

## Cross-cultural study of person-centred quality of life domains and indicators: a replication

C. Jenaro,<sup>1</sup> M.A. Verdugo,<sup>1</sup> C. Caballo,<sup>1</sup> G. Balboni,<sup>2</sup> Y. Lachapelle,<sup>3</sup> W. Otrebski<sup>4</sup> & R. L. Schalock<sup>5</sup>

<sup>1</sup> Institute on Community Integration, Faculty of Psychology, University of Salamanca, Avda. De la Merced, Salamanca, Spain

<sup>2</sup> University of Valle d'Aosta, Aosta, Italy

<sup>3</sup> Université du Québec a Trois-Rivières, Trois-Rivières, QC, Canada

<sup>4</sup> Catholic University of Lublin, Lublin, Poland

<sup>5</sup> Hastings College, Hastings, NE, USA

### Abstract

**Background** The increased use of the quality of life (QOL) concept internationally suggests the need to evaluate its etic (universal) and emic (culture-bound) properties. This study replicated and expanded a previous cross-cultural study on QOL.

**Method** The three respondent groups (consumers, parents and professionals; total  $n = 781$ ) were from four European countries: France, Belgium, Italy and Poland. The *Cross Cultural Survey of Quality of Life Indicators* was used to assess the importance and use of eight core dimensions of QOL. Two hypotheses were tested: (1) the etic properties would be demonstrated if there were similar profiles for the respondent and geographical groups, and if indicators grouped into the proposed QOL domains; and (2) the emic properties would be demonstrated if there were significant differences on scores across groups.

**Results** Results supported both hypotheses.

**Conclusion** The present study replicated the findings of a large cross-cultural study that the QOL construct has both etic and emic properties.

**Keywords** cross-cultural quality of life, quality of life domains, quality of life indicators

### Introduction

The increased use of the quality of life (QOL) concept internationally suggests the need to evaluate its etic (universal) and emic (cultural-bound) properties (Berry *et al.* 1992; Keith & Schalock 2000). In the QOL field, there has been little research on the problem of cultural impact on meaning and scaling of constructs, and, additionally, there is a lack of cross-cultural comparisons and evaluation of core QOL domains and indicators (Bullinger *et al.* 1993). To address this need a recent study (Schalock *et al.* 2005) surveyed three respondent groups (consumers, professionals and parents) from five geographical groupings (Spain, Latin America, Canada, China and USA) on the importance and use of the 24 core QOL indicators most commonly reported in the international QOL literature (Schalock & Verdugo 2002). Results indicated that: (1) there are similar profiles on importance and use across respondent and geographical groups; (2) there were significant differences in mean QOL and importance and use scores; and (3) factor scores on importance and use generally grouped into the proposed eight core QOL domains.

Correspondence: Cristina Jenaro, Institute on Community Integration, Faculty of Psychology, University of Salamanca, Avda. De la Merced, 109-131, 37005 Salamanca, Spain (e-mail: crisje@usal.es).

Thus, the study demonstrated both the etic and emic properties of the QOL construct.

The major purpose of the present study was to further our understanding of the etic and emic properties of the QOL construct by expanding the geographical grouping to include Italy, France, Belgium and Poland. Two hypotheses were tested: (1) the etic properties of the QOL construct would be demonstrated: (a) if there are similar profiles on importance and use for the respondent and geographical groups; and (b) if the indicators on importance and use are grouped into the proposed QOL domains; and (2) the emic properties of the QOL construct would be demonstrated if there are significant differences on scores across groups. An alpha level of 0.05 was used in all analyses.

## Method

### Participants

The study included 781 participants. Of this total, 279 (35.7%) were consumers, 205 (26.2%) families, and 297 (38.0%) professionals. Data were collected in four different European countries: Poland (49.4%), France and Belgium (28.9%), and Italy (21.6%).

The average age of consumers was 31.6 (SD = 13.0); 167 were male (59.9%) and 112 were female (40.1%). All consumers had a diagnosis of 'mental retardation' and almost equal percentages received services within the public (49.2%) or private (50.8%) service sector. Service environments included occupational centre (54.1%), supported employment (7.4%), sheltered workshop (1.6%), and other (36.9%). Almost half of consumers (48.8%) lived with their family, with 39.2% living in a care facility, 7.2% in supported living, 3.2% independently, and 1.6% in other type of living arrangements. Family respondent mean age was 53.1 (SD = 12.8), and most respondents were the father (58.5%) or mother (26.9%), followed by siblings (14.6%). Professionals were psychologists, direct care staff or special education teachers. Mean age was 36.9 (SD = 8.9). Of the total, 144 (48.8%) were male and 151 (51.2%) were female. The majority (58.3%) worked in the private sector. A majority (41.7%) had been working in the field for 10 years or longer, with 9% under one year, 27.8% 1–5 years, and 21.5% 5–

10 years. The primary focus of the services/supports provided was education (42.9%), housing (30.8%), employment (20.0%), community living (2.6%), or other (3.7%).

### Survey instrument

The survey instrument, based on the 24 core indicators and eight QOL domains identified in the international QOL literature (Schalock & Verdugo 2002), was the *Cross Cultural Survey of QOL Indicators* (Verdugo & Schalock 2001). The Survey employs a 4-point Likert scale to measure the dimensions for both sets of questions: (a) importance: from 'not important at all' (1) to 'very important' (4); (b) use: from 'never' (1) to 'always' (4). Two types of reliability were established: Cronbach's internal consistency (alpha) and split-half. Alpha coefficients on importance ranged from 0.88 to 0.95, and split-half coefficients ranged from 0.82 to 0.88. Alpha coefficients on use ranged from 0.87 to 0.94 and split-half coefficients ranged from 0.78 to 0.90. These high reliability levels are almost identical to those reported in the earlier study (Schalock *et al.* 2005).

### Procedure

The same procedure as in the previous study was followed. Neither random nor purposeful sampling was employed. Completed surveys were returned to the contact person for compilation and data analysis. All analyses used the SPSSx statistical package for social sciences (SPSS 1998). Three set of analyses were used to evaluate the construct's etic and emic properties: Chi-square tests, multiple analyses of variance, and two-way factorial ANOVA.

## Results

### Cross-groups analyses: importance

The average scores on importance across geographical areas and respondent groups showed a general skewedness, with mean scores typically higher than 3. Those scores are quite similar to those obtained in previous studies (Schalock *et al.* 2005). However, when computing percentages of responses 1–4 on importance across geographical groups, a significant association was found ( $\chi^2 = 989.652$ ; d.f. = 6;

$P < 0.01$ ). Data showed that ratings from French and Belgium participants tend to be higher, with 66.4% of responses rated with a 4. Conversely, scores from Poland tend to be lower, with 42.6% of responses rated '4'. Chi-square analyses were then performed between respondent group and ratings on importance. Data showed a significant association ( $\chi^2 = 345.485$ ; d.f. = 6;  $P < 0.01$ ), and users tended to score the highest, with 59.5% of responses rated as '4', while professionals ratings tended to be the lowest, with 45.5% of responses rated as '4'.

Next, mean scores and standard deviations across importance ratings for the eight core domains were calculated. MANOVA tests were first performed. Hotellings' T was statistically significant for geographical groups [ $T = 0.264$ ,  $F(16, 1528) = 12.592$ ,  $P < 0.01$ ], for respondent groups [ $T = 0.110$ ,  $F(16, 1528) = 11.044$ ,  $P < 0.01$ ] and for the interaction [ $T = 0.205$ ,  $F(32, 3030) = 4.842$ ,  $P < 0.01$ ]. A two-way factorial ANOVA on these data indicated (Table 1) several significant effects. Regarding geographical groups, *post hoc* tests (Duncan and Scheffe) showed that Poland scores were significantly ( $P < 0.01$ ) lower than the other geographical groupings in six out of the eight dimensions, and that the Francophone group scored significantly higher than the remaining geographical groupings in personal development and social inclusion. Participant groups *post hoc* tests (Duncan and Scheffe) showed that professionals scores were significantly ( $P < 0.01$ ) lower than the other respondent groups in five out of the eight dimensions, and that consumer scores were significantly ( $P < 0.01$ ) higher than the remaining respondent groups in personal development and rights.

#### Cross-groups analyses: use

The average scores on use across geographical areas showed a similar profile, with mean scores higher than 2.5 for each of the countries and groups. However, Chi-square test was statistically significant ( $\chi^2 = 363.560$ , d.f. = 6;  $P < 0.01$ ). The most frequent score on use from Italy was four (40.4%), while from France and Belgium, as well as from Poland was 3 (37.2% and 37.7%, respectively). Next, Chi-square analyses were performed. Data showed a significant association ( $\chi^2 = 439.570$ ; d.f. = 6;  $P < 0.01$ ) and users ratings tend to be the highest, with 33.3% of

responses rated as '4', while professionals ratings tended to be the lowest, with 42.3% of responses rated as '3', followed by families, whose most frequent response is '3' (37.7%) as well.

Next, MANOVA tests were conducted. Hotellings' T was statistically significant for geographical groups [ $T = 0.306$ ,  $F(16, 1524) = 14.594$ ,  $P < 0.01$ ], for respondent groups [ $T = 0.087$ ,  $F(16, 1524) = 4.118$ ,  $P < 0.01$ ], and for the interaction [ $T = 0.190$ ,  $F(32, 3022) = 4.489$ ,  $P < 0.01$ ]. A two-way factorial ANOVA was calculated for the three geographical groups and the three respondent groups. As shown in Table 1, results indicated several significant effects. *Post hoc* comparisons showed that professionals scored significantly ( $P < 0.01$ ) higher than the remaining respondent groups in physical well-being, self-determination and social inclusion; families scored significantly lower than the remaining respondent groups in personal development; consumers scored significantly lower than professionals in interpersonal relationships and material well-being. Regarding geographical groups, Italy scored significantly higher than the remaining geographical groupings in emotional well-being, and material well-being, as well as significantly higher than Poland in physical well-being and rights. On the other hand, Italy scored significantly lower than the remaining groups in social inclusion. Finally, Poland scored significantly lower than the other groups in self-determination.

#### Intra-groups analyses: importance

Principal components method of extraction was employed on the 24 importance and use variables to confirm the proposed factor structure (Verdugo & Schalock 2001; Schalock *et al.* 2005). Sub-samples used were: (1) Francophone countries (i.e. France and Belgium); (2) Poland; and (3) Italy. Concerning analyses on importance with the Francophone sample, Barlett's test of sphericity evidenced that all the correlations tested simultaneously were different from 0 ( $\chi^2 = 5212.57$ ; d.f. = 276;  $P < 0.01$ ). The Kaiser-Meyer-Okin measure of sampling adequacy was greater than 0.6 (KMO = 0.932), indicating that the sub-sample was suitable for factor analysis. A five-factor solution fit best. Total variance explained was 56.39%, with eigenvalues from 8.69 to 0.91. Items loadings ranged from 0.36 to 0.77. The five-factor grouped the items as follows: (1) material well-being

C. Jenaro *et al.* • Person-centred quality of life domains and indicators**Table 1** Two-way factorial ANOVA (importance and use)

	Importance				Use			
	Sum of squares	d.f.	Mean square	F	Sum of squares	d.f.	Mean square	F
Emotional well-being								
Main effects	29.371	4	7.343	26.312**	12.701	4	3.175	7.452**
Group	6.231	2	3.115	11.164**	2.465	2	1.233	2.893
Geographic group	24.396	2	12.198	43.711**	10.016	2	5.008	11.754**
Group and Geographic group	7.078	4	1.769	6.341**	8.083	4	2.021	4.743**
Interpersonal relationship								
Main effects	26.208	4	6.552	23.831**	3.504	4	0.876	2.013
Group	6.737	2	3.369	12.253**	3.283	2	1.641	3.771*
Geographic group	21.092	2	10.546	38.359**	0.166	2	0.083	0.191
Group and Geographic group	4.554	4	1.138	4.141**	11.679	4	2.920	6.709**
Material well-being								
Main effects	60.304	4	15.076	39.847**	19.132	4	4.783	8.383**
Group	20.122	2	10.061	26.593**	3.842	2	1.921	3.366*
Geographic group	45.104	2	22.552	59.608**	15.029	2	7.514	13.170**
Group and Geographic group	4.187	4	1.047	2.766*	8.663	4	2.166	3.796**
Personal development								
Main effects	18.846	4	4.711	10.987**	8.017	4	2.004	4.034**
Group	10.859	2	5.429	12.661**	5.907	2	2.954	5.945**
Geographic group	9.482	2	4.741	11.055**	2.250	2	1.125	2.264
Group and Geographic group	19.381	4	4.845	11.298**	10.526	4	2.632	5.297**
Physical well-being								
Main effects	33.112	4	8.278	33.103**	18.076	4	4.519	12.377**
Group	9.468	2	4.734	18.931**	5.365	2	2.682	7.347**
Geographic group	26.331	2	13.166	52.648**	12.428	2	6.214	17.019**
Group and Geographic group	3.401	4	0.850	3.400**	7.620	4	1.905	5.217**
Self-determination								
Main effects	39.810	4	9.953	23.407**	13.867	4	3.467	6.870**
Group	12.184	2	6.092	14.328**	7.412	2	3.706	7.344**
Geographic group	31.108	2	15.554	36.580**	5.505	2	2.753	5.455**
Group and Geographic group	23.359	4	5.840	13.734**	12.827	4	3.207	6.355**
Social inclusion								
Main effects	21.910	4	5.477	12.846**	24.795	4	6.199	10.978**
Group	0.519	2	0.259	0.608	13.552	2	6.776	12.000**
Geographic group	21.802	2	10.901	25.566**	10.718	2	5.359	9.491**
Group and Geographic group	19.177	4	4.794	11.244**	28.051	4	7.013	12.420**
Right								
Main effects	32.704	4	8.176	14.091**	39.461	4	9.865	15.967**
Group	14.652	2	7.326	12.626**	7.853	2	3.926	6.355**
Geographic group	20.994	2	10.497	18.091**	32.387	2	16.194	26.210**
Group and Geographic group	13.328	4	3.332	5.742**	12.518	4	3.129	5.065**

\*Significant with  $P < 0.05$ ; \*\*significant with  $P < 0.01$ .

and personal development; (2) physical well-being, plus item 2 from emotional well-being; (3) self-determination, social inclusion and rights; (4) interpersonal relationships; (5) emotional well-being, items 1 and 3. Factor analysis on importance with the

Polish sample ( $\chi^2 = 4384.12$ ; d.f. = 276;  $P < 0.01$ ; KMO = 0.936) suggested that a four-factor solution fit best. Total variance explained was 57.07%, with eigenvalues from 9.99 to 1.09. Items loadings ranged from 0.38 to 0.77. The four factors grouped the items

as follows: (1) self-determination, social inclusion, rights, and item 16 from physical well-being; (2) material well-being and physical well-being; (3) emotional well-being and interpersonal relationships; (4) personal development. Finally, analyses on importance with the Italian sample ( $\chi^2 = 1308.37$ ; d.f. = 276;  $P < 0.01$ ; KMO = 0.788) suggested that a four-factor solution fit best. Total variance explained was 48.81%, with eigenvalues from 6.59 to 1.41. Items loadings ranged from 0.20 to 0.75. The four factors grouped the items as follows: (1) material well-being, personal development, and rights; (2) interpersonal relationships, self-determination, and social inclusion; (3) emotional well-being; and (4) physical well-being.

#### Intra-groups analyses: use

The same procedure was followed with use indicators. Factor analysis on use with Francophone sample ( $\chi^2 = 5058.19$ ; d.f. = 276;  $P < 0.01$ ; KMO = 0.932) resulted in a four-factor solution. Total variance explained was 53.96%, with eigenvalues from 8.67 to 1.15. Items loadings ranged from 0.33 to 0.75. The four factors grouped the items as follows: (1) self-determination, social inclusion, and rights; (2) material well-being, and physical well-being; (3) emotional well-being, and interpersonal relationships; and (4) personal development. Analysis on use with the Polish sample ( $\chi^2 = 3928.95$ ; d.f. = 276;  $P < 0.01$ ; KMO = 0.931) resulted in a four-factor solution. Total variance explained was 55.54%, with eigenvalues from 9.26 to 0.109. Items loadings ranged from 0.31 to 0.83. The four factors grouped the items as follows: (1) self-determination, social inclusion, and rights; (2) emotional well-being and interpersonal relationships, and personal development; (3) physical well-being; and (4) material well-being. Finally, regarding the Italian sample ( $\chi^2 = 1756.13$ ; d.f. = 276;  $P < 0.01$ , and KMO = 0.882), a four-factor solution fit best. Total variance explained was 56.05%, with eigenvalues from 8.65 to 1.39. Items loadings ranged from 0.21 to 0.86. The four factors grouped the items as follows: (1) emotional well-being, personal development, rights, and items 13 and 14 from physical well-being; (2) social inclusion; (3) interpersonal relationships, and material well-being; (4), self-determination, and items 15 and 16 from physical well-being.

#### Discussion

The present study replicated the major finding of the previous study (Schalock *et al.* 2005) that the QOL construct has both etic and emic properties. Two results from the current study support its etic properties. First, high scores on ratings on importance – regardless the respondent and geographical groups – support the notion of the universal or cultural free property of the evaluated QOL domains. Second, factor analyses suggest that in general, four-factor solutions best fit the data and indicators from different domains loaded high in the proposed domains and low on those domains from which they do not share some conceptual meaning. Regarding the emic properties, mean scores for importance and use differed significantly across respondent and geographical groups. These differences might be explained on the basis of subjective perceptions based on culture-bound issues (e.g. beliefs, expectations, social policies).

The present study has limitations. First, cross-cultural variation obtained may be the result of the lack of functional, conceptual, or instrument equivalence, and/or possible differences in sample selection and data collection methods across geographical groupings (Yu *et al.* 1993). Second, the sampling strategy used in the present study limits the generalization to the current participants. Third, although reliability has been tested, validity, especially construct validity, needs to be tested with confirmatory factor analysis.

While the current study offers support for the emic and etic properties of the QOL construct, it also suggests emic differences regarding judgements on importance and use of the QOL dimensions among geographic areas and respondents groups. Additional studies need to be conducted in order to test if such differences are better explained as cultural differences that need to be respected, or as disadvantaged situations that need to be prevented. These and other issues will be addressed in further studies.

#### References

- Berry J. W., Poortinga Y. H., Segall M. H. & Dasen P. R. (1992) *Cross-cultural Psychology: Research and Applications*. Cambridge University Press, Cambridge.
- Bullinger M., Anderson R., Cella D. & Aaronson N. (1993) Developing and evaluating cross-cultural instruments

C. Jenaro *et al.* • **Person-centred quality of life domains and indicators**

- from minimum requirements to optimal models. *Quality of Life Research* **2**, 451–9.
- Keith K. D. & Schalock R. L. (2000) *Cross-cultural Perspectives on Quality of Life*. American Association on Mental Retardation, Washington, DC.
- Schalock R. L. & Verdugo M. A. (2002) *Handbook on Quality of Life for Human Service Practitioners*. American Association on Mental Retardation, Washington, DC.
- Schalock R. L., Verdugo M. A., Jenaro C., Wang M., Wehmer M., Xu J. & Lachapelle Y. (2005) A cross-cultural study of core quality of life domains and indicators. *American Journal on Mental Retardation* **110**, 298–311.
- SPSS Inc. (1998) *SPSS Base 8.0 for Windows User's Guide*. SPSS Inc., Chicago, IL.
- Verdugo M. A. & Schalock R. L. (2001) *Cross-cultural Survey of Quality of Life Indicators*. Institute on Community Integration, Faculty of Psychology, Salamanca, Spain.
- Yu J., Keown C. F. & Jacobs C. W. (1993) Attitude scale methodology: cross-cultural implications. *Journal of International Consumer Marketing* **6**, 45–64.

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.