiveness are experienced (Csikszentmihalyi, 1975). MCES guides problem-focused and task-oriented coping while SRS dominates emotion-focused behavior. When MCES is weak and personal competence is insufficient for handling the results of approaching, a person experiences anxiety, helplessness, and other forms of negative emotions. Such a negative emotional state can be expected if the self-Regulation capacity is not sufficiently strong.

Previous research has shown that during the student orientation period at University of Latvia, the quality of life of many first year students was not satisfactory (Voitkane & Mieziņa, 2001). Serious problems were identified in the area of relationship development. Equally important were the study problems that were uncovered: test and examination anxiety, fear of speaking in front of an audience, deficient coping with learning stress, and inadequate study skills. As many as 82 percent of the students had no clear idea about their future careers, and more than half of them worried about possible unemployment after graduation. Perhaps as a result of these factors, according to the statistics for 2001–2003 supplied by the Student Services of the University of Latvia, 3 – 6 percent of first-year students dropped out by the second year.

In the USA, the American College Testing Program reported that only 44 percent of students in four-year colleges complete their course of study (McGrath & Braunstein, 1997). Tinto (1988) found that 57 percent of American college students leave without receiving a diploma.

Gallagher (1992 a, b) in the United States, Balaisis (2002) in Lithuania, and Voitkane and Mieziņa (2001) in Latvia have described rather similar adjustment problems experienced by incoming university students. At that point in their lives, young people are faced with an important transition while they are developing their identity that is crucially linked to establishing their life's goals, choosing their field of studies, and readiness to expand effort in order to reach that goal. In order to investigate the connection between the importance of goals to quality of life indicators, as indexed by life satisfaction and psychological immune system, the following research questions were addressed in this exploratory study: (a) What is the relationship between students' goal directedness, as assessed by means of the hope for goal, pathways to goal and agency for goal indicators, and life satisfaction? (b) What is the relationship between students' goal directedness, measured by the same three indicators, with the psychological immune system? (c) What is the relationship between students' life satisfaction with the psychological immune system? (d) What is the relationship between the same three measures of students' goal directedness and depression? (e) What is the relationship between the psychological immune system and depression?

Method

Participants

Participants in the study were 182 female and 71 male students between ages 18 to 20 who were drawn from seven faculties of the University of Latvia. They were tested at the beginning of December 2002. Gender distribution was proportionate to that within the student body of the University of Latvia, in which two thirds of the students are female and one third male.

Procedure

At the beginning of December the students were provided with a packet of questionnaires in their classes. Some of the students filled out the questionnaires in the classrooms. Most of them, 70 percent, completed them at home. The students were asked to fill out and return the questionnaires anonymously in sealed envelopes to student representatives who in turn gave them back to researchers.

Instruments

The following instruments were administered: Adult Dispositional Hope Scale; The Goals Scale (ADHS, Snyder et al., 1991), Satisfaction with Life Scale, (SLS, Diener et al, 1995), Psychological Immune System Inventory, (PISI, Olah, 2000), and Beck Depression Inventory–II (BDA–II, Beck et al., 1996).

ADHS was developed by Snyder et al. (1991) to assess hope-goal directedness by inquiring into goal-directed activities. ADHS contains two interrelated components, agency and pathways. It consists of 12 items: four tap agency for goals, four tap cognitions about pathways for reaching goals, and four are distracters. Participants respond on an eight-point continuum from 1= definitely false, to 8= definitely true. Cronbach alpha for ADHS was found to be .66.

SLS, developed by Diener et al. (1995), is a self-report instrument that consists of five items that measure life satisfaction. Individuals respond by using a seven-point Likert-type scale bounded by “strongly disagree” and “strongly agree”. Its Cronbach $\alpha = .74$.

PISI, originated by Olah (2000) is a self-report instrument with three subsystems: ABS, MCES, and SRS, further divided into 16 scales. Individuals respond by using a four-point Likert-type scale ranging from “does not describe me at all” to “describes me completely.” The following Cronbach alphas were obtained for the student sample: PISI, $\alpha = .89$; ABS, $\alpha = .66$; MCES, $\alpha = .80$; SRS, $\alpha = .70$.

Beck Depression Inventory (BDA–II, Beck et al., 1996) is a 21-item self-report instrument for measuring the severity of depression in adults and adolescents aged 13 years and older. Items are organized according to the severity of the content of the statements to be selected, and each item is rated on a four-point scale ranging from 0 to 3 in terms of severity. BDI–II Cronbach $\alpha = .87$.

All scales were translated from English to Latvian and back to English by a team of bilingual psychologists in accordance with the currently accepted procedures as described by Van de Vijver and Hambleton (1996).

Results

In response to questions about their choice of fields of study, 19 percent of students stated that they chose the field. by themselves, 34 percent acknowledged suggestions by parents, 27 percent by friends, and 19 percent by teachers; 78 percent of students had already expressed interest in the chosen field at an earlier date; 49 percent had selected the specialty in order to qualify for free of charge for studies; and 65 percent chose their area of specialization on the basis of prospective employment opportunities after graduation.

Table 1 shows that in first semester at university there were significant consistent relationship between goal directedness and life satisfaction. Highest relationships were found for hope and agency.

Table 1. *Pearson product-moment correlation coefficients between goal directedness and life satisfaction*

	Goal directedness					
	Female, N= 182			Male, N=71		
	Hope	Pathways	Agency	Hope	Pathways	Agency
Life satisfaction	.46**	.29**	.52**	.40**	.31**	.42**

*p< .05; **p< .01

Table 2 shows that there are consistent and substantial relationships between goal directedness and approach-belief and monitoring-creating-executing subsystems of psychological immunity for both female and male students; correlation coefficients are weaker and less consistent for the self-regulation subsystem

Table 2. *Pearson product-moment correlation coefficients between goal directedness and psychological immune subsystems*

Psychological immune subsystems	Goal directedness					
	Female, N= 182			Male, N=71		
	Hope	Pathways	Agency	Hope	Pathways	Agency
Approach-Belief	.63**	.46**	.67**	.59**	.43**	.63**
Monitoring-Creating-Executing	.72**	.62**	.67**	.72**	.62**	.68**
Self-Regulating	.28**	.15*	.35**	.31**	.12	.41**

*p< .05; **p< .01

According to Table 3, there are high positive relationships between life satisfaction and approach-belief and monitoring-creating-executing systems. Life satisfaction has a significant relationship with all four scales within the approach-belief subsystem. Life satisfaction exhibits significant and substantial relationships with scales of creative self-concept and self-efficacy within the monitoring-creating-executing subsystem. Within the self-regulation system, significant correlations with synchronicity in both genders are noteworthy.

Table 3. *Pearson product-moment correlation coefficients between life satisfaction and psychological immune system*

Psychological immune system	Life satisfaction	
	Female N=182	Male N=71
Approach-Belief	.57**	.48**
Positive thinking	.48**	.29*
Sense of control	.25**	.32**
Sense of coherence	.49**	.39**
Sense of self-growth	.40**	.36**
Monitoring-Creating-Executing	.40**	.46**
Change and challenge orientation	.22**	.25*
Social monitoring capacity	.17*	.11
Creative self-concept	.48**	.47**
Social mobilizing capacity	.18*	.27*
Self-efficacy	.40**	.42**
Goal orientation	.22**	.26*
Problem solving capacity	.30**	.20
Social creating capacity	.22**	.24*
Self-Regulating	.33**	.46**
Synchronicity	.37**	.48**
Impulse control	.12	.10
Emotional control	.28**	.41**
Irritability control	.15*	.34**

*p < .05; **p < .01

As seen in Table 4, there is an array of significant negative correlation coefficients between all indicators of goal directedness and depression in participants of both genders.

Table 4. *Pearson product-moment correlation coefficients between indicators of goal directedness and depression*

	Goal directedness Female, N= 182			Goal directedness Male, N=71		
	Hope	Pathways	Agency	Hope	Pathways	Agency
Depression	-.36**	-.26**	-.39**	-.35**	-.30**	-.33**

*p < .05; **p < .01

Table 5 presents the results of correlational analyses between approach-belief and self-regulating subsystems and depression. A negative relationship between these variables emerged consistently for both genders. It may be worth noting that the correlation coefficient between the self-regulating subsystem and depression was higher for female than for male students.

Table 5. *Pearson product-moment correlation coefficients between psychological immune subsystems and depression*

Psychological immune subsystems	Depression	
	Female, N=182	Male, N=71
Approach-Belief	-.40**	-.41**
Monitoring-Creating-Executing	-.22**	-.35**
Self-Regulating	-.57**	-.32**

*P < .05; **p < .01

Discussion

The results presented substantiate the close link between life satisfaction of young students and their goals. Their hopes of attaining goals affect their life satisfaction. An individual's sense of ability to allocate energy for achieving his or her goals (agency) and to maintain this energy level as well as his or her beliefs about the ability to implement means for overcoming barriers to goals (pathways) enhances life satisfaction. Hope promotes expectations of positive outcome, perception of being in control, and optimism. (Snyder et al., 1991).

Goal directedness is closely connected with active behavior, reliance on one's own capabilities to control events and the actualization of intrapersonal and social resources. People whose strivings were propelling them toward possible intrinsic future tend to be high in self-actualization, vitality, and experience of positive affect. They score high in openness to experience, empathy with others, life satisfaction, and self-esteem. Intrinsically motivated people may create situations that also benefit the quality of other people's lives, while extrinsically motivated people do not (Sheldon & Kasser, 1998). The results of this research demonstrate that there is a significant relationship between the psychological immune subsystems and personal goals. In particular, the approach-belief and monitoring-creating-executing subsystems guide the individual's goal-orientated activity toward the implementation of his or her intentions and toward a positive approach to the utilization of his or her resources.

Life satisfaction is directly connected to the psychological immune system. Life satisfaction is implicated in all approach-belief categories: positive thinking, sense of control and coherence, and sense of self-growth. Approach-belief helps the individual also maintain belief in the attainability of his or her goal. Monitoring-creating-executing enables a person to exert his or her capabilities in moving toward the chosen goal and, in the process, promotes confidence in his or her abilities, enhances self-efficacy and a creative self-concept, and eventually fosters life satisfaction. Increased life satisfaction is also facilitated by self-regulation.

Individuals who succeed in their efforts at coping and thereby increase life satisfaction by reducing the frequency and intensity of negative affect are at the same time enhancing the frequency and intensity of positive affective experiences. Positive psychological well-being is related to all three subsystems of psychological immune systems (Olah, 2000; Vanags, 2004). Low life satisfaction is associated with frustration in meeting personal life goals and standards and is connected with anxiety and depression as well as with some stress-related psychophysiological and somatoform disorders. (Baruffol et al., 1995). People tend to feel more satisfied when they perceive that their standards of fulfillment have been met, and they experience less satisfaction when they have not. Personality characteristics such as optimism, extraversion, low neuroticism, and internal locus of control are positively related to subjective well-being and life satisfaction (Myers & Diener, 1995; Olah, 1995; Voitkane, 2003).

Vaguely defined goals, experiencing little hope of reaching one's goals and shortcomings in psychological resource immunity can trigger the appearance of depressive symptoms. Negative self-evaluation and low self-efficacy is also predictive of depression.

It is also apparent that psychological immune system approach-belief and self-regulating subsystems are strongly linked to depression. Uncertainty about the prospects of attaining one's cherished goals implementation affects an individual's feelings. Encountering difficulties in coping with the demands of university studies and in progressing towards their goals, students can experience disappointment with themselves. Low self-efficacy predisposes a person to believe that there are effective coping strategies for achieving the standards of satisfaction in valued areas of life and that many other persons are capable of executing such strategies. However, persons beset by self-dissatisfaction consider themselves incapable of performing these adaptive strategies in the foreseeable future (Frisch, 1998; Snyder, 2002). Initial goal setting and value clarification can lend meaning, coherence, and motivation to an individual's life satisfaction. It is important to build competencies for meeting personal standards of performance and success in key areas of life, such as university environment, academic achievements, and human relationships. In their relationships, individuals need to build understanding and set goals. They have to learn and practice effective communication and problem solving skills that would help them to experience a better quality of life. In this quest, university orientation and counseling programs and career centers have an important role to play in helping students to identify their goals and to chart their own path toward their realization.

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Lithuanian Juvenile Girls' Attitude towards Prostitution

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The purpose of research is to clarify attitudes of Lithuanian juvenile girls towards prostitution. 924 respondents of average age of 16.4 ± 0.08 years participated in the study. Interviews were administered for gathering data. After summarizing the data on girls' attitudes towards prostitution it was observed that the data allowed one to distinguish high-risk groups that needed more attention in order to cultivate juvenile girls' resistance to attempts of securing their involvement in prostitution. It became clear that the majority of the girls interviewed had positive attitudes towards prostitution. More than half of the interviewed juvenile girls believed that prostitution could secure women's economic wellbeing. One quarter of the girls believed that a prostitute could earn respect, be loved, have close family relationship and happy children. These attitudes clearly indicate that so far prostitution has been successfully advertised and that juvenile girls are at great risk of getting involved in prostitution, hence educational prevention programs need further improvement.¹

Key words: juvenile girls, prostitution, attitudes, standardized interview.

Introduction

Prostitution is a criminal activity that juvenile girls are deceived into by trick or by force. Getting involved in prostitution trade has an extremely negative impact on girls. According to F. Christiane, prostitution damages juveniles' health – it harms the reproduction functions, diminishes the possibility to conceive and to bear a healthy full-term child. Moreover it increases the risk of getting infected with sexually transmitted diseases (Christiane, 1998). Involvement in prostitution trade also affects juveniles' state of mind – distorts emotional and psychic spheres, arouses feelings of a guilt and stigma, causes depression and suppresses empathy (Wetzer, 2000). Prostitution also impinges on social relationship – juvenile prostitutes develop the syndrome of a victim, inability to start and maintain close relationships, aggressiveness and loss of confidence in other people (Edwards, 1992). We may conclude, therefore, that involvement with prostitution affects the quality of life, as the above mentioned health and social problems limit professional, recreational and personality development possibilities.

Although the harm of prostitution to juvenile girls is evident, nevertheless, according to Europol data over 120 000 women and children mainly from Eastern and Central Europe are being trafficked to Western Europe annually. According to the estimations by non-governmental organizations, these numbers are several times higher. According to these, about two to three thousand of women from the Baltic States, most of them from Lithuania, are being trafficked to various brothels abroad. While analyzing the situation among youth, the conclusion has been reached that every eighth or tenth young woman

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has experienced an attempted involvement in prostitution. Fourteen percent of young people reported that they knew at least one woman, who was either a friend of his/her friends, a colleague, a friend or a relative, who had been approached for trafficking abroad and involvement in prostitution (Sipavichiene & Gaidys, 2002).

Many studies conducted in different countries have shown that juveniles and young women are the ones being targeted for the prostitution business. According to T. Langfeld, juvenile girls take to prostitution at the age of 14–16 (Langfeld, 1993), whereas J. Money indicates that during the last decades of the 20th century the tendency of prostitution “growing younger” has been observed (Mone, 2004). Therefore, involvement in prostitution should be linked with insufficient sexual education among juveniles and lack of knowledge about the harm caused by prostitution.

Given such a situation, it would be appropriate to accumulate information about the attitudes towards prostitution among juveniles and to create a prevention (intervention) system on the basis of the data of this research. The attitude studies would be grounded by definition of attitude as the constant disposition to evaluate and as the composition of behavioral, cognitive and affectional components (Zimbardo & Leipp, 1991). The said components are not isolated, but are rather interwoven and interrelated. Therefore, attitudes towards a specific object or phenomenon comprise a particular and individual system of views. On the other hand, as D.A. de Vaus indicates that juveniles’ attitudes are often contradictory, not fully realized and are conditioned by random study in situational contexts. Therefore, the positive or negative attitudes towards different aspects of a certain phenomenon should be studied rather than generalization of their attitudes (De Vaus, 2004). This principle was taken into consideration in the analysis of attitudes of Lithuanian juvenile girls towards prostitution.

Implementation and methods

While analyzing attitudes towards prostitution an inventory of prostitution-related themes was prepared on the basis of which pilot surveys were conducted in 2003. These surveys allowed to develop more precise questions more precise and to transform them so as to make them more comprehensible to juveniles.

Pilot surveys confirmed that questionnaires are not a reliable method, because the answers of many juvenile girls often contained the stereotypes used by the media, and in the next moment they were denied by the reports of their personal experience and attitudes.

For this reason the method of individual standardized conversation was undertaken during which juvenile girls were questioned according to the same scheme.

In December 2003, a seminar was held for the purpose of training interviewers and to specify their task. Instructions on how the standardized conversation should be organized and a scheme of arranging the answers were prepared.

Interviewers were trained to gain interviewees’ confidence. They were instructed to ensure interviewees that their thoughts and attitudes wouldn’t be made public, that their answers would be used without reference to a particular person.

There were 221 interviewers trained. Each of was requested to interview 3 – 5 juvenile girls. They were instructed to follow the principle of quality rather than quantity. 197 interviewers presented questionnaires with girls' answers. These 3 questionnaires were filled out improperly and were debated. Such a small number of improperly conducted surveys prove the reliability of results obtained and the relevance of the questions to respondents.

It should be noticed however, that such studies had never been conducted before in Lithuania.

Respondents

924 respondents of average age of 16.4 ± 0.08 years participated in the study. Respondents' distribution according to age confirms that the aim of the study, e.g. learning the attitudes of juvenile girls towards prostitution might be achieved. 86% of respondents were students at high schools or gymnasiums. Some of the respondents (14%) were dropouts.

The data about the families of the respondents corresponds to the family types currently prevailing in Lithuania. Most of the respondent girls (69.3%) lived in full nuclear families. Nearly one third (30.7%) of the respondents lived in families with one parent only. 7.8 % of the girls lived together with a stepmother or a stepfather.

An average number of persons living together including the respondent herself were reported to be 3.9 ± 0.07 . These numbers slightly exceed the statistical data on the average Lithuanian family.

Every nine out of ten respondents had brothers and sisters. The presence of siblings in a family could have had an impact on the girls' attitudes, as their answers were often based on the opinion of their older sisters and brothers.

Then national composition of the respondents resembled the distribution of inhabitants in Lithuania according to nationality. In 76.1% of cases both parents of a respondent were Lithuanian.

The study that was conducted reflects basically the attitudes of girls in the big cities of Lithuania where prostitution is more widespread. 56.3% of respondents lived in Vilnius, 8.7 % of respondents lived in the larger cities of Lithuania, such as Kaunas, Klaipėda, Šiauliai, Panevėžys, 22.5 % – in smaller towns and district centers, and 9.5 % – in villages.

Results and discussion

Because of the limits imposed we cannot present all the results of the study, therefore we will restrict ourselves to juvenile girls' opinions on what impact prostitution has on the young women involved in it.

While conducting the survey, several aspects were stressed: what do girls think about the possibility for a prostitute to start a happy family, e.g. to maintaining a constant relationship with one partner and raise good children; the ability to function in a micro social milieu satisfactorily, e.g., to maintain friendly relationships with other people, to be

respected and well-off. Respondents were also presented with generalized questions about the possibility for a prostitute to have a happy private life as well as the consequences of their involvement in prostitution at some point in their lives.

Figure 1 reflects the girls' opinions about the possibility for a prostitute to achieve successful private life in several main areas. What girls think of the possibility for a prostitute to succeed in life in the following areas: well-being, public acknowledgement, constant relationship with the same partner, and raised up children.

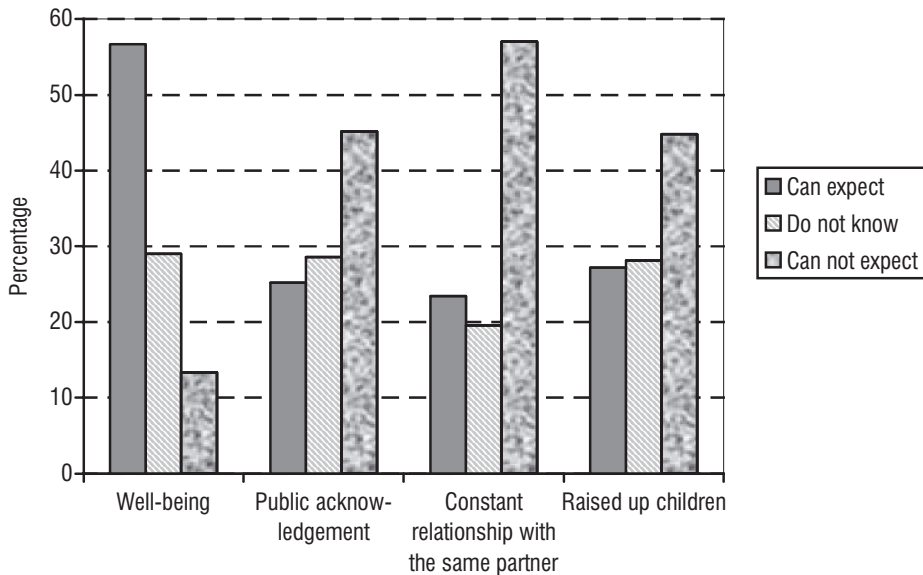


Figure.1. *What girls' think of a possibility for a prostitute to succeed in life*

The data presented have shown clearly that the absolute majority of girls interviewed stuck to the opinion that a prostitute could be well off. Only every 8th girl wouldn't agree with such an opinion.

The possibility of maintaining a close and friendly relationship with surrounding people was assessed more critically.

While deciding upon this question the experience of a pilot survey was taken into consideration, during which the majority of respondents reported that a prostitute could cover up her actual occupation. For this reason it was made clear in the standardized survey that friends, acquaintances and relatives of a prostitute were aware of her profession and the respondents had to answer whether a prostitute could maintain a close relationship with people who knew about her occupation or not.

The answers of the respondents whether a prostitute could have a normal relationship with people in the surrounding milieu showed that the majority of the respondents believed that a prostitute could be acknowledged by those around her. Moreover, during the analysis, if the answers "can expect" and "do not know" were attached to the same category, then the percentage of respondents who thought that a prostitute could have

public acknowledgement was higher than the percentage of those who believed in a prostitute's well being.

The prostitute's possibility to start and maintain an intimate relationship with one and the same man was assessed as less real, even still many respondents were still positive about it.

Furthermore, it should be noted that in the pilot survey some of the respondents stated that a prostitute's experience with her clients could be helpful in understanding and satisfying the needs of a beloved man. Some of the respondents thought that prostitutes could be good and faithful wives, which was the reason why men would be willing to marry them.

The data collected confirm that nearly one-quarter of girls interviewed thought that commercial sex did not serve as a hindrance for a prostitute to love and have a healthy family relationship in the future.

An important part of any relationship is a possibility of having and raising children.

While answering a straightforward question in a standardized survey requesting to provide appropriate arguments for imaginary mother daughter conversation intended to explain why there were no good reasons to become a prostitute, about a quarter of the girls mentioned negative impact on prostitutes' children. Oftentimes they indicated that a prostitute's children could be held up to ridicule, that after losing the respect of her children a prostitute would not have influence on them and her clients would abuse them.

It should be noted that very few girls who were interviewed indicated health problems and inability to produce a healthy child as a potentially negative impact of prostitution.

Standard survey data analysis shows that 27.2 % of the girls surveyed believe that prostitution did not have any negative impact on prostitute's children and 28.1 % were unequivocal on the issue.

Their general attitude towards prostitution was reflected in the girls' opinions about a prostitute's chances of having a happy private life.

Question: What do girls think about the prospects of successful private life for a prostitute?

The data reported in Figure 2 show that twenty seven percent of the girls interviewed have quite positive attitudes toward prostitution. Even up to 27% of them accept a myth of "successful" private life for a prostitute as plausible.

If the answer "I don't know if a prostitute could expect a happy private life" were interpreted as recognition of plausibility for a prostitute to have a successful private life, we can see that in their attitudes the respondents fell in two almost even groups. The first group claimed that a prostitute could not expect to have a happy private life and the second group, which is slightly longer in number, accepted it as a possibility.

The attitude of the girls towards prostitution could be seen by examining their opinions about the received impact on the life of a woman who had abandoned commercial sex.

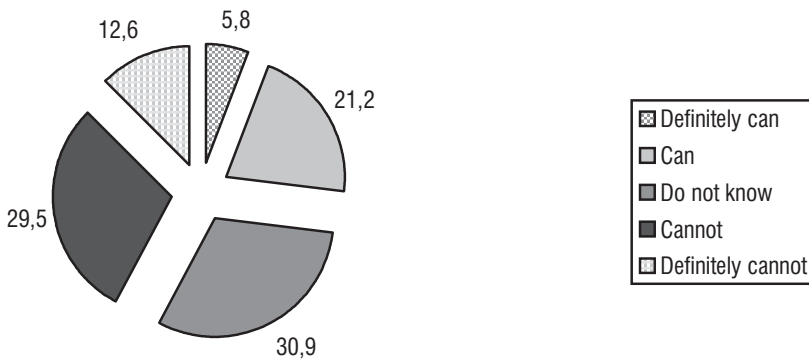


Figure 2. *What do girls think about the prospects of successful private life for a prostitute?*

In pilot surveys girls disagreed on what influence prostitution could have for a woman who had abandoned it. Some girls believed that a woman voluntarily or involuntarily involved in prostitution would not abandon it because organized crime would not allow it, or because she herself would not be willing or able to do it. Other girls believed that a prostitute could abandon her engagement easily. They often referred to the assistance offered by a mystery man who would fall in love with a prostitute as major condition for abandoning prostitution. This ``romantic`` notion of a prostitute abandoning her engagement, earning the respect of the society and love of her family was given credibility by several stories shown on TV.

The opinions of the respondents about the possible impact of prostitution on a woman that had abandoned it are shown in Figure 3.

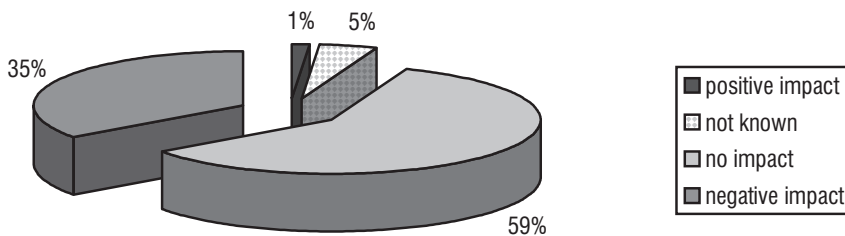


Figure 3. *What do girls think about the possible impact on a woman that had abandoned prostitution?*

What do girls think about the possible impact on a woman that had abandoned prostitution?

The girls interviewed maintained that commercial sex hardly influenced the life of a woman who had abandoned it. Only one percent of respondents believed in a positive impact of prostitution. Thirty five of respondents believed in a negative impact of prostitution on a woman who had abandoned it. Sixty percent of the girls interviewed

believed that prostitution had little impact. Undoubtedly, this attitude could help to involve juvenile girls in prostitution, because of the seeming ease of abandoning it.

Factors determining girls' attitudes towards prostitution

Summarizing the attitudes of the girls surveyed towards prostitution two groups of respondents could be distinguished.

Group A consisted of girls who believed that the life of a prostitute could be successful. Forty seven percent thought that a prostitute could secure her well-being, have a close relationships with one man and a friendly relationship with people around her, and raise good children: (a) 21.5% of respondents fully agreed with the possibility for a prostitute to have a successful life, (b) 25.4% of respondents agreed to this partially, i.e. in 4 areas out of 5 they said it was likely to happen.

Group B. Fifty three percent of the included girls who are of opinion that a prostitute's life cannot be successful: (a) 12, 9% indicated that a prostitute cannot be successful in any aspect of her life, (b) 41,1% of the respondents indicated that in 4 areas out of 5 a prostitute was unlikely to have a successful life.

Comparing group A and group B statistically significant ($p < .05$) differences were found on several indicators: Girls in group A more often than those in group B:

- Did not attend high school or gymnasium;
- Their families had moved from the country or a small city into the metropolis;
- Were born in ethnically mixed family, i.e. parents were of different nationalities;
- One of the parents was unemployed, or worked in the so-called "shadow economy" (i.e. having no employment contract);
- Their mothers were more educated than father;
- Were unaware of their father's educational background;
- Had a friend who was a prostitute.

Girls in group A also differed in their attitudes towards prostitution. They thought that:

- Girls become prostitutes because they cannot get any other job;
- The fault for girls' involvement in prostitution lies with men who need their services;
- Prostitution needs to be legalized;
- Those who decide to abandon prostitution need no other help except material.

Conclusion

After summarizing the data on girls' attitudes towards prostitution it was observed that the data allowed one to distinguish high-risk groups that needed more attention in order to cultivate juvenile girls' resistance to attempts of securing their involvement in prostitution.

It became clear that the majority of the girls interviewed had positive attitudes towards prostitution.

More than half of the interviewed juvenile girls believed that prostitution could secure women's economic wellbeing. One quarter of the girls believed that a prostitute could earn respect, be loved, have close family relationship and happy children. These attitudes clearly indicate that so far prostitution has been successfully advertised and that juvenile girls are at great risk of getting involved in prostitution, hence educational prevention programs need further improvement.

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Validity and reliability of the Coping with Bereavement Inventory

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The purpose of this article is to provide validity and reliability data on a recently constructed instrument to measure the multi-dimensional nature of the process of coping with bereavement – CWBI. The inventory was developed using both theoretical and empirical information. Principal Component Analysis of the CWBI yielded 4 factors relevant to Worden's Tasks of Mourning theory. Additional data are provided that support reliability and validity of the CWBI. Preliminary analysis suggests that the CWBI is a reliable and valid instrument for measuring coping with bereavement phenomena in several groups of bereaved Latvian women. The inventory appears to have utility in determining how successful individuals are in coping with bereavement and with the tasks of mourning.¹

Key words: coping, bereavement, inventory, validity, reliability, Latvian women

Introduction

Scientific research on grief and loss has increased over the last two to three decades. As well theoretical models of bereavement have emerged with various measurement instruments being tried and developed with bereaved populations. Search of Medline, Cancerlit and PsychInfo data bases for a period of 1977 to 1998 Mary Roach (Roach, 2000) yielded 24 self report questionnaires and interviews used in the field to investigate different aspects of bereavement and grief.

A substantial overview was compiled by Robert Neimeyer and Nancy Hogan (Neimeyer & Hogan, 2001) to survey and evaluate the most promising grief and mourning research methods. However, their findings on assessment questionnaires differ from those of Mary Roach. This brings to light the difficulties in gathering information on research instruments in this field. Overviews on bereavement research methodologies also pointed out some relevant disadvantages. Despite the considerable amount of research that has been conducted with bereft individuals, a clear understanding of the bereavement process has been hampered by the lack of psychometrically sound instruments available to study bereavement as a process. One of the most important disadvantages would be the lack of valid and reliable instruments. Osterweis with colleagues (Osterweis, Solomon & Green, 1984) saw this as a major barrier to addressing pressing questions regarding the bereavement process. The latest overviews also pointed to these problems: "more than fleeting attention to reliability and validity of the scales that authors adopt or devise for the measurement of grief phenomena" (Neimeyer & Hogan, 2002, p.111) and stressed this necessity in research on coping with loss: "However, despite the apparent popularity of the coping concept, little attention has been paid to assessment issues. [...] This has resulted in many coping measures of poor validity and reliability" (Van Heck & De Ridder, 2001, p. 449).

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“Another gap in the literature that invites attention is the astonishing tendency of investigators to proliferate new instruments without pausing to evaluate their relationship to existing measures” and to compare the existing or developed ones with one another (Neimeyer & Hogan, 2001, p.112). Another criticism was the lack of confirmatory factor analysis (or even the replication of an exploratory factor analysis) even for the most popular instruments and questionnaires, which are recognized as psychometrically sound. This means that prudent researchers should remain skeptical about the interpretation of subscales until such research is conducted (Neimeyer & Hogan, 2002). Neimeyer and Hogan also criticized a tendency to assess bereavement as an exclusively psychopathological process. A similar issue was pointed out by Osterweis and colleagues (Osterweis et al., 1984) twenty years ago. They pointed out the need for information to delineate normal grief and issued a caution about rushing ahead to pathologize grief. Nancy Hogan believes that “understanding this “normal” trajectory of bereavement has been hampered, in part, by use of questionnaires designed to measure psychiatric dysfunction, such as depression and anxiety, rather than instruments specifically developed to measure grief. A number of studies have relied on instruments that measure interesting and important questions related to grief, but have not focused on an understanding of the characteristics, intensity, or duration of the bereavement process itself” (Hogan, 2001, p. 2).

Authors also advised to exploit the possibilities for integration of both quantitative and qualitative research traditions and methods in the same research program to help to paint the complex picture of bereavement (Neimeyer & Hogan, 2002). Another recommendation would be to acknowledge that all the scales discussed in the overviews measure the grief process in “modern industrialized western cultures” (Roach, 2000, p. 5) and to prove those instruments in other nations because the grief process and indicators of grief resolution may be culturally defined.

So there is still an urgent need to provide psychometrically sound instruments that would allow researchers to better understand the normal bereavement process and coping with loss that is associated with the death of a loved one.

CWBI construction

The theoretical position of William Worden (1991) offers a well structured and easily understandable vision about main tasks of mourning to help bereaved persons to cope with the loss. All of human growth and development can be seen as influenced by various tasks. These are most obvious when observing child growth and development. Likewise, mourning, the adaptation to loss, may be seen as involving the four basic tasks of mourning.

According to W. Worden mourning includes four tasks to be resolved before the bereaved adjusts to the loss of a close person. Those tasks include the need to accept the reality of the loss (Task I); to work through to the pain of grief (Task II); to adjust to an environment in which the deceased is missing (Task III); and to emotionally relocate the deceased and move on with life (Task IV). Worden believes that mourning can be finished, when people regain an interest in life, feel more hopeful, experience gratification again, and adapt to new roles. Not accomplishing some of these tasks leads to an incomplete bereavement, just as one might have incomplete healing from a wound.

His theoretical concept “Tasks of Mourning” is also quite easily transferable to statements allowing to test people’s experiences. Even though created for psychotherapeutic purposes this theory seems adjustable for research purposes to investigate coping with the bereavement process.

Initial development of the Coping with Bereavement Inventory was created in 1999. The need for development of a new instrument for bereavement research was influenced by different social and psychological aspects. Since Soviet times there was lack of theoretical and methodological information and limited access to foreign resources to obtain information on recent developments in the field of bereavement and grief. This was followed by some preconceptions both social and academic in regard to researchers’ rights to intervene with the private suffering which was not a topic of discussion in previous years. As well as ethical aspects of recruiting respondents and questioning them which also was not a typical part of everyday life previously, there were also additional requirements for design of the research and research methods used.

During the first stage about 150 statements were formulated to find out the most appropriate for use of a questionnaire. The statements were derived from Worden’s theory and some other theoretical concepts, as well as, the author’s own bereavement experience. Statements were evaluated by experts, psychologists with notable practice and personal experience of bereavement. They used a qualitative approach to evaluate those statements in relation to theoretical assumptions. Evaluation criteria also included easy comprehension and an emotionally acceptable formulation and that would provoke the least reluctance, resistance and denial. Furthermore the statements should not lead to any misunderstanding or repeat previously proposed statements. Linguistic appropriateness was evaluated by Latvian language experts both as to rules of language and its everyday understanding.

For the purposes of research a special self-report questionnaire “Bereavement” was developed to study the mourning features of the bereaved. Considering lack of other instruments the questionnaire was designed to determine more aspects than coping with the tasks of mourning. The questionnaire included statements to study how mourners have solved the tasks of mourning and how they cope with the grief. It also investigated the intensity of the bereaved persons’ feelings, and what helps them to cope with grief. The questionnaire asked to provide “yes/no” answers to 84 statements and to evaluate 14 statements on a 5–point scale on how intensive some of the respondent’s feelings are, and to complete 20 open–ended statements related with the loss.

Pilot research (Maslovska, 1999) was conducted with 50 bereaved women using the complex questionnaire. Information gathered in this research was used to study the psychometric results of the item pool and to relate both quantitative and qualitative information to improve the questionnaire for the purposes of future research.

At the time of designing the next study more information on bereavement research and research instruments was available to allow to use some already psychometrically well developed instruments to investigate bereavement reactions and to develop the new inventory for more specific purposes. Therefore, the new inventory was investigated to measure only coping with the bereavement process relevant to the theory of tasks of mourning. A list of 84-items was evaluated by experts and 17 items were included in a revised questionnaire. Some of the questions were left the same and some of them were

re-formulated. The main criteria for the statements this time was their relevance to Tasks of Mourning theory. The questionnaire was named Coping with Bereavement Inventory (CWBI). It was expected that its subscales would be congruent to William Worden's theory on Tasks of Mourning (Worden, 1991). *Task I* – to accept the reality of the loss could be measured by statements like “I can't accept that he/she is dead”. *Task II* – to work through to the pain of grief refers to statements like “I allow myself to grieve”. *Task III* – to adjust to an environment in which the deceased is missing was formulated as “I can't manage with the new responsibilities that come up after his/her death”. *Task IV* – to emotionally relocate the deceased and move on with life includes statements like “I think I am adjusted to life without the deceased”. Statements included both direct and reverse meaning. The purpose for including reverse items was to offer both problem-oriented and recovery-oriented statements. All statements required to assess one's bereavement experience during the last month on a 5-point scale ranging from “never” to “always”.

Method

Participants

The group of participants consisted of 128 bereaved women. Participants ranged in age from 18 to 72 (median age is 32). The decedent's age ranged from 9 to 96 (middle age 58). All participants lived in Latvia and were fluent in Latvian. Most of them were Latvians by nationality. Table 1 includes other demographical data.

Instruments

Coping with Bereavement Inventory (CWBI) consists of 17 statements rated on a 5-point scale of frequency ranging from “never” (1) to “always” (5).

Core Bereavement Items (Burnett, Middleton, Raphael & Martinek, 1997) contains 17 questions referring to commonly occurring symptoms which the respondents are instructed to answer on a 4-point scale of frequency ranging from “never” (1) to “always” (4). CBI measures bereavement phenomena in three subscales “Images and Thoughts”, “Acute Separation” and “Grief”. It is evaluated as “probably best suited to the study of “normal” grief responses” (Neimeyer & Hogan, 2002). The questionnaire was translated into Latvian according to requirements provided by the International Test Committee (Hambelton & Patsula, 1999; van de Vijver & Hambelton, 1996). Translated instrument have favorable internal consistency properties both for total score (Cronbach alpha is .94) and each subscale “Images and Thoughts” (Cronbach alpha is .84), “Acute Separation” (Cronbach alpha is .86) and “Grief” (Cronbach alpha is .90).

Inventory of Traumatic Grief (Prigerson, Selby & Jacobs, 2001) consists of 37 statements, which the respondent completes by checking the frequency of the experience on a 5-point scale ranging from “never”(1) to “always”(5). It was constructed by Prigerson and her colleagues to measure symptoms of grief and reactions to the loss that “form a unified component of emotional distress that is clearly distinguishable from the symptoms of depression and anxiety” (Prigerson et al., 1995, p. 66 in Neimeyer & Hogan, 2002). It was also designed to distinguish between “normal” grief and its more

“pathological” forms. The questionnaire includes two criteria “Trauma Distress” and “Separation Distress”. Latvian version of the inventory was translated according to requirements provided by the International Test Committee and it has favourable internal consistency properties. Cronbach alpha for total score is .94 and for “Trauma Distress” alpha is .83 and for “Separation Distress” alpha is .89.

Table 1. *Demographical information of the sample*

Aspect	Percentage
Residence	
Riga	53.2
Regional centre	16.7
Town	16.7
Countryside	13.5
Family relationship	
Have boyfriend or husband	65.0
Don't have boyfriend or husband	35.0
Education	
Higher education	46.4
Secondary education	7.2
Secondary and professional education	24.0
Student	22.4
Employment status	
Work	40.8
Study	11.2
Study and work	40.0
Don't work	8.0
Self-assessed financial facilities	
I can buy everything I need and something still remains	9.8
I can buy everything I need	35.8
I can buy everything I need only partly	50.4
I lack money even for food	4.1
Religious beliefs	
I believe in God and attend church regularly	12.9
I believe in God but I don't go to church (regularly)	75.0
I don't believe in God	12.1
Do you attend psychotherapy or psychologist?	
Yes	8.0
No	72.8
Before, but not now	19.2
Connection to deceased	
First level relatives	54
Second level relatives	24
Others	22
Time since loss	
First year	29.9
On to two years	17.3
Two to four years	25.2
Four and more years	27.6
Expectedness of the loss	
Sudden	31.3
Anticipatory	68.8

Satisfaction with Life Scale (SWLS) is a short and psychometrically sound instrument (Diener et al., 1985; Pavot, Diener, Colvin & Sandvik, 1991; Pavot & Diener, 1993) to measure general satisfaction with life. It consists of 5 items which the respondents are instructed to evaluate on a 7-point scale of frequency. The Latvian version of SWLS also shows high internal consistency (Cronbach's alpha is .90) and a clear one factor structure.

Procedure

The results were gathered within the framework of a larger study. The questionnaire package of the study consists of two parts. The general part of the questionnaire package included Psychological Immune System Inventory (Olah, 2000), Relationship Questionnaire (Bartholomew & Horowitz, 1991), Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988), Satisfaction with Life Scale (Diener, Emmons, Larson, & Griffin, 1985) and Post-Traumatic Growth Inventory (Tedeschi & Calhoun, 1996) as well as a questionnaire to explore some demographic data. The bereavement specific part included self report questionnaires like Core Bereavement Items (Burnett, Middleton, Raphael & Martinek, 1997), Inventory of Traumatic Grief (Prigerson, Selby & Jacobs, 2001), the newly developed Coping with Bereavement Inventory as well as, a questionnaire to explore information relevant to the loss including some open ended questions and the invitation to write a short story to describe "what the death of this person means to you".

Respondents were gathered in three different ways. One way of gathering respondents was through an advertisement in private e-mail lists where we asked women to participate in research. Questionnaires were sent out electronically if a person replied and agreed to participate. Possible respondents were informed also through assistants of the researcher. They were asked to contact women with bereavement experience to ask their agreement to participate in a study. The third way included holding out the general part of the questionnaire package in different groups, inviting those with recent bereavement experience to fill in also bereavement specific part of questionnaire package. All participants were asked to complete the questionnaires in a private and comfortable place. The most comfortable way to submit questionnaires back was discussed with each participant. In accordance with ethical requirements respondents were informed about the goal and procedure of the research and confidentiality as well as about possible psychological impact of participation. Those who agreed to participate still were allowed to decline if they found it necessary while filling out the questionnaires.

Results

Construct validity

We used factorial validity and convergent validity for construct validity of the newly made instrument. We also assessed different hypotheses about relationship between the CWBI and some bereavement specific aspects.

Principal components analysis

A Principal Components Analysis was performed on 17 items followed by a Varimax rotation with Kaiser normalization. This approach was chosen in order to maximize the distinctions among the components. The analysis produced four factors with eigenvalues greater than 1. These accounted for 60% of the common variance and loaded greater than .5 on one of the four factors without loading of .4 or greater on any other factor². The factors were labeled Overwhelmed by Loss, Disengaged from Reality of Life, Adjusting to Life's Demands, Masking Grief. Table 2 shows factors and items with loading value greater than .4.

Table 2. *Factor analysis results for the Coping with Bereavement Inventory*

CWBI Subscales and Items	Factor I	Factor II	Factor III	Factor IV
Overwhelmed by Loss				
I feel as if this event has never happened	.79			
I feel that he/ she will be right back	.77			
I talk to other people about my experience	.71			
I can not accept that he/ she is dead	.69			
I allow myself to grieve	.68			
I am overwhelmed with memories and thoughts about the deceased	.57			
Disengaged from Reality of Life				
I do not know how to life further		.82		
I can not manage with the new responsibilities that come up after his/her death		.80		
Daily events still seem insignificant because I live in memories of him/ her		.70		
I have lost interest in life		.67		
Adjusting to Life's Demands				
I think I am adjusted to life without the deceased			.86	
I have learned to cope with life's challenges without him/ her			.71	
I have learned to be able to recall memories of my loved one and not hurt as much as I once did			.66	
I have been able to develop new relationships			.59	
Masking Grief				
I try to cover my pain and grief				.80
When there are people around I pretend that I can handle this loss				.66
When I see a stranger on the street I feel it is he/ she				.52
Rotation Sums of Squared Loadings	3.29	2.85	2.26	1.86
% of variance	19.36	16.78	13.30	10.95

Extraction Method: Principal Components Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Note: Items were translated to English to explain the content of subscales. They were not translated according to requirements provided by the International Test Committee.

Convergent validity

Convergent validity was established using two bereavement instruments and one instrument that measures related construct. Pearson correlations were used to investigate the relationship and coherence between previously and newly developed inventories.

² We used the term "factor" to refer to the results of the rotation of the extracted principal components, following conventional practice (Cooley & Lohnes, 1971 in Tedeschi & Calhoun, 1996).

Table 3. *Pearson correlations between the Coping with Bereavement Inventory and the Core Bereavement Items and the Inventory of Traumatic Grief and the Satisfaction with Live Scale*

	Coping with Bereavement Inventory				
	Total	Overwhelmed by Loss	Disengaged from Reality	Adjusting to Life's Demands	Masking Grief
CBI	-.72*	-.57	-.43	-.43	-.56
Images and Thoughts	-.73	-.54	-.44	-.49	-.56
Acute Separation	-.63	-.56	-.32	-.31	-.49
Grief	-.64	-.48	-.42	-.41	-.50
ITG	.80	.58	.62	.46	.63
Separation Distress	.72	.59	.60	.37	.47
Trauma Distress	.80	.60	.60	.47	.61
SWLS	-.23	-	-	-	-.24

*All correlations are significant at the 0.01 level (2-tailed).

Note: high score on Core Bereavement Items (CBI) shows low intensity of bereavement reactions, while high scores on the Inventory of Traumatic Grief (ITG) and the Coping with Bereavement Inventory (CWBI) show high intensity of bereavement reactions and difficulties in coping with grief.

The results show middle to high correlations between results of CWBI and its scales and the other two bereavement questionnaires. Since the factorial validity of Core Bereavement Items and Inventory of Traumatic Grief was not established as clearly as in the studies reported we should remain skeptical about the interpretation of the correlations between subscales of those instruments and CWBI. The high correlations point to the commonality of the phenomena they measure still leaving some space for specific aspects measured by each inventory.

Table 4. *Confirmatory Factor analysis results for 9 subscales measuring bereavement phenomena*

Scale	Factor I	Factor II	Factor III
CBI			
Acute Separation	-.92*		
Grief	-.84		
Images and Thoughts	-.83		
ITG			
Separation Distress	.71	.49	
Trauma Distress	.64	.59	
CWBI			
Overwhelmed by Loss	.61	.43	
Disengaged from Reality		.85	
Masking Grief	.46	.62	
Adjusting to Life's Demands			.92
Rotation Sums of Squared Loadings	3.79	2.04	1.31
% of Variance	42.14	22.62	14.51

* Factor loadings are showed only above .40.

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Note: The reverse items on the questionnaires result in negative loadings for scores on the CBI.

Convergent validity was also established using another related component named satisfaction with life. The results show weak and negative but statistically significant

correlation among the Satisfaction with Life Scale and the CWBI thus verifying the theoretical hypothesis that people with higher difficulties to cope with the tasks of mourning also are less satisfied with their life.

The results of all subscales of bereavement questionnaires were also included in the Principal Component Analysis followed by varimax rotation with Kaiser normalization to investigate a proposed three component structure. The scales produced three factors with eigenvalues greater than 1. These accounted for 79% of the common variance and loaded greater than 2. The results of analysis using the selected 9 scales are shown in table 4.

Results verify that all three instruments rather belong to the same construct. However, comparatively low correlations among scales lead us to think that the questionnaires measure different aspects of the general cluster named bereavement. It would be worth increasing the sample size to study the factorial structure including all the items to establish which groups of items best measure different aspects of bereavement.

Conforming hypotheses to prove construct validity

In order to assess the construct validity of the CWBI, several hypotheses were tested regarding the relationship between the construct under investigation and other variables. It is assumed that grief and difficulties to cope with loss diminish over time (Maslovska, 2004). Pearson correlation between the CWBI and length of time since loss were negative and weak ($r = -.33, p < 0.01$) indicating that difficulties in coping with the loss diminish with the passage of time. Statistically significant correlations were established also among time since loss and three subscales: Overwhelmed by Loss, Disengaged from Reality of Life and Adjustment to Life's Demands.

It is also presumed the loss of more distant relatives evokes less suffering from bereavement (Maslovska, 2004). Correlations among CWBI and closeness of ties with the deceased were also negative but weak ($r = -.22, p < 0.05$) indicating that loss of close relatives evokes greater difficulties in coping than in the case with the loss of more distant relatives or friends. Statistically significant correlations were also found between closeness of relationship and Disengagement from Reality of Life and Masking Grief.

Table 5. *Correlations among the CWBI and bereavement related aspects*

	Coping with Bereavement Inventory				
	Total	Overwhelmed by Loss	Disengaged from Reality	Adjusting to Life's Demands	Masking Grief
Time Since Loss	-.33**	-.33**	-.24**	-.21*	-
Closeness of Ties to the Deceased	-.22*	-	-.28**	-	-.24**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It is also assumed that sudden death complicates mourning (Maslovska, 2004). Groups of bereaved with sudden and anticipated loss were compared using t-test criteria. The results show differences ($t = -2.97, p < .004$) among group of suddenly bereaved ($M = 30.78, SD = 9.55$) and bereaved by anticipated death of the close person ($M = 36.34, SD = 10.35$).

Internal consistency

The internal consistency of the CWBI was assessed with the Cronbach's alpha coefficient. Table 6 shows alpha coefficients for the total and each of the subscales. The results point to the high reliability of the Inventory and its subscales, except for Masking Grief subscale, but this may be due to its brevity, only 3 items.

Pearson correlation with the total score of the CWBI (see Table 6) and between the subscales ranged from $r = .61$ to $r = .82$, indicating a considerable overlap between these factors, but also allowing for differentiation. There were no items with correlations of less than $r = .25$ with the total score.

Table 6. *Cronbach's alpha coefficients and Pearson correlations among the subscales and with the total score of the CWBI*

	Coping with Bereavement Inventory				
	Alpha	Total	Overwhelmed by Loss	Disengaged from Reality	Adjusting to Life's Demands
CWBI					
Total	.83				
Overwhelmed by Loss	.83	.82**			
Disengaged from Reality	.80	.69**	.37**		
Adjusting to Life's Demands	.71	.61**	.21*	.41**	
Masking Grief	.59	.64**	.39**	.41**	.20*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Discussion

To investigate the psychometric properties of the CWBI, different types of validity and reliability was examined. Factorial validity, as a part of construct validity, was created by extracting four factors in a newly developed questionnaire.

The four factors were labeled: Overwhelmed by Loss, Disengaged from Reality of Life, Adjusting to Life's Demands and Masking Grief. The factors closely resembled the hypothesized categories.

Data obtained from this sample demonstrated good convergence of the CWBI with other measures of bereavement. These include correlation between the CBI and the ITG. The CWBI was also shown to have negative correlation with the general satisfaction with life. Also several hypotheses were confirmed regarding the relationship between the construct under investigation and other variables.

The total score of CWBI as well as the subscales showed high internal consistency. Higher alpha coefficient could be expected for Masking Grief scale. However, it should be noted that because alpha coefficients are related to the number of items in the subscale it is difficult to get high reliability coefficients for subscales constituted by a small number of items. Masking Grief subscale include only 3 statements.

The CWBI and its subscales are consistent with William Worden's theory on Tasks of Mourning. Factor No.1 is relevant to the first and the second mourning tasks (Task

I = to accept the reality of the loss; Task II = to work through to the pain of bereavement). Factor No.2 relates to the third mourning tasks (Task III = to adjust to an environment in which the deceased is missing). Factor No.3 reflect outcomes included in the fourth mourning task (Task IV = to emotionally relocate the deceased and move on with life). And the Factor No. 4 discloses some aspects of the second task of mourning (Task II = to work through to the pain of bereavement).

However, some of the subscales include different aspects of the tasks. The scale Overwhelmed by Loss includes both cognitive aspects of accepting the loss and emotional aspects of grief. But the subscale Masking Grief refers to difficulties of working through the pain of the loss. Thus the measurement discriminate between emotions related to avoidance behaviors and emotions evoked by efforts to accept the reality of the loss. This is a small difference between Worden's theory and the philosophy of the author of the CWBI. How the tasks of mourning are differentiated in the CWBI is consistent with findings in a qualitative research with bereaved women in Latvia (Maslovska et al., in press). Accepting reality is not so much a matter of understanding than a wish to avoid the reality of the fact. A comment from an interview with a bereaved woman illustrates this. She says "I know that he is dead but I don't want to believe it". This probably explains the difficulty to separate emotional and cognitive aspect of accepting the loss which in cases of "normal" bereavement is closer to being overwhelmed than not accepting. Difficulties to cope with the loss refer to the Masking Grief scale focusing on cognitive and emotional difficulties to coming to terms with the loss, to accept the grief and to express one's grief to others.

The scale Disengaged from Reality of Life allows one to identify difficulties related to everyday life where the deceased is missing. The scale Adjusting to Life's Demands refers to adjustment to one's life where the deceased is missing including emotional recovery and stabilizing one's identity as well as forming new relationship.

The CWBI allows to measure bereavement process and to identify strategies that people use to overcome the loss and the difficulties they meet on their way to recovery. Subscale 1 refers to emotional and cognitive aspects to accept the reality of the loss. This includes both disbelief and hope, and following one's emotions to be overwhelmed with emotions, thoughts, memories and talks about the loss and deceased. Subscale 4 demonstrates likely opposite way to cope with the loss. This includes emotional and cognitive and social masking of one's feelings and not allowing oneself to work through the pain of the loss. Subscale 3 shows the turn off of the life or the distance one takes to survive the loss. While the Subscale 4 shows the turn to adjustment to the loss and the changes the loss creates (however, the items are calculated in the reverse form to be adjusted to the total score in the same form). The results also demonstrate that subscales Overwhelmed by Loss and Disengaged from Reality and Adjusting to Life's Demands probably changes over time while Masking Grief does not show correlation with the time since loss. This is also supported by correlation of Masking Grief with the Satisfaction with Life Inventory which has been tested as relatively stable phenomena over time (Pavot et al., 1991). Closeness with the deceased seems to be provoking more difficulties as it has been shown by correlations between the closeness of ties to the deceased and the Masking Grief subscale and Disengagement from Reality subscale. The results obtained

with the sample also support the hypothesis that unexpected death brings additional difficulties to cope with the loss.

In Summary, the construct of the CWBI was established by factorial and convergent validity as well as through hypotheses about additional aspects of bereavement. The results also point to the high reliability of the CWBI and its subscales. However, since the findings are based on a female sample, they cannot be generalized to both genders. Further studies with larger samples of both genders would be necessary to confirm the validity of the CWBI for assessing the phenomena associated with coping with bereavement in a wider population.

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Personality Characteristics of Intellectually Gifted Adolescents in Latvia

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This article considers issues associated with personality characteristics of intellectually gifted adolescents in Latvia. The goal of the present research was to study personality characteristics of 11–15 year-old intellectually gifted adolescents. Participants of this study (N=93) were selected using the Wechsler Intelligence Scale for Children (WISC–R). The gifted group had WISC–R IQs >129 and non-gifted group had WISC–R IQs between 85 and 115. Participants completed the Cattell's Children's Personality Questionnaire and High School Personality Questionnaire. Results obtained in the research showed that intellectually gifted children are more oriented towards seeking group interaction than those of average IQ. These results were founded for the 11–12 year-old girls and 13–15 year-old boys. 13–15 year-old intellectually gifted girls differ from their peers with their emotional stability, sensitivity, and tenderness. Intellectually 13 to 15 year-old gifted boys are more emotional fatigued, fretful, expedient, and self-indulgent.¹

Key words: giftedness, gifted adolescents, personality, personality characteristics.

Introduction

Gifted people comprise a national asset whose high achievements are expected to be the backbone of the country. Their social, psychological and physical development is very important and necessary. Parents, psychologists, teachers and other specialists should help them adapt themselves to society. The creation of conditions including environment, that foster intellectual, cognitive and affective potential of individuals is important so that they are both able and willing to fill society's need for creative, imaginative and productive persons.

Giftedness is the individual cognitive and motivational potential to achieve excellent performance in one or more areas. Gifted children have an unusually advanced degree of general intellectual ability that requires differentiated learning experiences of a depth and breadth beyond those normally provided in the regular school program. Gifted individuals are needed to contribute the development of science and culture.

Gifted and talented children may have special problems and special needs related to their social, emotional, physical and intellectual development. They also have special, sometimes immense, talents. Being gifted means being different from others with respect to one or more specific talent area. A child may exhibit talents in one area (e.g., art or music) or in various areas. Children's gifts and talents may become apparent at different stages of their lives. Gifted children are present in all groups (e.g., age, gender, ethical groups) in a society.

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Issues associated with and addressed by education and psychological research of gifted children are very important in Latvia. Effective methods for identifying gifted children and educational programs for their development are not generally available. The identification of gifted people and the search for methods to provide their unique needs and abilities are very important current concerns.

Gifted children may be at a high risk, both emotionally and psychologically, in that their unique intellectual abilities make them vulnerable at home and school to pressures which may lead to underachievement. They have positive and negative (dysfunctional) expressions of some common emotional and social characteristics.

Many gifted people do not realize their potential because they cannot adapt to school and other institutional requirements. As a result, some are prone to depression, social isolation, self-deprecation, manipulation of others, aggressive behavior and cynicism about authority. They may lose interest in learning. Parents, teachers and psychologists need to recognize and develop their strengths, to teach and help gifted children adapt their behavior to the requirements of society.

Personality characteristics of gifted adolescents

Behavioral, social and emotional problems of gifted adolescents have often been reported in literature. Having reviewed world research and conclusions on personality traits in gifted children, it was stated that in the psychology of giftedness there are very contradictory points of view and research results of personality characteristics in gifted adolescents (Silverman, 1998; Webb, 1993; Sheras, 1997; Janos & Robinson, 1985; Clark, 1992; Dauber & Benbow, 1990; Kitano, 1990; Ackerman, Paulus, 1997; Garland, Zigler, 1999; Riyanto, 2002, Shaughnessy, Hee Kang, Greene, Misutova, Suomala, Siltala, 2004 etc.), that do not allow us to develop united understanding of the issue. Further examination of gifted adolescents' intellectual and personality characteristics is important for understanding their specific needs and potential problems.

Though gifted children differ in temperament, interests, upbringing, as well as personality manifestations, there still are shared personality traits that are characteristic of most children and adolescents of high intellect. The most important personality characteristics in discovering intellectual giftedness include particular value system, impressiveness that does not correspond to age, inner control, contradictory and unstable self-esteem, non-conformism. Because of irregular development, intellectually gifted adolescents often have problems in communication, emotional development, will and personality. It is especially typical for children with IQ from 129 to 160, and this is the group of adolescents represented in the present research. In relation to this problem, scientific literature especially emphasises that in these children the process of development of giftedness often is accompanied by a number of complicated psychological, psychosomatic and even psychopathological problems of different kinds, and they can be included in the "risk group" because of that. Most authors (Whitmore, 1980; Freeman, 1983; Webb, 1993; Norby, 1997; Clark, 1992; Riyanto, 2002) are sure that these are gifted and talented children who have serious problems more often than others, that demand special attention and corresponding help from teachers and psychologists. Some results suggest the gifted are at greater risk for social and emotional problems because of their personal characteristics.

Modern psychology differentiates giftedness as harmonious and disharmonious type of development. Gifted adolescents of the harmonious developmental type differ with physical maturity that corresponds to their age. Their high and objectively significant achievements in a specific field organically combine with high level of intellect and personality development. Studies of personality qualities, including the emotional adjustment of gifted adolescents, generally have found them to at least as well adjusted emotionally as the average adolescents (Dauber & Benbow, 1990; Janos & Robinson, 1985). The gifted tend to show more desirable characteristics in such areas as social adjustment, self-concept, personality, emotional stability and social achievement (Gallucci, 1988; Dauber & Benbow, 1990) and to be more self-confident and have higher self-esteem than the non-gifted (Park, 1992). Many authors state that children with excellent abilities are emotionally stable and have strong character, and they are less anxious than their less talented peers (Shore & Kanevsky, 1993). Research has shown that many gifted children are less egocentric, more empathic and more sensitive to other people's feelings and needs (Shore & Kanevsky, 1993).

Gifted adolescents of disharmonious developmental type differ with very high level of separate abilities and achievements. They have irregularity of development of different psychic traits and adaptation problems (Sheras, 1997; Silverman, 1998; Webb, 1993, Clark, 1992; Runco, 1999). In "especially" gifted adolescents (IQ from 150 to 180) there can often be observed neurological disorders, marked accentuation, excessive dominating, negativism. These children have increase in emotional disharmony and communication problems. Silverman (1998), Sheras (1997), Webb (1993) suggest that some gifted adolescents are prone to interpersonal isolation, low self-esteem, depression, suicide and hypersensitivity. They display more neurotic behavior (Janos & Robinson, 1985; Riyanto, 2002) and may experience more stress because of their sensitivity, high aspirations and the difficulty they may have in fitting in with peers, siblings and others (Janos & Robinson, 1985; Webb, 1993). Whitmore (1980) believes gifted children are emotionally vulnerable because they need to adjust socially to being different.

Contemporary researchers believe that perfectionism (Silverman, 1998; Kitano, 1990; Mendaglio, 1994; Webb, 1993; Porter, 1999), inner control, special value system (Богоявленская, Шадриков, 2003), autonomy are characteristic for gifted adolescents, which makes it difficult (and sometimes impossible) for them to work in a group, to think and act the way most people do (Mares, 1991; Kitano, 1990). Gifted adolescents are more responsible, more independent than their peers, they often violate established social norms and rules, because they do not consider those to be logical and right (Clark, 1992; Morelock, 1996). Gifted children have inadequately high or low self-esteem (Sheras, 1997; Webb, 1993; Park, 1992; Tannenbaum, 1991; Clark, 1992). Too highly raised standards in relation to self and others make gifted teenagers more sensitive, more critical and more subject to frustration (Freeman, 1983; Webb, 1993).

In most studies, moderately gifted children (IQ=130 to 145) get characterised as much more mature, more extraverted and socially active (Janos & Robinson, 1985). Moderately gifted adolescents have the most favorable profile in terms of personality and peer acceptance. In contrast, highly gifted adolescents (IQ=145 to 160) view themselves as more introverted, less socially adept, more inhibited, socially less active, less popular in

the group of peers and seldom become leaders (Dauber & Benbow, 1990). Vulnerabilities of highly gifted children include uneven development, perfectionism, adult expectations, intense sensitivity, alienation, and role conflict (Roedell, 1984) as well as impulse control, tolerance for ambiguity and complexity, venturesomeness and openness to experience (Tannenbaum, 1991). Silverman's study (1993) indicated that over 60% of gifted children are introverted compared with 30% of the average population and over 75% of the highly gifted children are introverted. Introversion correlates with introspection, reflection, the ability to inhibit aggression, deep sensitivity, moral development, high academic achievement, scholarly contributions, leadership in academic and aesthetic fields in adult life and smoother passage through mid-life (Riyanto, 2002).

Davis and Rimm (1998) list some positive personality characteristics of giftedness with corresponding negative traits, most of which are social or emotional. But we should remember that any trait can have either a positive or negative effects in a person's life, depending on how it is disciplined. Thus, it is not the characteristic or trait itself which is positive or negative, but how it is used. This is reflected in the table 1, which details some personality characteristics of gifted children extrapolated from lists by Davis and Rimm (1998).

Table 1. *Positive and dysfunctional expressions of some common personality characteristics of gifted children (Source: Louise Porter. Gifted young children, 1999)*

Trait	Positive expression	Dysfunctional expression
Sensitivity	Perceptiveness	Overreaction to criticism or mistakes
	Imagination	Early appearance of fears
Perfectionism	Striving for excellence	Procrastination
	High achievement	Frustration
	Self-esteem from success	High expectations of self and others
High task commitment	Enthusiasm	Boredom with repetitive tasks
	Curiosity	Underachievement with routine activities
	Persistence	Over-activity
		Insatiability
Independent thinking		Fatigue
	Creativity	Behavioral non-cooperation
	Motivation	Social isolation
		Lack of interest in details
Internal self – control		Stubbornness
	Learns from mistakes	May blame self for mistakes
Social perceptiveness		Self-deprecation
	Sense of humour	Manipulation of others
	Leadership	Alienation / isolation
Sense of justice and idealism	Insight	
	Empathy	Disappointment / outrage that other children don't abide by rules
	Interest in social issues	Stress from helplessness to effect social change
		Cynicism about authority

A source of vulnerability for gifted children could result from parents' and teachers' motivation for the child's high achievement. They strive to provide an optimum environment that fosters the full development of children's potential. Some adults become so overwhelmed by the concept of giftedness and place unceasing pressure on themselves and on their children not to waste a moment that might be devoted to the development of talent. Some parents are so delighted with the exploits of their gifted child that they greet every little accomplishment with lavish praise. Excessive praise can have a number of negative effects that are sources of psychological vulnerability (Roedell, 1984).

Development of the personality characteristics of gifted adolescents

Gifted adolescents tend to demonstrate an asynchronous development (Norby, 1997). Gifted children develop in an uneven manner, that they are more complex and intense than their age mates and that they feel out-of-sync with some age peers and age appropriate curriculum. Internal and external discrepancies increase with IQ, and that these discrepancies make them vulnerable. The highly gifted show greater intensity of imagination, intellectual prowess, sensitivity, and emotions than their average IQ peers. Gifted children's dissonant development between the various developmental domains can lead to frustration. They may be able to conceptualize what they want to do yet fail to make allowance for their child-level skills (Freeman, 1983; Webb, 1993) such as their lack of manual dexterity (Whitmore, 1980; Kitano, 1990). Gifted children sometimes develop fears earlier than other children, and they may be too young emotionally to cope with their precocious imagination (Chamrad & Robinson, 1986). Gifted adolescents generally tend to be confident about the domain in which they are talented yet lack confidence in their physical or social skills (Tannenbaum, 1991; Sekowski, 1995).

Gifted adolescents often accept responsibilities that are usually given only to older children. Because of their independence, gifted individuals tend to resist external attempts to control their behavior (Delisle, 1992; Kitano, 1990). They often break rules in unusual and unanticipated ways and so can appear to be "mischief – making" (Mares, 1991). Although they may not conform to expectations themselves, young gifted children often want others to conform to rules (Kitano, 1990).

Some gifted children often show early leadership abilities (Clark, 1992). They are ready to accept responsibility, enjoy being a part of a group, have respect for peers, use of clear communication, adaptability, flexibility, preference for directing rather than following activities and self-confidence around others. They have verbal abilities to influence other children's behaviour, although they might also use their skills manipulatively (Davis & Rimm, 1998). The other group of gifted adolescents will often form strong attachments to one or two friends (Baska, 1989). They seek out older children and adults for companionship, or seek to be alone more often than other children (Clark, 1992; Lewis & Louis, 1991).

Typically gifted children have an advanced sense of justice (Baska, 1989, Clark, 1997; Davis & Rimm, 1998). This advanced value system can present some problems for gifted children: their moral values can drive their personal interests, leading at times to a disdain for popular activities which have no 'meaning'. It can intensify their feelings of being different. Their brutal honesty sometimes disturbs other people (Gross, 1989).

Working with gifted adolescents and their parents, the author of this article noted that some of gifted children have demonstrative personalities, they express verbal aggression, are emotionally "closed", cynical and act superior to parents and other children who are not gifted or do not have high intellectual level. These children have communicative problems with family and friends.

Gender differences in the personality characteristics of gifted adolescents

Gifted female and male adolescents may differ in their personality characteristics. Gifted adolescent girls may have negative self-regard and lower self-confidence in behavior, intellectual and school status, and lower popularity than non-gifted girl adolescents (Kleine & Short, 1991; Klein, 1996). Their perfectionism, hopelessness and discouragement increase with age. These changes may result from conflicts between the psychological needs of gifted females and society's gender role expectations, as girls learn from their families, school and the media which behaviors are approved (Kleine and Short, 1991).

Gifted individuals at all ages exhibit the following characteristics: self-sufficiency, independence, autonomy, dominance and individualism, self-direction and nonconformity. Boys exhibit these characteristics more than girls. Gifted boys are less friendly, sociable, cooperative and obliging (Janos & Robinson, 1985). Many highly gifted may be unrecognized as high achievers and labelled as loners (Kerr, 2000; Riyanto, 2002).

Current study

This study investigates personality characteristics of intellectually gifted adolescents ages 11 through 15. The research aims to determine if there are significant differences in personality characteristics of intellectually gifted adolescents (IQs >129) and non-gifted (IQs between 85 and 115) in Latvia.

Method

Participants

Participants were 93 pupils aged 11 to 15, including 44 intellectually gifted children (24 boys, 20 girls; mean age = 12 years) and 49 non-gifted pupils (26 boys, 23 girls; mean age = 12 ½ years) studying at various secondary schools in Latvia. Respondents were selected by the Wechsler Intelligence Scale for Children (WISC-R). The gifted group had WISC-R IQs >129 (mean IQ = 135 for 11–12 years-old; mean IQ = 132 for 13–15 years-old) and non-gifted group had WISC-R IQs between 85 and 115 (mean IQ = 104 for 11–12 years-old; mean IQ = 102 for 13–15 years-old). The gifted and non-gifted groups were matched by age and sex.

Measures

Intelligence quotients (IQ) for both groups were obtained administering the Wechsler Intelligence Scale for Children (WISC-R). The translated and adapted Latvian version of WISC-R (Strika, Sarksa, 1996; 1998) was used with Latvian adolescents. Unfortunately the scaled scores for the adapted Latvian version is not developed yet. The mean raw scores and the standard deviations in Latvian version is not statistically different from the American (original) norms. The author of this article has consulted with Dr. JJ Zhu, the chief statistician at the Psychological Corporation on the question of using the US norms to convert the subtests' raw scores into scaled scores for this study, and has received a positive answer. In this case, the original American norms of the WISC-R were used in this study.

In the present study the Wechsler Intelligence Scale for Children (WISC–R) showed a high degree of reliability (Full Scale IQ for Latvian version was .82).

Personality characteristics were assessed by Children's Personality Questionnaire (CPQ) and High School Personality Questionnaire (HSPQ). The Latvian standardized versions were used for Latvian participants (Agadžanžana K., Beļkova T., Kozlova L., Lāce G., 2003). Cronbach's alpha ratings for Latvian version were found to range from .18 to .74; test-retest reliability for Latvian version $r = .51$ to $r = .88$. According to Cattell (Cattell, Cattell, Johns, 1984; Schuerger, 1992) the original versions of CPQ and HSPQ also had low reliability coefficients because personality characteristics are enough wide and less homogenous. In this case, low internal consistency does not take into consideration the low validity of the method.

Statistical analysis of the data was performed with SPSS Version 10.0. The Mann-Whitney U test and t-test were used to compare means between groups of intellectually gifted and non-gifted adolescents. Analyses were also made separately for children at different ages.

Procedure

Parental permission to test was obtained for all children. Every child was tested individually by WISC–R. Afterwards the CPQ and HSPQ were administered to participants in small groups of 5 to 7 children. Parents, children and teachers were given the opportunity to receive feedback about test results.

Results

The demographic criteria for dividing the research sample into groups were age and gender (analysis of differences in age and gender is the important component of the research).

Descriptive and inferential statistics were calculated for the CPQ and HSPQ of Latvian versions in gender groups (see Table 2 and 3).

Table 2. *Descriptive and inferential statistics of the CPQ in the gifted and non-gifted adolescents' groups*

Scale	11 – 12 year-old adolescents (N=48)					
	Gifted adolescents (N=22)		Non-gifted adolescents (N=26)		Gifted /non-gifted adolescents	Gifted /non-gifted adolescents
	male	female	male	female	male	female
Warmth (Factor A)						
M	5.07	4.83	5.21	4.93	-0.17	-0.16
SD	2.55	1.19	2.15	1.83		
Intelligence (Factor B)						
M	7.00	4.25	6.43	4.27	1.05	-0.03
SD	1.36	1.29	1.55	1.71		
Emotional Stability (Factor C)						
M	5.73	5.75	5.29	4.87	0.58	1.08
SD	2.43	2.09	1.59	2.13		
Excitability (Factor D)						
M	7.07	6.33	7.14	7.13	-0.08	-1.52
SD	2.52	1.23	2.71	1.46		
Dominance (Factor E)						
M	6.53	6.92	6.21	5.73	0.40	1.13
SD	2.00	2.75	2.33	2.66		
Impulsivity (Factor F)						
M	6.47	5.67	6.86	6.67	-0.45	-1.17
SD	2.45	2.06	2.25	2.32		
Conformity (Factor G)						
M	3.67	4.42	3.93	4.47	-0.40	-0.06
SD	1.76	1.62	1.73	2.47		
Boldness (Factor H)						
M	5.13	5.75	5.71	4.80	-0.82	0.96
SD	2.20	2.80	1.54	2.37		
Sensitivity (Factor I)						
M	3.67	3.75	4.14	4.07	-0.62	-0.37
SD	2.19	1.96	1.96	2.34		
Internality (Factor J)						
M	4.53	3.83	5.29	5.80	-0.85	-2.02*
SD	2.53	2.89	2.20	2.18		
Shrewdness (Factor N)						
M	5.67	5.67	7.21	6.13	-1.45	-0.87
SD	3.31	0.98	2.33	1.64		
Insecurity (Factor O)						
M	5.60	5.00	6.07	6.27	-0.58	-1.46
SD	2.13	2.13	2.27	2.31		
Self-sufficiency (Factor Q2) ^a						
M	-	-	-	-	-	-
SD	-	-	-	-	-	-
Self-discipline (Factor Q3)						
M	3.80	4.50	5.07	4.80	-1.75	-0.45
SD	1.82	1.73	2.09	1.70		
Tension (Factor Q4)						
M	6.67	5.33	6.64	6.67	0.04	-1.78
SD	2.19	2.15	1.39	1.76		

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

^a this factor is not in CPQ

Table 3. *Descriptive and inferential statistics of the HSPQ in the gifted and non-gifted adolescents' groups*

Scale	13 – 15 year-old adolescents (N=45)					
	Gifted adolescents (N=22)		Gifted adolescents (N=23)		Gifted /non-gifted adolescents	Gifted /non-gifted adolescents
	male	female	male	female	male	female
Warmth (Factor A)						
M	5.33	5.44	5.25	5.07	0.09	0.62
SD	1.97	1.24	1.39	1.49		
Intelligence (Factor B)						
M	7.00	6.33	5.88	5.50	1.16	1.33
SD	1.26	1.66	2.10	1.34		
Emotional Stability (Factor C)						
M	5.67	7.22	7.75	5.07	-2.09*	2.83**
SD	1.37	2.05	2.12	1.59		
Excitability (Factor D)						
M	4.83	5.67	5.25	5.43	-0.33	0.29
SD	1.83	2.29	2.60	1.09		
Dominance (Factor E)						
M	6.83	6.67	6.12	7.57	0.93	-0.90
SD	1.33	2.74	1.46	1.60		
Impulsivity (Factor F)						
M	6.17	6.67	4.75	6.50	1.47	0.24
SD	2.04	2.00	1.58	1.34		
Conformity (Factor G)						
M	3.17	5.67	5.50	4.86	-3.45**	1.28
SD	1.47	1.50	1.07	1.46		
Boldness (Factor H)						
M	5.33	6.78	6.25	6.43	-0.83	0.46
SD	1.75	1.79	2.25	1.79		
Sensitivity (Factor I)						
M	4.67	4.44	5.00	2.79	-0.44	2.25*
SD	1.03	1.42	1.60	1.89		
Internality (Factor J)						
M	4.17	6.33	6.50	6.07	-2.61*	0.33
SD	1.83	2.55	1.51	1.21		
Shrewdness (Factor N) ^a						
M	-	-	-	-	-	-
SD	-	-	-	-	-	-
Insecurity (Factor O)						
M	6.83	5.44	4.88	5.43	1.82	0.03
SD	1.33	1.59	2.36	1.02		
Self-sufficiency (Factor Q2)						
M	5.83	6.22	6.17	5.54	-0.25	0.29
SD	1.94	1.72	2.56	1.51		
Self-discipline (Factor Q3)						
M	5.33	6.44	5.63	5.07	-0.45	1.66
SD	1.51	2.24	0.92	1.73		
Tension (Factor Q4)						
M	5.33	4.00	5.75	5.29	-0.45	-1.69
SD	2.07	1.80	1.39	1.77		

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

^a this factor is not in HSPQ

In the sample of 11–12 year-old intellectually gifted girls, factors J (internality) is statistically significantly lower than those in the sample of girls with intellect within the norm of the same age group (see Table 2). In other personality factors there were stated no are statistically significant differences in the samples of 11–12 year-old Latvian girls and boys.

Significant differences were founded between 13 – 15 year-old gifted and non-gifted girls on factor C (emotional stability) and on factor I (sensitivity). Intellectually gifted boys aged 13 to 15 differ from average peers on factor G (conformity), and on factor C (emotional stability), and factor J (internality). In other personality factors there were stated no are statistically significant differences in the samples of 13–15 year-old Latvian boys and girls. There are no common personality factors for gifted girls and boys at the same age.

The gifted adolescents' groups' means show that mean scores of all factors are in the norm interval ($3 < M < 8$).

Discussion

Results showed that intellectually gifted Latvian 11 to 12 year-old girls are more oriented towards seeking group interaction (internality) than those of average IQ. 13–15 year-old intellectually gifted girls differ from their peers with their emotional maturity, ego strength, emotional balance, self-dependence, and self-control in stress situation. They don't become upset or anxious easily (emotional stability). At the same time they are more sensitive and tender. It should be especially emphasised that these children are less subject to stress and neurotic reactions, psychosomatic disorders and irrational fears. This conclusion conforms to the results obtained in research (Janos & Robinson, 1985), that children with excellent abilities are emotionally stable, with strong character and they are not so anxious as their less talented peers are. Research by other psychologists (Dauber & Benbow, 1990) characterises moderately gifted children (IQ=130 to 145) as much more mature, more extraverted with high social activity.

Intellectually 13 to 15 year-old gifted boys are more self-indulgent, expedient, less respectful of authority (conformity) than their average peers. They do not like to follow social norms (conformity). It would be wrong to conclude that gifted boys at this age cannot learn or do not understand social norms and expectations of the society, but they more often do not recognise and do not follow accepted social norms, because they consider them illogical and disadvantageous for them. They often demonstrate their lack of wish to follow social rules, which can provoke problems and conflicts with others – parents, teachers and peers. They tend to be low in frustration tolerance, are emotional fatigued, fretful, emotional, and easily annoyed (factor – emotional stability). Also other research showed that gifted adolescents often violate established social rules and norms (Clark, 1992; Morelock, 1996). They like to work in a group, look for attention to their personality and more oriented towards seeking group interaction (internality).

The obtained results do not comply with theoretical statements about disharmonious developmental type of gifted adolescents' personality. This incomppliance can be explained by good social adaptation of intellectually gifted adolescents who live in Latvia and their possibilities to work in the social environment that corresponds to their intellectual abilities and interests.

The results of this research did not show any statistically significant differences, nor those personality characteristics in intellectually gifted adolescents that could disturb gifted children's self-realisation or create severe personality problems. In the framework

of this research there were stated no such personality characteristics that would allow us to include intellectually gifted adolescents in higher risk group. Of course, it must be emphasised that in our sample there were only few “especially” gifted children (IQs>150), who are in literature more often characterised as “problem children”. Likewise, the obtained results did not prove nor argue in favour of intellectually gifted people’s “special” personality characteristics that would appear and develop under influence of high intellect. We would like to emphasise that the intellectually gifted child’s personality is omnifarious and it develops according to the very same principles as the personality of the child within the intellectual norm.

Analysing the obtained results, we must take into account stereotyped perception of people with special needs typical for our society (e.g., people with mental disorders, sexual minorities, children with special needs as well as gifted people). The society tends to relate people’s difference in one field to the personality in whole.

Future research should consider the background characteristics of gifted children, such as social economic status, the educational level and attitudes of parents. It is necessary to do longitudinal research in gifted children in Latvia that would give an opportunity to obtain broader information on different aspects and traits of giftedness. Indeed, it is necessary to continue and expand the present research with studying especially gifted children (IQ > 150) in order to find out their “special” needs and peculiarities. This sphere includes further perspectives of research.

These findings have practical implications for teachers, psychologists and parents – for all people who are in contact with gifted and talented children. This study contributes to the understanding of personality characteristics of gifted adolescents and has implications for the ways in which teachers and parents can help to enhance the development of gifted children, optimize their learning potential and recognize the potential risks for underachievement and their emotional problems. By understanding the psychological aspects of development of gifted children and their personality characteristics, it is possible that society will respond in a responsible manner. The author of this research suggests that at present there are many myths in the society about gifted people and one can feel lack of information about the phenomenon of giftedness in the society.

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