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CROSS-CULTURAL VALIDATION OF THE EMOTIONAL SKILLS AND COMPETENCE QUESTIONNAIRE (ESCQ)¹

*Luísa Faria*²; *Nelson Lima Santos*³; *Vladimir Takšić*⁴; *Hannu Rätty*⁵;
*Bo Molander*⁶; *Stefan Holmström*⁶; *John Jansson*⁶; *Andreja Avsec*⁷;
*Natalio Extremera*⁸; *Pablo Fernández-Berrocal*⁸; *Hiroshi Toyota*⁹

Abstract: This article discusses the cross-cultural validation of the *Emotional Skills and Competence Questionnaire* (ESCQ), which consists of 45 items divided into three subscales – (i) *perceiving and understanding emotion* (PU), (ii) *expressing and labelling emotion* (EL), and (iii) *managing and regulating emotion* (MR) – and is classified as a “*trait emotional intelligence*” or “*perceived emotional intelligence*” measure.

Originally, it was developed in Croatian settings using a theoretical framework from the emotional intelligence model (Mayer & Salovey, 1997), but it has already been translated into English and presented in 2001 at the 7th *European Congress of Psychology* in London.

The psychometric qualities and the relations of ESCQ with several relevant constructs in Croatian, Portuguese, Finnish, Swedish, Slovene, Spanish, and Japanese contexts are here presented, using target samples of mainly high school and university students, as well as older subjects (workers and supervisors), highlighting construct, convergent, divergent and concurrent validity. However, the Cronbach alpha of the MR scale needs improvement, stressing the need to further pursue the validity studies of the ESCQ.

Keywords: emotional intelligence, cross-cultural validation, self-rating scale.

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² Faculty of Psychology and Education, University of Porto/Portugal (lfaria@fpce.up.pt).

³ Fernando Pessoa University, Porto/Portugal (limasant@ufp.pt).

⁴ Department of Psychology, Faculty of Science and Arts, University of Rijeka/Croatia (vtaksic@ffri.hr).

⁵ Department of Psychology, University of Joensuu/Finland (hannu.ratty@joensuu.fi).

⁶ Department of Psychology, Umeå University/Sweden (bo.molander@psy.umu.se).

⁷ Department of Psychology, University of Ljubljana/Slovenia (Andreja.avsec1@guest.arnes.si).

⁸ Department of Psychology, University of Málaga/Spain (nextremera@uma.es).

⁹ Nara University of Education, Takabatake-cho, Nara/Japan (htoyota@nara-edu.ac.jp).

Validação intercultural do *Emotional Skills and Competence Questionnaire* (ESCQ) (Resumo): Este artigo tem como objectivo discutir a validação intercultural do *Emotional Skills and Competence Questionnaire* (ESCQ), sendo constituído por 45 itens divididos em três subescalas – (i) *percepção emocional* (PE), (ii) *expressão emocional* (EE) e (iii) *capacidade para lidar com a emoção* (CLE) –, e classificado como um instrumento de avaliação da “*inteligência emocional de tipo traço*” ou da “*percepção de competência emocional*”.

Foi originalmente desenvolvido no contexto croata, de acordo com a perspectiva teórica de Mayer e Salovey (1997), tendo sido traduzido para inglês e apresentado, em 2001, no 7th *European Congress of Psychology*, em Londres.

São apresentadas as qualidades psicométricas e as relações do ESCQ com outros constructos relevantes, nos contextos Croata, Português, Finlandês, Sueco, Esloveno, Espanhol e Japonês, utilizando amostras-alvo de estudantes do ensino secundário e universitário, bem como de sujeitos mais velhos (trabalhadores e supervisores de empresas), tendo evidenciado bons valores de validade de constructo, convergente, divergente e concorrente. Contudo, o valor de *alpha* de Cronbach da subescala CLE exige melhoria, enfatizando a necessidade de prosseguir os estudos de validade do ESCQ.

Palavras-chave: inteligência emocional, validação intercultural, escala de auto-relato.

Introduction

The American Dialect Society selected *emotional intelligence* (EI) as the most useful new word of 1995. It refers to a set of abilities to recognize the meaning of emotional patterns and to solve problems that include an emotional context. There are few definitions of EI. The most comprehensive one defines EI as a four-level set of abilities: *emotional intelligence involves the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotions and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth* (Mayer & Salovey, 1997, p. 5).

Emotional intelligence can be assessed with three types of measurements: (i) a self-reported measure, (ii) an observer/informant measure, and (iii) an ability-based measure (Conte, 2005). Although self-report measures have been criticized as too subjective and less valid because of strong social desirability tendencies, Bandura (1977) has claimed that people commonly behave according to their thoughts and feelings. McClelland (1973) has published an anthological article in which he appeals to researchers to “test

the competencies rather than intelligence”. In more recent years there are strong movements towards shifting from *ability and aptitude testing* to *competence testing*. Pervin (1990) encouraged researchers to “...call attention to the person’s *cognitive activities* – the operations and transformations that people perform on information, in contrast to some store of cognitions and responses that a person *has*” (p. 117).

The aim of this article is to discuss the cross-cultural validation of the *Emotional Skills and Competence Questionnaire* (ESCQ), presenting the psychometric qualities and the relations of ESCQ with relevant constructs in the Croatian, Portuguese, Finnish, Swedish, Slovene, Spanish, and Japanese contexts, using target samples of mainly such as school and university students, as well as samples of older subjects such as workers and supervisors.

The items of ESCQ were generated by a standard procedure: experts in psychology of emotion, as well as students, were informed about the concept of emotional intelligence, especially the details of the 16 categories in Mayer-Salovey’s model. After that, they were asked to write as many items as they could remember during a brainstorming process. Close to 300 items were collected, together with items that were already used in validated scales (Averill & Thomas-Knowles, 1991; Mayer, Caruso, Ziegler, & Dryden, 1989; Mayer & Stevens, 1994; Salovey, Mayer, Goldman, Turvey, & Palfai 1995).

The next step was to refine the collected items, so that experts and personality psychologists might place them into the 16 categories according to the model. Items were kept in the scale if at least two judges placed them in the same category. The next few steps had the main purpose of finding the best possible combination of items whilst maintaining internal consistency. A sample of 381 high school students was analysed (Takšić, 1998; Takšić, Jurin, & Cvenić, 2001). The correlations among each category (subscales) were examined, and common factor analysis was applied. Scree-tests suggested the existence of three significant factors: *perception and understanding of emotion* (PU), *expression and labelling of emotion* (EL), and *management and regulation of emotion* (MR). The items in each scale were retained according to high loading with common factor, as far as positive connotation (orientation). To avoid misunderstandings and criticism regarding to self-rating scales and their ability to assess intelligence, the scale was therefore named the *Emotional Skills and Competence Questionnaire* (ESCQ). The complete ESCQ (English version) is listed in Appendix A, while the Portuguese version is listed in Appendix B.

Croatian study (Vladimir Takšić, 2005)

This study aims to present the summary of the most relevant results of eight studies with different Croatian samples.

Method

Participants

The samples include a total of 2.124 subjects, mainly from a high school, but also including university students, and supervisors from an electronics factory that manufactures cell phones.

Results and Discussion

Internal consistency

The Cronbach alphas in different samples were: for *Perceive and Understand Emotion* (PU) between 0,82 and 0,89, for *Express and Label Emotion* (EL) between 0,78 and 0,82, and for *Manage and Regulate Emotion* (MR) between 0,71 and 0,74, and for the total score of ESCQ between 0,87 and 0,92.

Convergent, divergent, and concurrent validity

The correlation among subscales is positive (.35 – .55), and allows the configuration of an overall ESCQ score. The reliability of the three subscales and ESCQ was mainly satisfactory in all the samples, with somewhat lower values for MR. Confirmatory factor analysis performed on a large sample of high school students ($N = 1460$) indicated satisfactory goodness – of – fit indexes ($GFI = 0,87$, $AGFI = 0,86$, $RMSEA = 0,055$) and confirmed the three-factor structure (Takšić, 2005).

In an attempt to estimate convergent and divergent validity, the ESCQ subscales and total scores were compared with the scales that measure similar constructs (personality traits, self-concept, social skills, and coping strategies). As expected, the highest correlations emerged with Schutte's self-report emotional intelligence scale (SSREI; Schutte *et al.*, 1998), while the correlations with PU, EL, MR subscales and with the total score were 0,59, 0,48, 0,48, and 0,65, respectively. *Alexithymia*, defined as the difficulty in identifying and describing feelings and having externally oriented thinking (Bagby, Parker, & Taylor, 1993; Parker, Taylor, & Bagby, 2003), is a similar but reverse concept of emotional intelligence and competence, and is negatively correlated with the ESCQ subscales and the total score (-.34, -.50, -.42, and -.53; Takšić, 2001b).

Among social skills (Riggio & Trockmorton, 1986), the highest correlations with ESCQ subscales and the total score are with emotional sensitivity (.50, .37, .24, and .52) and social expression (.34, .45, .34, and .50; Takšić, 1998).

Among the Big Five dimensions, the highest correlation was found with openness/intellect (.50, .25, .44, and .52; Takšić, 2001a), stressing the connection of emotional ability with cognitive aspects of the personality system.

The ESCQ subscales and the total score also have highly positive correlations with maintaining positive mood (.35, .45, .55, and .59; Takšić, 2002) and with Block's ego-resiliency concept defined as "the linkages of the ego structures that keep the personality system within tenable bounds or permit the finding again of psychologically tenable adaptation modes" (Block & Kremen, 1996, p. 350), and the correlations were .47, .36, .49, and .55. As mentioned previously, empathy is a crucial criterion for emotional intelligence, and it is interesting that higher correlations have been found between the ESCQ scale and the cognitive aspect of empathy, so-called perspective taking (.45, .20, .41, and .44), than with its emotional aspect (.43, .15, .09, and .27; Takšić, 1998). These findings support the connection of emotional intelligence, skills, and competencies with cognition.

The absolute values of coefficients of correlation of ESCQ with related constructs still support the hypothesis that emotional competence is not only a "new word for an old concept", but is a distinct construct of so called (positive) "emotional traits" (Mayer, 2001).

Psychometric literature stresses the importance of the predictive validity of every newly established psychological instrument in a validation procedure. The highest predictive validity of ESCQ subscales and total score was found for quality of leadership (.46, .46, .52, and .61; Takšić, Tkalčić, & Brajković, 2001), defined according to Yukl's taxonomy (Yukl, 1994). This supports many theoretical claims about the significant role of emotional abilities and competences in the leadership process (Cooper & Sawaf, 1998; Goleman, 1997; Ryback, 1998).

The authors chose life satisfaction and empathy as the criteria of EI theory (Mayer, Salovey, & Caruso, 2000). They assumed that every instrument that has the intention to measure EI must show positive relationship with those two constructs. The ESCQ scale satisfies these criteria. Following the idea proposed by Salovey and Mayer (1990) that an emotionally intelligent person does not ask how much he will earn in life, but he tends to be happy in his/her life, satisfaction was established as the main criterion for concurrent and incremental validity procedures. The ESCQ scales significantly contributed to explaining the variance in life satisfac-

tion, even when they were the last variables entered in the regression equation after those from of self-concept, and variables from the Social Skills Inventory (Riggio & Trockmorton, 1986; $\Delta R^2 = 0,047$; $p = 0,007$). The stepwise regression analyses demonstrated strong evidence and superiority of *emotional management* skills for the competences in establishing life satisfaction among variables derived from the self-concept construct (Takšić, 1998, 2002).

Conclusions

In concluding this review of results in Croatian settings, it could be said that ESCQ scale shares some amount of common variance (up to 28%) with the scales derived from similar constructs (convergent validity). However, due to sufficient reliability of the scales, a great deal of unique variance remains (more than 40%). Finally, this unique variance of the ESCQ scale has an incremental contribution in explaining life satisfaction as the crucial criterion for emotional intelligence, skills and competence.

Portuguese study (Luísa Faria & Nelson Lima Santos, 2005)

The aims of this study are to present the preliminary results of the adaptation of the ESCQ to the Portuguese context, and to compare them with those of the Croatian version.

Method

Sample

The sample includes 730 students, 61% female and 39% male. 28,6% are between 15 and 16 years old, 36,7% are 17 or 18 years old, and 34,2% are older than 18 years. The subjects are secondary school students – 29,7% in the 10th grade and 22,5% in the 12th grade –and university students – 33,7% in the 1st year and 14,1% in the 2nd year.

Materials and Procedure

The ESCQ was collectively administered together with a socio-demographic questionnaire in whole classes and during regular school hours. The instructions were read aloud and confidentiality and anonymity were guaranteed. The English version of the scale (Takšić, Tkalčić, & Brajković, 2001) was translated into Portuguese and back-translated into

English, through the collaboration of the Portuguese and Croatian authors (Van de Vjver & Hambleton, 1996).

Results

Internal consistency

The dimensions of *Perceive and Understand Emotion* (PU – 0,84) and *Express and Label Emotion* (EL – between 0,83 and 0,84) present the highest alpha values in every sample, and the dimension of *Manage and Regulate Emotion* (MR – between 0,64 and 0,67) has the lowest alpha value of all, exactly as in Takšić's (2001a, 2001b) studies. The alpha values for the *Total Emotional Competence Scale* are the highest (between 0,88 and 0,90) and appear to be slightly higher than to those of the Croatian samples. The alpha values for secondary and university samples are similar.

Validity: principal components factor analysis

The factor analysis for each sample – secondary and university – extracted 3 factors, which explain almost 30% of the total variance of the results (29,9% for the total sample, 30,7% for the secondary school sample, and 29,9% for the university sample). The factorial structure found for the secondary sample is more similar to that of the total sample than to that of the university one.

In the factorial structure obtained for the secondary sample, Factor 1 gathers 24 items: 13 of the dimension of PU, 9 of MR and 2 of EL; Factor 2 presents 11 items of the dimension of EL; Factor 3 mixes 7 items of MR, 2 items of PU and 1 item of EL.

The factorial structure found for the university sample extracts factors with fewer mixtures, although none of these factors is loaded by items belonging to just one dimension, as it is the case for Factor 2 in the secondary sample. Thus, for Factor 1 there are 12 items from the dimension of EL and 5 items from MR; for Factor 2 we can see 14 items from PU, 2 items from MR and 1 item from EL; and for Factor 3 we can see 9 items of the dimension of MR and 1 item of each of the dimensions of EL and of PU.

Internal validity of the items

The indicators of item internal validity are, for the most part, higher than .40 in the studied samples, indicating a satisfactory correlation between the items and the three dimensions of *Emotional Competence*.

Sensibility

The values of the mean and of the median are close to each other for all of the dimensions of emotional competence. However, the minimum and the maximum values are at great distance from each another, and the coefficients of asymmetry and kurtosis are globally inferior to one. It is also to be noted that in the university sample, the minimum values are always higher than in those of the secondary sample.

Discriminative power

As for the discriminative power of the items, we can conclude that the most chosen answer alternatives are “Frequently” and “Always”, suggesting that in general, subjects perceive themselves as competent with regard to perceiving and understanding others’ emotions and expressing and managing their own emotions. The university sample, when compared with the secondary one, shows low percentages of higher response alternatives (“Frequently” and “Always”), and greater percentages of central response alternatives (“Occasionally” and “Usually”).

Correlations among the dimensions of the instrument

The dimensions of *Emotional Competence* are all significantly and positively correlated in the two samples. In the secondary sample, the highest correlations appear between MR and PU, whereas, in the university sample they appear between MR and EL. These results support the evidence already observed in the factorial analysis for the secondary and university samples, indicating that students with a higher level of instruction associate more the capacity of managing and regulating their emotions with the capacity of expressing these emotions. The other students, on the other hand, associate more the managing and regulation of their emotions with their perception and understanding. It is also to be noted that, in general, the university sample has lower correlation coefficients. This fact may be related to the fact that university students, differently better the various dimensions of their competence in the emotional domain.

Empirical validity: differential studies

Sex differences favour the female sample on the dimension of *Perceive and Understand Emotion*, indicating that girls see themselves as more competent than boys. These results support sex stereotypes that present women as being more capable of perceiving and understanding

others' emotions. However, the results do not support women's greater ability to express emotions.

Regarding age and school grade differences, we can observe that younger students (from 15 to 16 years old) and those who attend less advanced school classes perceive themselves as more capable of managing and regulating their emotions and more capable of perceiving and understanding others' emotions. This fact may be explained by a certain tendency of younger individuals to appear more optimistic regarding the evaluations they make about themselves, as in fact, the results of various studies have shown. Thus, the individuals' increasing realism through time gradually replaces the positive self-evaluations that characterize younger individuals.

Conclusions

The results point to good alpha values, similar to those of the original version ($> 0,80$), except for MR that proved to be less satisfactory ($0,67$).

The exploratory factorial structures revealed 3 factors, together explaining approximately 30% of the total variance. The secondary students distinguish more aspects related to emotional expression, while the university students distinguish more aspects related to emotional perception and understanding. The different dimensions of emotional competence seem to vary in importance as schooling advances, although the aspects related to "maintaining good humor" (included in the dimension of *Manage and Regulate Emotion*) are considered to be the least important for both samples. Note also the low percentage of the total variance in the results for which the instrument is responsible in both samples (less than 30%).

The internal validity and the discriminative power of the items was satisfactory. The positive correlations among three dimensions had higher values than those of the original version.

Finally, the preliminary results on empirical validity point to sex and school grade differences according to the data. Meanwhile, further studies should clarify some of this evidence. Overall, the *ESCQ* provided satisfactory results in the Portuguese context.

Finnish study (Hannu Rätty, 2005)

The present study set out to examine the construct validity in the Finnish context, regarding the factor structure of the *ESCQ*, its related

psychometric qualities, and its concurrent validity in terms of its relationships to the *Multidimensional Self-Concept Measure*.

Method

Participants

The participants were a group of university students ($N = 228$), including both females (76%) and males (24%), whose mean age was 25,4 years ($SD = 7,9$) and who represented a number of different academic fields: humanities (40%), education and psychology (34%), and natural sciences (26%).

Materials

The respondents were requested to fill out the following questionnaires: the ESCQ, which was translated into Finnish, and the *Multidimensional Self-Concept Measure*, a questionnaire widely used for vocational guidance in Finland. In the 'clinical version' used in this study, the respondents were requested to describe themselves using 52 bipolar adjective scales, such as *calm* ---- *flighty*. The measure consisted of 13 dimensions (with four bipolar adjective scales for each dimension), whose reliability coefficients in the present sample were rather satisfactory, with an average of 0,82 and a range from 0,73 to 0,94.

The 13 dimensions were the following (examples in brackets): (1) originality vs. ordinariness (e.g., original – ordinary), (2) stability vs. lability (e.g., calm – flighty), (3) energy vs. inertia (e.g., energetic – inert), (4) extroversion vs. introversion (e.g. talkative – reticent), (5) high vs. low talent (e.g., talented – not so talented), (6) broad vs. narrow scope (e.g., broad-minded – precise), (7) dominance vs. submission (e.g., domineering – submissive), (8) theoreticalness vs. practicalness (e.g., meditative – active), (9) anthropocentricity vs. issue-centeredness (e.g., people important – issues important), (10) high vs. low anxiety (e.g., anxious – easy-going), (11) rationality vs. emotionality (e.g., cool – emotional), (12) high vs. low self esteem (e.g., feeling useful – feeling useless), and (13) psychosomatic complaints vs. no complaints (e.g., suffering from headache and perspiration when nervous – no such symptoms).

Results

Validity: principal components factor analysis

The ratings of the ESCQ statements were subjected to principal components factor analysis with varimax rotation. A three-factor solution accounted for 32.6 % of the total variance. The factors were labelled (a)

ability to perceive others' emotions (12,7 % of the total variance), (b) *ability to perceive, express and label own emotions* (12,4 %), and (c) *ability to manage and regulate emotions* (7,5 %).

The content of the first two factors seemed to correspond closely to those obtained by Takšić. These factors could be interpreted somewhat differently, however, by taking into account whether the observation concerned the ability to perceive others' emotions or simply the ability to perceive and express one's own emotions. The content of the third factor appears to be somewhat different from that of Takšić's original results, albeit the general idea is the same.

Note that a few statements pertaining to the expression of negative feelings ("when something doesn't suit me, I show this immediately" and "when I don't like a person, I find ways to let him/her know") had low communality. In the Finnish context, then, these statements did not relate to general emotional skills.

Internal consistency

Scales representing each factor were constructed by selecting the highest-loaded items, and the internal consistency of each (Cronbach alpha) was assessed. The first scale, ability to perceive others' emotions, consisted of 13 items and had an alpha value of 0,88. The second scale, ability to perceive, express and label own emotions, comprised 12 items and had an alpha value of 0,87. The third scale, ability to manage and regulate emotions, had 13 items and had an alpha value of 0,71. The reliability coefficient for the whole questionnaire, totalling 38 items, was 0,90.

Correlations among the scales

Significant differences were not found between the male and female respondents in any subscales or the total scale.

The correlations of the three scales to the whole set of items was highly significant: the coefficient for the scale of ability to perceive others' emotions was 0,77, that of the scale of ability to perceive own emotions was 0,81, and that of the scale representing ability to manage and regulate emotions was 0,70. The inter-correlations among the three scales varied between 0,35 and 0,39.

Relations between perceived emotional competence and self-concept

A correlation analysis indicated that those respondents who had a high total score in the emotional competence questionnaire tended to score high on originality ($r = 0,27$; $p < 0,01$), energy ($r = 0,45$; $p < 0,01$), extroversion ($r = 0,39$; $p < 0,01$), talent ($r = 0,29$; $p < 0,01$), dominance ($r = 0,32$;

$p < 0,01$), anthropocentricity ($r = 0,28$; $p < 0,01$), and self-esteem ($r = 0,41$; $p < 0,01$); conversely, they scored low in anxiety ($r = -0,47$; $p < 0,01$), theoreticalness (i.e., high in practicalness; $r = -0,26$; $p < 0,01$), and rationality (i.e., high in emotionality; $r = -0,28$; $p < 0,01$).

Additionally, a linear regression analysis was conducted with the total score of the emotional competence scale (all items) as the dependent variable and the self-concept dimensions as the independent variables. A stepwise method was employed. The model obtained accounted for 34% of shared variance and included the following variables: energy (standardized beta coefficient 0,24; $p < 0,001$), anthropocentricity (0,24; $p < 0,001$), originality (0,20; $p < 0,001$), and anxiety (-0,22; $p < 0,01$).

Factor analysis of the self-concept dimensions and perceived emotional competence

The relationships between self-concept and emotional competence appeared to be somewhat diverse, suggesting that there might well exist different patterns of associations. To examine this possibility, a second-order factor analysis including all the self-concept dimensions and the total score of the emotional competence questionnaire was conducted. These variables were subjected to principal components factor analysis with varimax rotation. The three-factor solution accounted for 58% of the total variance. The emotional competence questionnaire had significant loadings on the first and the second factor, which accounted for 26.3% and 18.4% of the total variance, respectively.

The first factor related perceived emotional competence (loading: 0,43) to self-esteem (0,82), talent (0,70), dominance (0,67), energy (0,67), anxiety (-0,75) and psychosomatic complaints (-0,61). We are thus dealing here with the evaluation of one's general mental capacity and well-being. The second factor related the perceived emotional competence (loading: 0,48) to anthropocentricity (0,78), extroversion (0,67), rationality (-0,68), and theoreticalness (-0,63). Here we are dealing with personal orientation in terms of extroversion and introversion.

Conclusions

The obtained factor structure agreed with that noted in our pilot study of high school students (Ignatius, 2004) and with that of Takšić, which furnished empirical support for the construct validity of the *Emotional Skills and Competence Questionnaire*. Furthermore, the reliability coefficients of the total questionnaire and its three scales turned out to be fairly satisfactory.

Correlation and linear regression analyses indicated support for the concurrent validity of the ESCQ, as it was positively associated with self-

-concept dimensions such as energy, anthropocentricity, talent, dominance and extroversion and negatively associated with anxiety. Perceived emotional competence seems to be associated, then, with what is called 'positive psychology'.

The preliminary analysis of the patterns of relations between perceived emotional competence and the self-concept dimensions suggested that emotional competence may have at least two faces. Perceived emotional competence is part of the more general perception of one's mental capacity and mental well-being; it is also part of the broad dimension of personality style in terms of the extroversion – introversion. The former characterisation may be understood as a psychological state and the latter, perhaps, as a psychological trait. In further research, it would be interesting to examine emotional competence analogously to its opposite construct, *alexithymia*, which seems to possess both trait and state characteristics (Honkalampi, Hintikka, Saarinen, Lehtonen, & Viinamäki, 2000).

Swedish study (Bo Molander, Stefan Holmström & John Jansson, 2005)

In the present study the main goal was to examine the relationship between stress and musculoskeletal pain in two community organizations: a home for elderly persons and a bus company. Our previous studies of various work places (e.g., Holmström, Molander, & Barnekow-Bergkvist, 2004; Molander, 2002) have indicated that quite a lot of stress is related either to frustration due to mistakes or neglect on the part of colleagues or to conflicts with supervisors or managers. This confirms that emotions are indeed very much involved in situations with high stress. Thus, the present study also included measurement of emotional intelligence. On the basis of theory and previous findings it was expected that negative correlations would be found between *ESCQ* (Takšić, Tkalčić, & Brajković, 2001) and stress, as measured by *Job Stress Survey* (Spielberger & Vagg, 1999), as well as between *ESCQ* and health complaints. Since *ESCQ* has not been used in Sweden before, the present study will also be the first evaluation of the usefulness of the Swedish version.

Method

Participants

Participants were employees in two community-governed organizations, a nursing home organization and a transport organization. The

nursing home was engaged in the care of elderly persons, and participants were 103 women and 16 men (mean age = 45,1 years, range 23,3 to 68,1 years). The participant's mean number of years in school was 12,9 (range 7 to 22 years). The transport organization was a local city bus company for local traffic, and participants were 17 women and 54 men (mean age = 47,6; range 24,0 to 63,6 years). Mean number of school years for the transport company sample was 11,0 years (range 7 to 18 years).

Materials

The instrument used for measuring emotional skill was the *Emotional Skills and Competence Questionnaire* (ESCQ-45, Takšić, Tkalčić, & Brajković, 2001). The instrument for measuring stress was the *Job Stress Survey* (JSS; Spielberger & Vagg, 1999), which allows for nine-point ratings of 30 typical and potentially stressful workplace situations. Three main scales are provided, all of them based on ratings of severity as well as frequency: Job Stress Severity, Job Pressure, and Lack of Support. Participants also answered 29 questions on subjective health, covering common areas of health complaints, such as musculoskeletal problems, cardiovascular problems, respiratory problems, and psychosomatic problems. These complaints were rated on five-point scales, where (0) was *no complaints at all* and (4) was *yes, absolutely*.

Procedure

Measurements took place in the work-places. Before the start of the testing, the participants were introduced in general terms to the purpose of the study, and informed consent was obtained. Instructions were given for each part of the questionnaires, beginning with background information about participants and their working conditions, then following with the sections containing questions about health and the JSS instrument. The last part introduced was the ESCQ questionnaire. The whole session lasted about 50 minutes.

Results

Internal consistency

Results presented here focus on the relationship of ESCQ to health and stress. First, Cronbach alpha was calculated for ESCQ and JSS separately for both organizations. The alpha values of both instruments were generally high in both groups of participants, varying between 0,65 and 0,88, and between 0,76 and 0,91 for ESCQ scales and JSS scales, respectively.

Empirical validity: differential studies

The mean values of the ESCQ and subscales came out as expected. There is a small difference in total scores between the Nursing home group, dominated by women, and the Transport group, dominated by men ($p < 0,01$). A comparison of men and women over both organizations showed significantly higher scores for women for total scores ($p < 0,04$), and for *Perceive and Understand Emotion* ($p < 0,03$) and *Express and Label Emotion* ($p < 0,005$) subscales. No significant difference was obtained for the *Manage and Regulate Emotion* scale. Still lacking Swedish norms for ESCQ, the group of Croatian supervisors studied by Takšić (2002) was put in as a comparison. The Swedish groups had slightly higher means on the PU scale, whereas the Croatian supervisors scored higher on the MR and total. The scores on the EL scale showed no significant difference ($p = 0,335$).

Concurrent validity

The Pearson correlations between ESCQ and the JSS measures of stress are low, in the order of $-.02$ up to $.25$, although some of them are significant ($p < 0,01$). There was a difference between the two organizations, such that the Nursing-home group showed positive relationships, whereas the Transport group showed tendencies towards the expected negative relationships. A possible explanation for this discrepancy might have to do with the combination of severity and frequency in the JSS measures. Presumably, the Nursing home participants rated frequencies of stressful situations differently from the Transport participants. When only severity ratings are considered the two groups show similar and negative patterns.

In contrast to the correlations between ESCQ and stress, the relationships between ESCQ and subjective-health measures showed a consistent and expected pattern. In general, the correlations are negative, and, for the *Manage and Regulate Emotion* scale, moderately high. In particular, musculoskeletal complaints ($r = -0,38$; $p < 0,01$) and psychosomatic complaints ($r = -0,40$; $p < 0,01$) were related to the *Manage and Regulate Emotion* scale.

Conclusions

In conclusion, this study shows that the Swedish version of ESCQ-45 works quite well. The pattern of results presented here is in line with previous findings in other countries. However, as the Cronbach alpha of the MR scale turned out to be somewhat low, as is the case also in certain other studies, improvements of the formulations of some of the items in this scale

might help to raise the value. Also, more studies on the validity of the ESCQ scales are needed.

Slovene study (Andreja Avsec, 2005)

The aim of this study was to evaluate the psychometric qualities of the Slovene version of the ESCQ. Discriminant validity of the questionnaire from personality traits was of primary interest. In empirical studies, medium to large correlations have been found between personality and emotional intelligence scores. Some studies also show important relationships between emotional intelligence scores and all big five personality traits (Gannon & Ranzijn, 2005; Palmer & Stough, 2001; Saklofske, Austin, & Minski, 2003; Takšić, 2002).

Method

Participants

Participants were 311 university students from different colleges of the University of Ljubljana: 93 were male and 207 were female; one student did not report his gender. The age of the sample varied between 19 and 39 years ($M = 21,5$; $SD = 1,8$). From this sample, only 188 students completed both questionnaires.

Materials

The Slovenian version of the ESCQ (Takšić, Tkalčić, & Brajković, 2001) and the *Big Five Observer* (BFO; Caprara, Barbaranelli, Borgogni, Bucik, & Boben, 1997), which is an adjective-based measure of the Big Five, were used. It consisted of 40 bipolar adjectives, 8 for each of the 5 factors (energy/extraversion, agreeableness, consciousness, emotional stability, openness). Responses were made on a 7-point Likert-type scale ranging from 1 (not at all characteristic) to 7 (strongly characteristic).

Procedure

Participants were tested in several groups of 20-50 at their college. Participation in the study was voluntary and anonymous. The results of 25 students were eliminated because they skipped more items. Seven outliers were also excluded.

Results

Internal consistency

The internal consistencies for the ESCQ subscales ranged from 0,73 for *Manage and Regulate Emotion* (MR) to 0,88 for *Express and Label Emotion* (EL) and 0,89 for *Perceive and Understand Emotion* (PU). The reliability of the total scale was also highly satisfactory ($\alpha = 0,91$).

Empirical validity: differential studies

As expected, important gender differences emerged. Females rated significantly higher on the scales PU ($M_{\text{males}} = 56,8$; $M_{\text{females}} = 59,1$; $t = -2,4$; $df = 298$; $p < 0,05$; $Eta^2 = 0,02$) and EL ($M_{\text{males}} = 43,9$; $M_{\text{females}} = 46,5$; $t = -2,7$; $df = 298$; $p < 0,01$; $Eta^2 = 0,02$).

Concurrent validity

The subscale's interrelations were of medium size: from 0,45 between MR and PU and between MR and EL, to 0,56 between PU and EL.

The correlations among emotional intelligence and Big Five were also calculated. Among the three subscales, the MR scale has the highest percent of variance (38%) explained by the Big Five. The scale seems to be a mixture of the Big Five, with extraversion and openness as its best predictors. Correlations range between 0,32 and 0,49. Concerning the EL scale, 33% of variance was explained by Big Five. The scale is primarily a combination of extraversion ($r = 0,53$; $p < 0,01$), openness ($r = 0,42$; $p < 0,01$), and conscientiousness ($r = 0,37$; $p < 0,01$). For the PU scale, only 18% of the variance was determined by the Big Five. The highest correlation is with openness ($r = 0,33$; $p < 0,01$).

Conclusions

This study explored to what extent emotional intelligence can be expressed in terms of personality traits. Results indicated that up to 38% of variance could be explained by the Big Five. In general, we could say that the high emotional-intelligence person is more extroverted and open to experiences, is also more conscientious and somewhat more emotionally stable and agreeable.

Spanish study (Natalio Extremera & Pablo Fernández-Berrocal, 2005)

The purpose of the present study was threefold: (i) to examine the reliability of the Spanish version of the ESCQ in Spanish students; (ii) to investigate the extent to which ESCQ subscales relate to subjective happiness, mental health and satisfaction with life; and (iii) to observe the relative contribution of the ESCQ to predict well-being indexes compared to other instrument based on Mayer and Salovey model, the *Trait Meta-Mood Scale* (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995).

Method

Participants

A sample of 119 Psychology undergraduate students attending the University of Malaga along with their teachers participated in this study. There were 13 males and 108 females (one participant omitted gender information), with age ranging from 18 to 51 ($M = 22,9$ years; $SD = 4,06$ years).

Materials

In addition to the Spanish adaptation of the ESCQ, the *Trait Meta-Mood Scale* (TMMS, Salovey *et al.*, 1995) was used. The TMMS is considered a proxy for perceived emotional intelligence and is composed of three dimensions, Attention to Feeling, Mood Clarity and Emotional Repair. The following scales were used: the Spanish shorter version of the Trait Meta-Mood Scale (Fernández-Berrocal, Extremera, & Ramos, 2004); the *Satisfaction with Life Scale* (SWLS; Diener, Emmons, Larsen & Griffin, 1985), which assesses the perceived global life satisfaction; the *Subjective Happiness Scale* (SHS, Lyubomirsky & Lepper, 1999), which evaluates dispositional subjective happiness; and the *Mental Health 5* (MH-5; Ware & Sherbourne, 1992), which measures the relative amount of time an individual has experienced happiness, nervousness and depression in the last 4 weeks.

Results

Internal consistency

Cronbach alphas were computed and used to examine the psychometric qualities of the Spanish version of the ESCQ. *Manage and Regulate Emotion* scale (MR) showed the lower but still adequate coefficient (0,74) and quite similar to those found in previous studies in Croatian settings. However, the

ESCQ total was high (nearly 0,90), while *Perceive and Understand Emotion* scale (PU), and *Express and Label Emotion* scale (EL) showed quite acceptable coefficients of reliability (0,86 and 0,85, respectively).

Concurrent Validity

To examine the concurrent validity of the ESCQ with other well-known self-report measures of EI, the TMMS, Pearson correlation coefficients were computed. The relationships obtained were moderate. Unexpectedly, PU subscale did not correlate with Attention to moods subscale. A tentative explanation is that the Attention to moods subscale evaluates mainly the capacity to pay attention and be conscious of one's moods, while the PU dimension is more focused on the ability to perceive emotions in others (through facial expression or body movement) and understand the cause and consequences of their emotions. The higher correlation for PU was with Clarity, which is expected, given that both subscales assess the understanding component. Similarly, EL subscale also correlated higher with Clarity (0,65), since Clarity involves the ability to feel clearly about one's feelings. Furthermore, clarity is supposed to denote the proper ability to express and identify feelings using words. On the other hand, as expected, the MR subscale showed stronger correlations with Repair subscale (0,54). Finally, positive and moderate correlations between ESCQ subscales, total, and total satisfaction with life, happiness and mental health were found. MR subscale showed the higher significant correlations with outcomes variables, all in positive directions.

Predictive Validity

Finally, in order to assess the predictive validity of the ESCQ subscales compared to TMMS subscales, a series of multiple regressions were conducted for both measures with happiness, mental health and satisfaction with life as the dependent variables.

With respect to happiness, one TMMS subscale (Repair) explained 23% of the variance in happiness, ($F_{3, 117} = 11,326$; $p = 0,001$), while ESCQ dimensions (specifically MR subscale) explained 33% of the variance ($F_{3, 118} = 9,287$; $p = 0,001$).

Next, mental health was used as dependent variable in the regression equation, once again one TMMS dimension (Repair) accounted for significant variance in mental health (16,5%) ($F_{3, 116} = 7,470$; $p = 0,001$). In the case of ESCQ subscales, EL and MR dimensions predicted the regression equation ($F_{3, 117} = 8,020$; $p = 0,001$) and the amount of explained significant variance was quite similar (17,4%).

Finally, both instruments contributed meaningful amounts of variance in reference to satisfaction with life. In short, TMMS subscales (Clarity and Repair) explained 13,8% of the variance in satisfaction with life, ($F_{3, 117} = 6,100$; $p = 0,001$), while one ESCQ subscale (MR) explained even more variance of this outcome variable (20,1%) ($F_{3, 118} = 9,667$; $p = 0,001$).

Conclusions

The findings of the present study suggest that Spanish ESCQ presents acceptable internal consistency for total scale (0,90), evidencing MR scale a lower coefficient (0,74) that needs to be improved with the development and inclusion of new items.

Therefore, the relationships between ESCQ subscales and important life criteria were in the expected direction. In this line, positive and significant correlations between ESCQ (subscales and total score) and satisfaction with life, happiness and mental health were confirmed. With respect to the predictive validity of the ESCQ, this instrument showed higher predictive power than TMMS in explaining happiness and satisfaction with life. A tentative explanation for these results might be that TMMS was developed only to assess intrapersonal emotional abilities and ESCQ was developed as a more extensive measure of EI including items referring to both intrapersonal and interpersonal aspects. In sum, the present findings suggest that emotional competences can be adequately measured in Spain and other Spanish native speaking countries using the Spanish version of the ESCQ.

Japanese study (Hiroshi Toyota, 2005)

The first purpose of the present study was to develop a Japanese version of the ESCQ (J-ESCQ). The second purpose was to examine the relationship among the J-ESCQ, the Big-five and Self-esteem scales, and to compare with results on the same scales obtained by Takšić (2002).

Method

Participants and Procedure

The participants were 615 undergraduates (483 females and 132 males) from four different universities in the Kansai Prefecture of Japan. They were asked to make judgments on the J-ESCQ, the Big-Five scales, and the Self-Esteem scale. The mean age of the subjects was 19,5 years ($SD = 0,58$; range, 19,3 to 23,4 years).

Materials

J-ESCQ: the 45 items in J-ESCQ were translated and written in Japanese Kanji or Hirakana characters which were familiar to the subjects, and printed on a B4 sheet. The J-ESCQ was originally developed by Takšić, Tkalčić, and Brajković (2001) and has the same three subscales as the ESCQ, *Perceive and Understand Emotion* (PU), *Express and Label Emotion* (EL), and *Manage and Regulate Emotion* (MR); *Big Five*: the Japanese version of the Big Five Personality inventory was used to capture five dimensions, namely neuroticism (N), extroversion (E), openness to experience (O), agreeableness (A), and conscientiousness (C). This inventory, developed by Wada (1996), has 60 personality trait terms (e.g. silent, cheerful, extrovert) based on the terms of the ACL (Adjective Check List; Gough & Heilbrun, 1983) and has 7-point rating scales; *Self-esteem*: the Japanese version of the self-esteem scale (SE), which has 10 items with 5-point rating scales, was developed by Yamamoto, Matsui, and Yamanari (1982).

Results

Internal consistency

The alpha coefficients of the subscales were calculated to confirm the reliability of the J-ESCQ, and were: for PU 0,91, for EL 0,83, and for MR 0,67.

Concurrent validity

The correlations of the three subscales (PU, EL, and MR) in J-ESCQ, the five subscales in the Big Five personality scale and the Self-Esteem scale are as follows: PU, EL, and MR have negative correlations with N (-.18 for male, and -.05 for female for PU), -.38 and -.15 (EL), -.39 and -.19 (MR). The PU, EL, and MR subscales also have positive correlations with E (.35 to .49), openness to experience (.40 to .54), A (.19 to 0,34), and C (.12 to .28). The PU, EL, and MR subscales have also positive correlations with SE (.37 for male and .24 for female on PU, .41 and .31 on EL, .43 and .33 on MR). A gender difference was observed within the correlations of ESCQ with N and SE, where the correlations of these two scales were higher for males than for females.

Conclusions

The first purpose of the present study was to develop a Japanese version of the ESCQ (J-ESCQ), and the coefficient alphas of the subscales were satisfactory to enable the confirmation of the reliability of the J-ESCQ. Previous studies using the original version of the ESCQ (Takšić, 1998,

2000, 2001b; Takšić, Jurin, & Cvenić, 2001; Takšić, Tkalčić, & Brajković, 2001) indicated that the alphas ranged from: 0,85 to 0,90 for PU, 0,79 to 0,82 for EL, and 0,71 to 0,78 for MR. Although the alpha for MR in the J-ESCQ was slightly lower than that obtained in the original version, the alphas for the other two scales were no more than in the original version. These results indicated that the J-ESCQ was reliable.

The second purpose of the present study was to examine the relationship between the J-ESCQ and two other scales, the Big Five and the Self-Esteem. The J-ESCQ had a negative relationship with neuroticism, whereas it had a positive relationship with the other subscales in the Big Five and Self-Esteem scales. These results were consistent with a previous study (Takšić, 2002) that reported a positive relationship of the ESCQ with emotional stability (the reverse of neuroticism) and the other four subscales in the Big Five and Self-Esteem scales. However, only for J-ESCQ, gender differences were observed, namely that the relationships between J-ESCQ and neuroticism or self-esteem were higher for males than for females. These results indicated that gender differences should be considered for further research using J-ESCQ.

Concluding remarks and general guidelines for the future

The ESCQ proved to be a reliable and valid measure in varied contexts, showing construct, convergent, divergent and concurrent validity. In establishing construct validity via exploratory factor analysis three significant factors were extracted. It was found that the majority of the items have the highest loadings on only one of the following latent variables: *perceiving and understanding, expressing and labeling, and managing and regulating emotions.*

Convergent and divergent validity was examined through the correlations with similar constructs from the domain of personality traits. As expected, the strongest relationships of ESCQ occurred with Schutte's self-reported emotional intelligence scale (Schutte, et al., 1998) and Toronto alexithymia scale (TAS-20; Bagby, Parker, & Taylor, 1993). Among the Big Five traits significant relationships emerged with extraversion and openness to experience, although it showed moderate values.

The ESCQ correlated significantly with life satisfaction scale, even after controlling some other personality traits (from self-concept) and social skills (Riggio & Trockmorton, 1986) indicating its incremental validity in predicting this important criterion.

However, as the Cronbach alpha of the *Manage and Regulate Emotion* scale turned out to be somewhat low in several of the studies, improvements of the formulation of some of its items might help to raise its value. The structure of ESCQ in different countries and languages needs to be examined via confirmatory factor analysis. The present results suggest that it would be interesting to consider more thoroughly the issue of gender differences: females were found to have higher scores on ESCQ, but this finding was not consistent in all the countries.

Meanwhile, it would be interesting in further research to pursue the validity studies of the ESCQ.

References

- Averill, J. R., & Thomas-Knowles, C. (1991). Emotional creativity. In K. T. Strongman (Ed.), *International Review of Studies on Emotions* (Vol. 1, pp. 269-299). London: Wiley.
- Avsec, A. (2005). *Emotional Skills and Competence Questionnaire: Reliability and validity of a Slovene version*. Oral presentation in the Symposium "Cross-cultural validation of Emotional Skills and Competence Questionnaire (ESCQ)", at the 9th European Congress of Psychology (3-8 July), Granada, Spain.
- Bagby, R. M. Parker, J. D. A., & Taylor, G. J. (1993). The twenty-item Toronto Alexithymia Scale: II. Convergent, discriminant, and concurrent validity. *Journal of Psychosomatic Research*, 38, 33-40.
- Bandura, A. (1977). Self-efficacy: Toward a unified theory of behavioral change. *Psychological Review*, 84, 191-215.
- Block, J., & Kremen, A. M. (1996). IQ and Ego-Resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70 (2), 349-361.
- Caprara, G. V., Barbaranelli, C., Borgogni, L., Bucik, V., & Boben, D. (1997). *Model "velikih pet"*. (The model of Big Five). Ljubljana: Produktivnost, Center za psihodiagnostična sredstva.
- Conte, J. M. (2005). A review and critique of emotional intelligence measures. *Journal of Organizational Behavior*, 26, 433-440.
- Cooper, R. K., & Sawaf, A. (1998). *Executive EQ: Emotional intelligence in leadership and organizations*. New York: Penguin Books.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality and Social Psychology*, 69, 71-75.
- Extremera, N., & Fernández-Berrocal, P. (2005). *Emotional Skills and Competence Questionnaire (ESCQ): Adaptation to Spanish, reliability and its relationship with well-being indexes*. Oral presentation in the Symposium "Cross-cultural validation of Emotional Skills and Competence Questionnaire (ESCQ)", at the 9th European Congress of Psychology, Granada, Spain.

- Faria, L., & Lima Santos, N. (2005). *Adaptation of the Emotional Skills and Competence Questionnaire (ESCQ) to the Portuguese context*. Oral presentation in the Symposium “Cross-cultural validation of Emotional Skills and Competence Questionnaire (ESCQ)”, at the 9th European Congress of Psychology, Granada, Spain.
- Fernández-Berrocal, P., Extremera, N., & Ramos, N. (2004). Validity and reliability of the Spanish modified version of the Trait Meta-Mood Scale. *Psychological Reports, 94*, 751-755.
- Gannon, N., & Ranzijn, R. (2005). Does emotional intelligence predict unique variance in life-satisfaction beyond IQ and personality? *Personality and Individual Differences, 38*, 1353-1364.
- Goleman, D. (1997). *Working with emotional intelligence*. New York: Bantam.
- Gough, H. G., & Heilbrun, A. B. (1983) *The adjective checklist manual*. Palo Alto, CA: Consulting Psychologist Press.
- Holmström, S., Molander, B., & Barnekow-Bergkvist, M. (2004). Job Stress Survey and self-reported health: Evaluating survey stability through repeated measurements in metal-industry workplaces. In K. B. Olsen & O. J. Teller (Eds.), *Nordic Ergonomics Society 36th Annual Conference “NES2004”*. Proceedings (pp. 239-242). Kolding: NES.
- Honkalampi, K., Hintikka, J., Saarinen, P., Lehtonen, J., & Viinamäki, H. (2000). Is alexithymia a permanent feature in depressed patients? *Psychotherapy and Psychosomatics, 69*, 303-308.
- Ignatius, R. (2004). *Tunnetaidot Lukiolaisilla* [Emotional Skills among high school students]. Unpublished MA thesis in psychology. Department of Psychology, University of Joensuu.
- Lyubomirsky, S., & Lepper, H. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research, 46*, 137-155.
- Mayer, J. D. (2001). Emotion, intelligence, and emotional intelligence. In J. P. Forgas (Ed.), *Handbook of affect and social cognition*. Mahwah, NJ: Erlbaum Associates, Publishers.
- Mayer, J. D., Caruso, R. D., Ziegler, E., & Dreyden, J. I. (1989). Intelligence and intelligence-related personality traits. *Intelligence, 13*, 119-133.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications*. New York: Basic Books.
- Mayer, J. D., Salovey, P. & Caruso, D. (2000). Competing models of emotional intelligence. In R. J. Sternberg (Ed.), *Handbook of human intelligence* (2nd ed.). New York: Cambridge University Press.
- Mayer, J. D. & Stevens, A. A. (1994). An emerging understanding of the reflective (meta) experience of mood. *Journal of Research in Personality, 28*, 351-373.
- McClelland, D. C. (1973). Testing for competence rather than for “intelligence”. *American Psychologist, 28*, 1-14.
- Molander, B. (2002). Self-reported health and occupational stress in metal industry working sites. In D. Caldenfors, J. Eklund & L. Kiviloog (Eds.), *Humans in a*

- complex environment. Proceedings of the 34th Annual Congress of the Nordic Ergonomics Society* (Vol. 2, pp. 585-590). Linköping, Sweden: Linköping University.
- Molander, B., Holmström, S., & Jansson, J. (2005). *ESCQ-45 as related to self-rated job stress and health*. Oral presentation in the Symposium “Cross-cultural validation of Emotional Skills and Competence Questionnaire (ESCQ)”, at the 9th European Congress of Psychology, Granada, Spain.
- Palmer, B. R., & Stough, C., (2001). *Swinburne University Emotional Intelligence Test: Interim technical manual*. Melbourne: Organisational Psychology Research Unit, Swinburne University of Technology (unpublished).
- Parker, J. D. A., Taylor, G. J., & Bagby, R. M. (2003). The 20-item Toronto Alexithymia Scale-III. Reliability and factor validity in a community population. *Journal of Psychosomatic Research*, 55, 269-275.
- Pervin, L. A. (1990). *Handbook of personality: Theory and research*. New York: Guilford Press.
- Räty, H. (2005). *Perceived emotional competence and self-concept*. Oral presentation in the Symposium “Cross-cultural validation of Emotional Skills and Competence Questionnaire (ESCQ)”, at the 9th European Congress of Psychology, Granada, Spain.
- Riggio, R. E., & Trockmorton, B. (1986). *Manual for the social skills inventory (SSI)*. Department of Psychology, California State University, Fullerton.
- Ryback, D. (1998). *Putting emotional intelligence to work: successful management is more than IQ*. Woburn: Butterworth-Heinmann.
- Saklofske, D. H., Austin, E. J., & Minski, P. S. (2003). Factor structure and validity of a trait emotional intelligence measure. *Personality and Individual Differences*, 34, 707-721.
- Salovey, P., & Mayer, J.D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9 (3), 185-211.
- Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, & health* (pp. 125-154). Washington: American Psychological Association.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177.
- Spielberger, C. D., & Vagg, P. R. (1999). *Job Stress Survey. Professional manual*. Odessa, FL, USA: Psychological Assessment Resources, Inc.
- Takšić, V. (1998). *Validacija konstrukta emocionalne inteligencije*. [Validation of the Emotional Intelligence Construct]. Unpublished doctoral dissertation, University of Zagreb.
- Takšić, V. (2000). *Convergent and divergent validity of the Emotional Skills and Competence Questionnaire*. Paper presented at the XII Days of Psychology, Zadar, Croatia.

- Takšić, V. (2001a). *Relation between emotional intelligence (skills and competences) and some relevant constructs*. Oral presentation at the XV Ramiro Bujas' Days, Zagreb, Croatia.
- Takšić, V. (2001b). Upitnici emocionalne kompetentnosti (inteligencije). [Emotional competence (intelligence) questionnaires]. In K. Lacković-Grgin & Z. Penezić (Eds.), *Zbirka psihologijskih mjernih instrumenata*. [The collection of psychological instruments]. Faculty of Philosophy in Zadar, Croatia.
- Takšić, V. (2002). *The importance of emotional intelligence (competence) in positive psychology*. Paper presented at the First International Positive Psychology Summit, Washington, DC, October 4-6.
- Takšić, V. (2005). *Basic psychometric properties of Emotional Skills and Competence Questionnaire (ESCQ) in Croatian samples*. Oral presentation in the Symposium "Cross-cultural validation of Emotional Skills and Competence Questionnaire (ESCQ)", at the 9th European Congress of Psychology, Granada, Spain.
- Takšić, V., Jurin, Ž., & Cvenić, S. (2001). Operacionalizacija i faktorsko-analitička studija konstrukta emocionalne inteligencije. [Operationalization and factor-analytic study of the emotional intelligence construct]. *Psihologijske Teme*, 8-9, 95-109.
- Takšić, V., Tkalčić, M., & Brajković, S. (2001). *Emotional intelligence: An empirical validation of the construct*. Poster presented at the VIIth European Congress of Psychology, London.
- Toyota, H. (2005). *Emotional Skills and Competence Questionnaire: Development of a Japanese version*. Oral presentation in the Symposium "Cross-cultural validation of Emotional Skills and Competence Questionnaire (ESCQ)", at the 9th European Congress of Psychology, Granada, Spain.
- Van de Vjver, F., & Hambleton, R. K. (1996) Translating tests: Some practical guidelines. *European Psychologist*, 1, 89-99.
- Wada, S. (1996). Construct of the Big Five Scales of personality trait terms and concurrent validity with NPI. *The Japanese Journal of Psychology*, 67, 1-67.
- Ware, J. E. & Sherbourne, C. D. (1992). The MOS 36-item short form health survey (SF-36) I. *Medical Care*, 30, 473-483.
- Yamamoto, M., Matsui, Y., & Yamanari, Y. (1982). The structure of perceived aspects of self. *Japanese Journal of Educational Psychology*, 30, 64-68.
- Yukl, G. (1994). *Leadership in organization*. New York. Englewood Cliffs, Prentice Hall.

**APPENDIX A – English version of the ESCQ
(translated from Croatian)**

EMOTIONAL SKILLS & COMPETENCE QUESTIONNAIRE

ESCQ - 45

*Author: Vladimir Takšić Ph.D., Associate Professor, Department of Psychology, Faculty of Philosophy,
University of Rijeka, Croatia*

This is not a test to examine your knowledge; therefore there is no wrong answer. We are interested in how you usually feel and think. Answer the questions immediately without thinking too much about them. Answer how much the given claims are relevant to you by circling one of the following numbers:

- 1 - Never
- 2 - Seldom
- 3 - Occasionally
- 4 - Usually
- 5 - Always

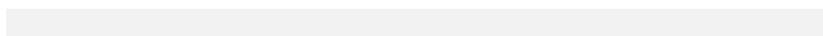
Claim	Evaluation
1) I am able to maintain a good mood even if something bad happens.	1 2 3 4 5
2) Putting my feelings and emotions into words comes easily to me.	1 2 3 4 5
3) I can maintain a good mood, even when the people around me are in a bad mood.	1 2 3 4 5
4) Unpleasant experiences teach me how not to act in the future.	1 2 3 4 5
5) When somebody praises me, I work with more enthusiasm.	1 2 3 4 5
6) When something doesn't suit me, I show this immediately.	1 2 3 4 5
7) When I don't like a person, I find ways to let him/her know.	1 2 3 4 5
8) When I am in a good mood, it is difficult to bring my mood down.	1 2 3 4 5

Please, continue to work on the next page ➡

1 – Never 2 – Seldom 3 – Occasionally 4 – Usually 5 – Always

Claim	1	2	3	4	5
9) When I am in a good mood, every problem seems soluble.	1	2	3	4	5
10) When I am with a person who thinks highly of me, I am careful about how I behave.	1	2	3	4	5
11) I study and learn best, when I am in a good mood and happy.	1	2	3	4	5
12) If I really want to, I will solve a problem that may seem insoluble.	1	2	3	4	5
13) When I meet an acquaintance, I immediately notice his/her mood.	1	2	3	4	5
14) When I see how someone feels, I usually know what has happened to him	1	2	3	4	5
15) I am able to tell the difference if my friend is sad or disappointed.	1	2	3	4	5
16) I can easily think of a way to approach a person I like.	1	2	3	4	5
17) I am capable to list the emotions that I am currently experiencing.	1	2	3	4	5
18) I am able to detect my friend's mood changes.	1	2	3	4	5
19) I can easily think of a way to make my friend happy on his/her birthday.	1	2	3	4	5
20) I do not have difficulty to persuade a friend that there is no reason to worry.	1	2	3	4	5
21) I am able to express my emotions well.	1	2	3	4	5
22) I can recognize most of my feelings.	1	2	3	4	5
23) I am capable to describe my present emotional state.	1	2	3	4	5
24) I can say that I know a lot about my emotional state.	1	2	3	4	5
25) If I observe a person in the presence of others, I can determine precisely her or his/her emotions.	1	2	3	4	5
26) I do not have difficulty to notice when somebody feels helpless.	1	2	3	4	5
27) My behavior is a reflection of my inner feelings.	1	2	3	4	5

Please, continue to work on the next page ➡



1 – Never	2 – Seldom	3 – Occasionally	4 – Usually	5 – Always
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Claim	Evaluation				
28) People can tell what mood I am in.	1	2	3	4	5
29) I try to control unpleasant emotions, and strengthen positive ones.	1	2	3	4	5
30) There is nothing wrong with how I usually feel.	1	2	3	4	5
31) I do my duties and assignments as soon as possible, rather than think about them	1	2	3	4	5
32) I usually understand why I feel bad.	1	2	3	4	5
33) I try to keep up a good mood.	1	2	3	4	5
34) I am able to tell somebody's feelings by the expression on his/her face.	1	2	3	4	5
35) I can detect my friends' concealed jealousy.	1	2	3	4	5
36) I notice when somebody tries to hide his/her bad mood.	1	2	3	4	5
37) I notice when somebody feels guilty.	1	2	3	4	5
38) I notice when somebody tries to hide his/her real feelings.	1	2	3	4	5
39) I notice when somebody feels down.	1	2	3	4	5
40) As far as I am concerned, it is normal to feel the way I am feeling now.	1	2	3	4	5
41) I have found it easy to display fondness for a person of the opposite sex.	1	2	3	4	5
42) I notice when somebody's behavior varies considerably from his/her mood.	1	2	3	4	5
43) I can easily name most of my feelings.	1	2	3	4	5
44) I am able to express how I feel.	1	2	3	4	5
45) I know how to pleasantly surprise each of my friends.	1	2	3	4	5

Name _____

Gender F M

Age _____

Education _____

Thank you for your cooperation and honesty!

**APPENDIX B – Portuguese version of the ESCQ
(translated from English)**

**FACULDADE DE PSICOLOGIA E DE CIÊNCIAS DA EDUCAÇÃO
UNIVERSIDADE DO PORTO**

QUESTIONÁRIO DE COMPETÊNCIA EMOCIONAL

Autor: Vladimir Takšić (2000)

Adaptação Portuguesa: L. Faria & N. Lima Santos (2001)

O presente Questionário é **CONFIDENCIAL** e **ANÓNIMO**.

Nas páginas seguintes vai encontrar um conjunto de afirmações, às quais pedimos que responda espontaneamente, sem pensar muito em cada uma delas, pois o que nos interessa é o que habitualmente sente e pensa acerca das mesmas.

Isto não é um teste, logo, não há boas nem más respostas. O que conta é a sua opinião sincera!

MUITO OBRIGADO por nos ter disponibilizado o seu tempo para responder a este Questionário.

Por favor, leia cada uma das afirmações que a seguir se apresentam e responda pondo um círculo ou uma cruz na letra que corresponde à sua opinião, usando a escala que se segue:

A	B	C	D	E	F
NUNCA	RARAMENTE	POUCAS VEZES	ALGUMAS VEZES	FREQUENTEMENTE	SEMPRE

1	Consigo manter-me de bom humor, mesmo que alguma coisa má aconteça.	A	B	C	D	E	F
2	Consigo exprimir os meus sentimentos e emoções em palavras.	A	B	C	D	E	F
3	Quando encontro alguém conhecido, apercebo-me logo da sua disposição.	A	B	C	D	E	F
4	Consigo manter-me de bom humor, mesmo quando os que me rodeiam estão de mau humor.	A	B	C	D	E	F
5	Quando alguma coisa me desagrada, demonstro-o logo.	A	B	C	D	E	F
6	Quando vejo como alguém se sente, geralmente sei o que lhe aconteceu.	A	B	C	D	E	F
7	As experiências desagradáveis ensinam-me o que não devo fazer.	A	B	C	D	E	F
8	Consigo facilmente arranjar maneira de me aproximar das pessoas de quem gosto.	A	B	C	D	E	F
9	Consigo perceber a diferença, se os meus amigos estão tristes ou decepcionados.	A	B	C	D	E	F
10	Quando alguém me elogia, trabalho com maior entusiasmo.	A	B	C	D	E	F
11	Consigo facilmente descrever as emoções que estou a sentir.	A	B	C	D	E	F
12	Consigo facilmente notar as mudanças de humor nos meus amigos.	A	B	C	D	E	F
13	Quando não gosto de uma pessoa, arranjo maneira de lho mostrar.	A	B	C	D	E	F
14	Exprimo bem as minhas emoções.	A	B	C	D	E	F
15	Consigo facilmente fazer feliz um amigo no dia do seu aniversário.	A	B	C	D	E	F
16	Quando estou de bom humor, é difícil ficar mal disposto(a).	A	B	C	D	E	F

A	B	C	D	E	F
NUNCA	RARAMENTE	POUCAS VEZES	ALGUMAS VEZES	FREQUENTEMENTE	SEMPRE

17	Consigo exprimir a forma como me sinto.	A	B	C	D	E	F
18	Ao observar uma pessoa junto de outras, sou capaz de descrever bem as suas emoções.	A	B	C	D	E	F
19	Quando estou de bom humor, todos os problemas parecem ter solução.	A	B	C	D	E	F
20	Consigo descrever o meu estado emocional actual.	A	B	C	D	E	F
21	Consigo perceber quando alguém se sente desanimado.	A	B	C	D	E	F
22	Quando estou com alguém que me admira, tenho cuidado com a forma como me comporto.	A	B	C	D	E	F
23	Posso afirmar que conheço bem o meu estado emocional.	A	B	C	D	E	F
24	Consigo descrever os sentimentos de uma pessoa a partir da expressão da sua cara.	A	B	C	D	E	F
25	Quando estou feliz e bem humorado(a), estudo e trabalho melhor.	A	B	C	D	E	F
26	O meu comportamento reflecte os meus sentimentos mais profundos.	A	B	C	D	E	F
27	Consigo detectar a inveja disfarçada nos outros.	A	B	C	D	E	F
28	Se eu quiser mesmo, consigo resolver problemas que parecem sem solução.	A	B	C	D	E	F
29	As pessoas são sempre capazes de descrever o meu estado de humor.	A	B	C	D	E	F
30	Percebo quando alguém tenta esconder o seu mau humor.	A	B	C	D	E	F
31	Consigo facilmente persuadir um amigo de que não há razões para se preocupar.	A	B	C	D	E	F
32	Normalmente sei as razões porque me sinto mal.	A	B	C	D	E	F
33	Percebo quando alguém se sente culpado.	A	B	C	D	E	F
34	Procuro moderar as emoções desagradáveis e reforçar as positivas.	A	B	C	D	E	F
35	Considero fácil manifestar carinho a pessoas do sexo oposto.	A	B	C	D	E	F
36	Percebo quando alguém tenta esconder os seus verdadeiros sentimentos.	A	B	C	D	E	F

A	B	C	D	E	F
NUNCA	RARAMENTE	POUCAS VEZES	ALGUMAS VEZES	FREQUENTEMENTE	SEMPRE

37	Não há nada de mal com o modo como habitualmente me sinto.	A	B	C	D	E	F
38	Consigo nomear e descrever a maioria dos meus sentimentos.	A	B	C	D	E	F
39	Percebo quando alguém está em baixo.	A	B	C	D	E	F
40	Cumpro os meus deveres e obrigações com prontidão, em vez de estar a pensar neles.	A	B	C	D	E	F
41	Consigo reconhecer a maioria dos meus sentimentos.	A	B	C	D	E	F
42	Percebo quando o comportamento de alguém varia em função do seu humor.	A	B	C	D	E	F
43	Tento manter o bom humor.	A	B	C	D	E	F
44	Sei como surpreender de forma agradável cada um dos meus amigos.	A	B	C	D	E	F
45	No que me diz respeito, é normal sentir o que sinto agora.	A	B	C	D	E	F

Muito obrigado pela sua colaboração.