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Quality of Life in Disability: Validation of Schalock's Multi-Dimensional Model in the Portuguese Context

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Abstract. This paper aims to evaluate the validation of Schalock's quality of life multi-dimensional model (1996) in the Portuguese context. We also analyze the quality of life of disabled people by adding a political dimension (adapted from the *Minorities' Rights Support Scale* by Nata & Menezes, 2007) to this construct and seeking to understand the impact of discrimination. The sample is composed of 217 participants, most of whom have a physical disability, aged 16 to 81. Validation procedures of the *Quality of Life Questionnaire* (Schalock & Keith, 1993) and descriptive statistics and correlation analysis were conducted. Confirmatory Factor Analysis revealed good local and global fit indices, and the internal consistency of the scales was satisfactory. An adapted version of the instrument composed of five scales—satisfaction, competence, empowerment, equality of rights and positive discrimination—is proposed. The results reveal the importance of rights and empowerment for the quality of life of disabled people and indicate a strong critical consciousness concerning the experience of discrimination in different contexts. Taken together, the findings indicate the strong need for social and political changes in this domain.

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A medical/individual perspective has been prevalent in quality of life research in the field of disability. Within this rubric, individuals' quality of life with a disability has been placed in the field of pathology and deficit. Based on the assumption that the absence of a medical condition constitutes in itself a better quality of life (Cummings, 2001; Huppert & Whittington, 2003) and that there is a dichotomy between health and illness, disability fails to fulfill the criteria for 'normality' (De Mayer, Vanderplasschen, & Broekaert, 2009; Pfeiffer, 2000).

Moreover, the concept of 'health-related quality of life' has been widely used in disability research. This concept is assessed by evaluating the 'normality' of an individual's mental and physical health and their influence on the individual's functioning (e.g. Cummins, 2000; Farquhar, 1995; Ware, Kosinski, & Keller, 2002; The World Health Organization (WHO), 2001). This assessment has often been executed using the *Short Form Health Survey–36* (SF-36) and the *Short Form Health Survey–12* (SF-12) (Garratt, Schmidt, Mackintosh, & Fitzpatrick, 2002; Ware, Kosinski, & Keller, 1996). With these instruments, the 'abnormality' of the disabled individuals' physical condition is tested (Hays, Hahn, & Marshall, 2002; Tate, Kalpakjian, & Forchheimer, 2002) based on their ability to accomplish two feats: move a table or climb stairs (Huppert & Whittington, 2003).

This emphasis on the 'normality' of physical and mental functionality neglects the possibility of an individual's well-being in the presence of his/her impairment. Similarly, the medicalization of disability and the consequent authority granted to health professionals has been a disabling factor in peoples' lives (Pfeiffer, 2000). Empirical evidence reinforces this finding: accounts of disabled people suggest that, according to others, a life with a disability is not worth living (McCarthy, 2003). Furthermore, empirical data reflect a gap in the way that disabled individuals' quality of life is perceived by themselves and by the general population (Ubel, Loewenstein, & Jepson, 2003). This underestimation of disabled individuals' quality of life as a result of medicalization influences political decisions, which are largely based on economic factors and medical decisions. Health professionals and patients thus interpret health situations or physical conditions through the filter of the medical model of disability (Ubel et al., 2003).

However, this model of medical assessment, which has produced academic research that attributes a sense of inferiority to disabled individuals' quality of life, has been strongly opposed by various models that emerged some decades ago. The disability movement has given rise to other models of disability that have

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supported broader opportunities for disabled people to participate in society (Wehmeyer & Schalock, 2001; Wehmeyer & Schwartz, 1998). Sociopolitical, rights and environmental models interpret disability in the interaction between the individual (impairment) and the context. Moreover, these models aim to attain a similar level of the quality of life for disabled and non-disabled citizens (Keith & Schalock, 2000).

Within a sociopolitical paradigm, the assessment of individuals' quality of life takes into account the respondents' priorities instead of one relying on normative comparisons (Joyce, McGee, & O'Boyle, 1999). One's personal, familial; community and societal well-being go well beyond the technological, scientific and medical developments conveyed by the medical model. Furthermore, the empowerment model replaces the normalizing movement when it advocates for person-centered planning and self-determination (Verdugo, Prieto, Caballo, & Peláez, 2005).

Within this paradigm, Schalock and Verdugo (2003) and Schalock (2004) have arrived at a consensus concerning the key domains of an individual's quality of life. Interestingly, these key domains are consonant with the well-being domains proposed by Community Psychology. Well-being is considered at an individual, relational, community and social level (Nelson, Lord, & Ochocka, 2001; Prillentensky, Nelson, & Peirson, 2001). We can identify corresponding key domains for individuals' quality of life as identified by Schalock and Verdugo (2003) and Schalock (2004) in several studies[1]. As shown in Table 1, the domains of quality of life, such as self-determination, personal development, physical and emotional well-being and civil rights, correspond to domains of individual well-being; interpersonal relationships, family, social inclusion and leisure are related to one's relational well-being; and environmental circumstances (living conditions), material well-being and safety represent the dimension of community and social well-being.

Of the many definitions of quality of life in the literature, one of the most commonly used is the WHO definition. WHO defines Quality of Life as individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (The World Health Organization Quality of Life Group (WHOQOL), 1998). In contrast to the bio-psychosocial perspective defended by WHO, Schalock and Verdugo (2003) define quality of life as the promotion of equal opportunities between people, regardless of their physical condition, thus espousing a sociopolitical perspective. Schalock's model of quality of life (1996) used in this empirical research considers this construct to be multidimensional, comprising the following aspects: emotional well-being, interpersonal relationships, material well-being, personal development, physical well-being, self-determination, social inclusion and rights.

In Portugal, there is one study of the quality of life of disabled people that was conducted by Sousa et al., 2007 (CRPG/ISCTE), comprising a sample of 15.005 disabled people. The results of this study revealed the importance of a sociopolitical dimension of a person's quality of life with a disability. The findings indicate that Portuguese disabled people have negative levels of quality of life in self-determination, personal development, physical and material well-being, rights and social inclusion. Moreover, the findings suggest that the social inequalities that disabled individuals experience in their access to training, work and income reveal discrimination and prejudice in the Portuguese society. However, this discrimination is not felt as such by disabled people, suggesting that there is a sense of conformity toward their situation and a diminished social consciousness because they do not regard disability as a social condition (Sousa et al., 2007).

This empirical study assesses the quality of life of disabled people according to a sociopolitical perspective. It proposes the following aims:

- to evaluate the validation of the Schalock's multidimensional model of quality of life (1996) in the Portuguese context through confirmatory factor analysis;
- to assess the adequacy of two new subscales—the equality of rights and positive discrimination from the *Minorities' rights support scale* (Nata & Menezes, 2007)—for the quality of life scale through confirmatory factor analysis;
- to examine levels of quality of life in their various dimensions (satisfaction, competence, empowerment, equality of rights and positive discrimination) and their correlations; and
- to assess the impact of discrimination on people's lives by probing the values concerning the existence, motives and contexts of discriminatory experiences and the level of discomfort felt, as well as the relationship between discrimination and quality of life.

Method

Participants

As described in table 2, the sample was composed of 217 participants: 149 men (69,00%) and 67 women

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[1] The review of the studies on quality of life included the studies of Hughes, Hwang, Kim, Eisenman & Killian, 1995; WHO, 1995; Felce & Perry, 1996; Schalock, 1996; Cummins, 1997; and Gardner & Nudler, 1997; Gettings & Bradley, 1997; Renwick, Brown & Rafael, 2000; and Ferdinand & Smith, 2003.

Table 1. *Quality of life's key domains and the well-being domains of Community Psychology*

Domains of well-being in Community Psychology (Nelson, Lord, Ochocka, 2001; Prilleltensky, Nelson & Peirson, 2001)	- Individual well-being: personal control, choice, self-esteem, competence, autonomy, positive identity, civil rights; - Relational well-being: participation in social, community and political life; - Community and social well-being: opportunities to acquire basic resources through work, income and education and living conditions.
Key domains of quality of life (Schalock & Verdugo, 2003; Schalock, 2004)	- Self-determination, personal development, physical and emotional well-being, and civil rights; - Interpersonal relations, family, social inclusion, and leisure; - Environment (living conditions), material well-being and safety.

Table 2. *Characteristics related to socio-demographics and to impairment, mobility and autonomy*

Variable	*N*	Category	Mean/Frequency (percentage)
Gender	216	Men	149 (69,00)
		Women	67 (31,00)
Age	209		Mean = 35,86
			SD = 12,60
			Minimum = 16 Maximum = 81
Civil status	212	Single	148 (69,80)
		Married	55 (25,90)
		Widow(er)/divorced	9 (4,20)
Education degree		Illiterate	11 (5,10)
		Mandatory education–9th grade	80 (37,20)
		College degree/ Post-graduation	42 (19,50)
Professional situation	213	Employed/ working student	95 (44,60)
		Student/trainee	47 (22,10)
		Unemployed	41 (19,20)
		Not actively employed	30 (14,10)
Source of income	204	Work	81 (39,70)
		Subsidy/allowance	95 (46,60)
		Others	28 (13,70)
Type of impairment	202	Physical	107 (49,30)
		Sensorial	49 (22,60)
		Intellectual	6 (2,80)
		Multiple	40 (18,40)
Origin of impairment	201	Congenital	89 (44,30)
		Acquired	112 (55,70)
Assistive device	161	No assistive device	50 (31,10)
		Crutches/prostheses	25 (15,50)
		Manual wheelchair	70 (43,50)
		Power wheelchair	16 (9,90)
		Not applicable	47 (21,70)
Mobility	206	Own car	87 (40,10)
		Family or friend's car	50 (23,00)
		Public transportation	43 (19,80)
General autonomy	212	Reduced	52 (24,50)
		Medium	65 (30,70)
		Total	95 (44,80)
Autonomy on daily activities	216	Reduced	23 (10,60)
		Medium	23 (10,60)
		Total	122 (56,20)
		Not applicable	48 (22,10)

(31,00%) between the ages of 16 and 81 (*M* = 35,86; *SD* = 12,60). Single participants account for 148 (69,80%), 55 (25,90%) are married and 9 (4,20%) are widow(er)s or divorced. Participants' sources of income include work (N=81; 39,70%), pensions/allowances and subsidies (*N* = 95; 46,60%) or other sources (*N* = 28; 13,70%). Regarding education, 11 (5,10%) cannot read or write, 80 (37, 20%) had completed the 9th grade, 82 (38,10%) had completed high school or a technical course and 42 (19,50%) had completed a degree or post-graduate studies. As to their professional situation, 95 (44,60%) are employed or working students, 41 (19,20%) are unemployed, 30 (14,10%) are not actively employed and 47 (22,10%) are students or trainees.

With reference to the type of impairment, 107 (49, 30%) have a physical impairment, 6 (2,80%) have an intellectual impairment, 49 (22,60%) have a sensory impairment and 40 (18,40%) have multiple impairments. As to the origin of impairment, 89 (44,30%) of the participants noted a congenital cause and 112 (55,70%) noted an acquired cause.

Most of the participants use assistive devices: 25 (15,50%) use crutches or prostheses, 70 (43,50%) use a manual wheelchair and 16 (9,90%) use a power wheelchair. With respect to autonomy in daily life activities (eating, getting dressed, bathing), 122 (56,20%) have total autonomy in their daily life activities, 23 (10,60%) have a medium level of autonomy and 23 (10,60%) have reduced autonomy.

Assessment Instruments

Questionário de Qualidade de Vida (Questionnaire of Quality of Life) (QQV). The QQV is an adapted version of four scales. Most of the items are adapted from the *Quality of Life Questionnaire (QoL.Q)* (Schalock & Keith, 1993). Other items have been adapted from the scales *WHOQOL–BREF* (WHO, 2004) and the *Disability Assessment Schedule* (WHO, 2001), which have been added to three original dimensions of the *QoL.Q* (satisfaction, competence, empowerment) (see Table 3). Two additional dimensions have been added to the QQV—equality of rights and positive discrimination—which were adapted from the *Minorities' Rights Support Scale* (Nata & Menezes, 2007) (see Table 3).

In his literature review, Cummins (1997) has found that the *QoL.Q* is the most frequently used scale in quality of life research. This scale was originally developed for people with intellectual disabilities and has primarily been used with that population (e.g., Lachapelle et al., 2005); however, it has also been used with visually impaired people (Verdugo, Schalock, Keith, & Stancliffe,

Table 3. *Dimensions, number of items and new items for the QQV*

Dimension	Number of items	New items and original scale used
Satisfaction	11	I can move around well in my neighborhood. (Disability Assessment Schedule, OMS, 2001) I'm satisfied with my personal relationships. (WHOQOL-BREF, OMS, 2004) I'm satisfied with my physical appearance. (Quality of Life Index, Ferrans & Power, 1984) I'm satisfied with my sexual life. (WHOQOL-BREF, OMS, 2004) I'm satisfied with my access to health care (WHOQOL-BREF, OMS, 2004) I'm satisfied with my health. (WHOQOL-BREF, OMS, 2004)
Competence	10	I consider myself competent in work/training. My colleagues in work/training treat me well. I'm satisfied with the abilities and experiences I have been acquiring in work/training. (Authors of the study)
Empowerment	6	Who decides the leisure activities you participate in? (Authors of the study)
New dimensions		*Minorities' Rights Support Scale* (Nata & Menezes, 2007)
Equality of rights	3	Disabled people should have the same opportunities as everyone else. If a disabled person does the same job as someone else, that person should receive the same salary. Disabled people should have the same rights as everyone else.
Positive Discrimination	3	Disabled people should have special rights because they are discriminated against (treated in a negative way by other people or society) Disabled people should have representation in parliament, city halls, local councils, etc., because they are a minority. Disabled people should receive concessions (subsidies, for example) to lead an independent life.

2005). The original *QoL.Q* uses an ordinal scale with three categories.

The Portuguese version was adapted by the authors and includes 33 items using a five-point Likert scale (1 for 'totally disagree' and 5 for 'totally agree'; for some items, 1 for 'decided totally alone' and 5 for 'someone totally decided for me'). The questionnaire includes the following dimensions: satisfaction (11 items, $\alpha = .79$) (ex.: *Generally speaking, my life is as I want it to be*), competence/productivity (10 items, $\alpha = .86$) (ex.: *My work or what I carry out daily is important for me and for others*), empowerment/independence (6 items, $\alpha = .687$) (ex.: *I can leave the house or get in whenever I want*), equality of rights (3 items, $\alpha = .74$) (ex.: *Disabled people should have the same opportunities as everyone else*) and positive discrimination (3 items, mean inter-item correlation = .231) (ex.: *Disabled people should have special rights because they are discriminated against*).

Escala da experiência de discriminação (Discriminatory Experiences Scale); EED. The EED is a version of *'The experience of discrimination scale'* (Thompson, Noel, & Campbell, 1996, cited in Thompson, Noel & Campbell, 2004) adapted by the authors. It includes four items referring to the existence of an experience of discrimination ('Have you ever felt discriminated against?'), the motive for the discrimination (impairment, race, gender, age, socioeconomic status, religion, sexual orientation or others—with an option to be more specific), the contexts where the discrimination occurred (school, work or other—with an option to be more specific) and the degree of discomfort felt due to the experience, using a scale ranging from 1–5 (1 for 'none at all' and 5 for 'much').

Escala de Autonomia (Autonomy Scale) (EA). The EA is a version of the questionnaires *Disability Assessment Schedule* (WHO, 2001) and *Participation Objective, Participation Subjective* (Brown, 2006) by the authors. It includes 7 items, 3 of which refer to daily activities (eating, getting dressed and bathing) and 4 to other activities, such as domestic activities, purchasing groceries, preparing/cooking meals and being on one´s own for several days. For each item, the question is whether the participants can carry out the task on their own or if they require assistance (and, in that case, if the assistance is total or partial and whether it is available).

Design and Procedure

The snowball sampling method was used (Maroco, 2007) due to the difficulties in accessing this socially excluded population. Disability organizations were contacted, as well as personal contacts (one of the researchers is part of the disability community); they were encouraged to respond to the questionnaire and to spread the word about the study. Before administering the questionnaire, a discussion was carried out with four persons with physical disabilities who had different socio-demographic features. These individuals provided suggestions on how to improve the items' comprehensiveness.

The criterion for including participants in the study was the existence of impairment; in the case of an acquired impairment, it needed to have occurred at least one year prior. Participants were required to be at least 16 years old.

The questionnaire was administered both on-line and on paper[2] and it guaranteed anonymity. Information regarding the time required to fill out the questionnaire, its aim, its target population and the contact information of the research team was available. The administration of the questionnaire took place from August 2008 to February 2009.

Statistical analyses

Confirmatory factorial analysis using the EQS 1.6 program was conducted for validation purposes. First, an analysis of local fit for each of the quality of life dimensions (satisfaction, competence, empowerment, social integration, equality of rights and positive discrimination) was carried out. Second, a first- and second-order Confirmatory Factor Analysis global model fit was tested to determine which model revealed a better goodness-of-fit. Furthermore, Cronbach's alpha coefficient and mean inter-item correlation analyses were executed to test the instrument's internal consistency.

Descriptive and correlational analyses were carried out using the program SPSS 19. Analyses of means and standard deviations for the four quality of life dimensions were conducted. The Kolmogorov-Sminorv Test was used to test the normal distribution of the sample, which revealed an abnormal distribution for all dimensions aside from the dimension of satisfaction. With

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[2] Of the entire sample, 27% completed the on-line questionnaire and 73% completed the paper version. Chi square analyses of different socio-demographic variables were conducted, and significant differences were revealed between the on-line/paper questionnaires, the participants' professional situation ($\chi^2(3) = 23{,}72$, $p < .001$) and the type of transportation used ($\chi^2(3) = 8{,}64$, $p < .05$). The inactive participants used the on-line form of the questionnaire more frequently (27, 1%) than the paper form (9, 1%). The participants who used public transportation (25,4%) and owned a car (49,2%) used the on-line form more frequently (17,7%) than the paper form (36,7%). T-tests were also carried out, revealing significant differences between two dimensions: participants using the paper form scored higher on the satisfaction dimension ($M = 3{,}60$; $SD = .64$) than those using the on-line form ($M = 3{,}17$; $SD = .58$). In addition, differences were found in the competence in work/training dimension (paper form respondents: $M = 3{,}99$; $SD = .82$ and on-line respondents $M = 3{,}62$; $SD = .81$). The magnitude of the differences was moderate in the satisfaction score (*eta-squared* = .09) and low in the competence score (*eta-squared* = .04) (Cohen, 1988).

this type of distribution, Spearman's Rank Order Correlation was chosen to analyze correlations between the quality of life dimensions. The impact of discrimination on participants' lives was examined with descriptive analyses, including frequencies and percentages related to discrimination (experience, motive, context, and degree of discomfort). Spearman's Rank Order Correlation was conducted to study the relationship between discrimination and quality of life.

Results

Confirmatory factor analysis (CFA)

The original version of the *QoL.Q* (Shalock & Keith, 1993) includes 40 items and has four dimensions: satisfaction, competence/productivity, empowerment/independence and social integration. Confirmatory Factor Analysis revealed good local fit indices for each of the dimensions except for social integration, which was removed from the scale due to its inadequate fit indices, ($\chi^2(5) = 72.06$, $p < .001$; CFI = .69; RMSEA = .26), (see Table 4). Of the six items that comprised this dimension, only three remained after depuration proceedings, and they were related to participation in associations/recreational activities.

It was thus necessary to carry out depuration proceedings, i.e., to remove items from all sub- scales. This removal was based on the factor loading of each item, redundancy and/or ambiguity. The criteria for removal were a low factor loading (under 0.35) and a consequent improvement of fit indexes once removed. Correlations between error variances of some items were performed using the criterion of semantic similarity between those items (Byrne, 2006). The robust version (Byrne, 2006) was chosen for all dimensions, as it was found to be more suitable due to the abnormality of distribution.

Afterwards, the first-order (global) model's fit was tested, and in some dimensions, items were randomly parceled (in 2 or 3 parcels, according to the number of items) to achieve a parsimonious and justified model (for further details on the advantages of using parceling, see Little, Cunningham, Shahar, & Widaman, 2002). The test of first-order global fit with factor analysis shows good fit indices ($\chi^2(17) = 14.62$ ns; CFI = .93; RMSEA = .00) (see Table 5). This finding reveals that the model is multidimensional. The diagram regarding the first-order global fit is displayed in figure 1.

The goodness-of-fit of the second-order (global) model was also tested (see Table 5), and the AIC values (Akaike's Information Criterion) of both models were compared to determine which presented the lowest value, thus revealing the best-fitted model (Hu & Bentler, 1995). The value for the second-order global model (−40.26) is higher than the value of the first-order model (−10.84), which confirms the multidimensionality of the model.

Table 4. *Results from CFA: fit indices and descriptions of modifications*

Scales	S-Bχ^2 *(gl)*	CFI	RMSEA	IC 90%
Satisfaction	67,02 (43)**	.93	.05	[.03–.08]
Modifications: removal of items sat8, sat9 and saud14 and error variances correlation of items sat2 and sat6.				
Competence	35,44 (33)*	.98	.05	[.00–.14]
Modifications: removal of item trab15 and error variances correlation of items trab18 and trab24 and between trab20 and trab21.				
Social integration	72,06 (5)***	.69	.26	[.21–.31]
Modifications: removal of items soc33, soc34, soc35, soc37, soc38 and soc39.				
Empowerment	10,05 (9)*	.98	.03	[.00–.09]
Modifications: removal of items quot24_R, quot28 and quot29_R.				
Equality of rights	.1257 (1) ns	1	.00	[.00–.13]
Modifications: correlation between error variances of items dir40 and dir41.				
Positive Discrimination	1,64 (1) ns	.98	.06	[.00–.20]
Modifications: removal of item dir45.				

* $p < .05$; ** $p < .01$; *** $p < .001$; ns (not significant)

Table 5. *Results from CFA: first- and second-order model fit; fit indices and AIC scores*

	χ^2*(df)*	CFI	RMSEA	AIC
First-order model fit	14,6163 (17) ns	.93	.00	−10,84
Second-order model fit	103,74 (72)**	.92	.06	−40,26

**$p < .01$; ns (not significant)

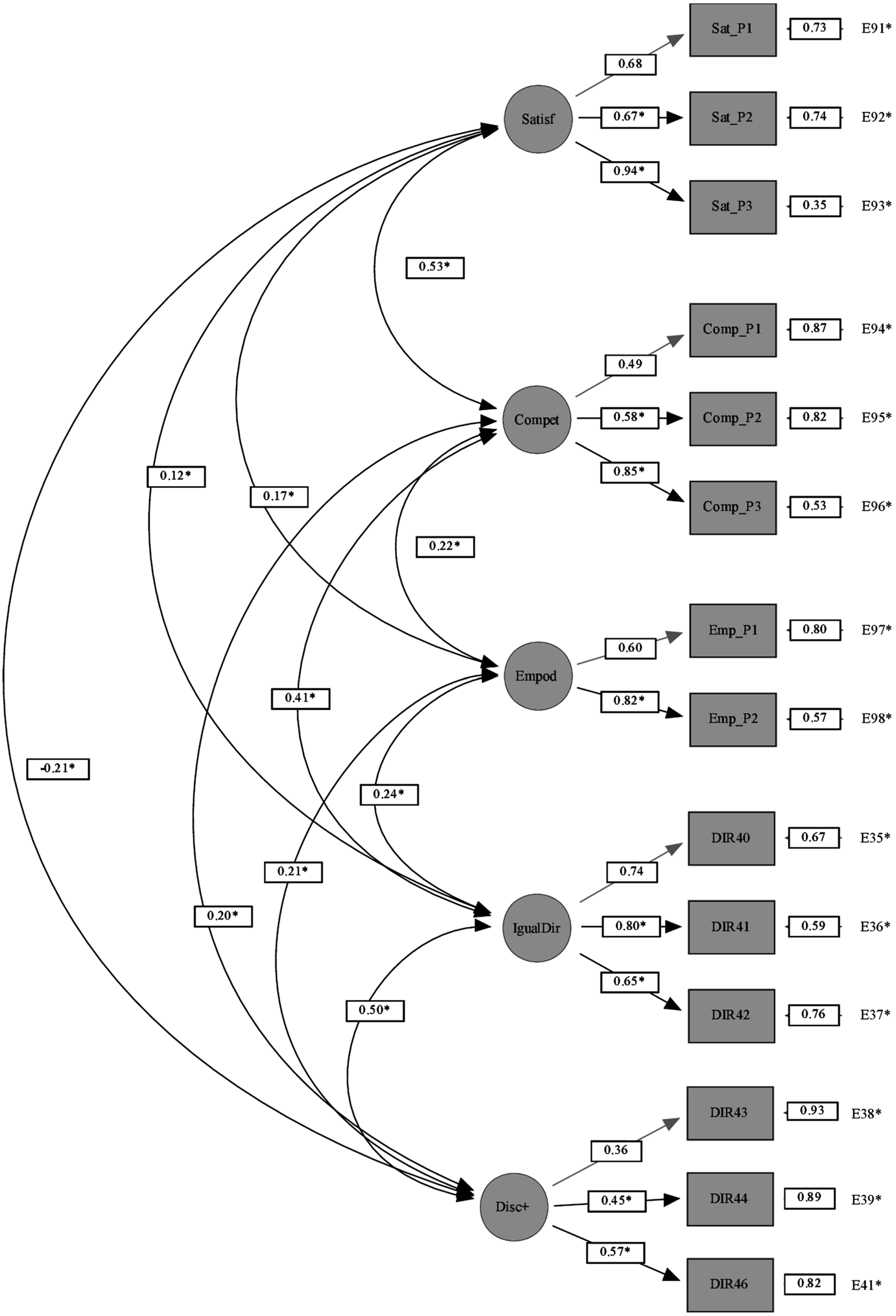

Figure 1. First-order global model–5-dimension-structure and factor loadings. Satisf = Satisfaction; Compet = Competence; Empod = Empowerment; IgualDir = Equality of rights; Disc+ = Positive discrimination.

Reliability analysis

The sub-scales of quality of life have good internal consistency with Cronbach's alpha coefficients reported between .859 and .687 (cf. Table 6). Moreover, positive discrimination has a good internal consistency with the mean inter-item correlation reported to be .231 (in the range of .2–.4) (Briggs & Cheek, 1986) (see Table 6). We chose to use the mean inter-item correlation for positive discrimination because the Cronbach's alpha coefficient is more sensitive to the number of scale items; using the mean inter-item is therefore more adequate (Pallant, 2001).

Dimensions of quality of life

As displayed in Table 6, equality of rights (M = 4.67, SD = .67) and empowerment (M = 4.20, SD = .75) are the dimensions with the highest means, followed by positive discrimination (M = 3.96, SD = .88), competence (M = 3.89, SD = .83) and satisfaction (M = 3.49, SD = .66).

The relationships between dimensions of quality of life were investigated using Spearman's Rank Order Correlation. There is a moderate positive correlation ($r = .447$, $p < .001$) (Bryman & Cramer, 2003) between satisfaction and competence in work/training, and this correlation has the highest value (see Table 7), with high levels of satisfaction in life associated with high levels of competence in work/training. Additionally, there is a positive correlation ($r = .183$, $p < .001$) between competence in work/training with equality of rights (see Table 7).

Empowerment is significantly and positively correlated with satisfaction ($r = .152$, $p < .01$) and with equality of rights ($r = .277$, $p < .001$), with high levels of empowerment associated with high levels of satisfaction in life and equality of rights. Finally, equality of rights is correlated with positive discrimination (both are dimensions of rights), with high levels of equality of rights associated with high levels of positive discrimination ($r = .159$, $p < .01$) (see Table 7). This finding implies that the more people advocate equal rights, the more they also advocate positive discrimination. Except for the correlation between satisfaction and competence in work/training, all other correlations reveal low scores (Bryman & Cramer, 2003).

Impact of discrimination

The impact of discrimination was analyzed with the use of descriptive statistics regarding the existence, motive, contexts and discomfort level experienced (see Table 8). The relationship between the dimensions of quality of life and discrimination was investigated using Spearman's Rank Order Correlation (see Table 9).

As displayed in table 8, 67.40% (n = 145) of the participants have been discriminated against by people or society. Impairment is the primary underlying motive for discrimination (57.80%, n = 125), as other motives have low levels of expression ($n < 5$). School (37.90%,

Table 6. *Values of internal consistency (Cronbach's alpha coefficient) and mean inter-item correlation, means and standard deviations of the dimensions*

Dimensions	Number of items	*Cronbach's alpha coefficient/Mean inter-item correlation*	*M*	*SD*	*n*
Satisfaction	11	α = .794	3,49	.66	217
Competence	10	α = .859	3,89	.83	211
Empowerment	6	α = .687	4,20	.75	217
Equality of rights	3	α = .737	4,67	.67	216
Positive discrimination	3	*Mean inter-item correlation* = .231	3,96	.88	215

Table 7. *Spearman's correlations between dimensions*

	1	2	3	4	5
(1) Satisfaction	1				
(2) Competence	.447*** (n = 211)	1			
(3) Empowerment	.152** (n = 217)	.107 (n = 211)	1		
(4) Equality of rights	.008 (n = 216)	.183*** (n = 210)	.277*** (n = 216)	1	
(5) Positive discrimination	−.048 (n = 215)	−.038 (n = 209)	.119 (n = 215)	.159** (n = 215)	1

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 8. *Frequencies and percentages of responses related to the existence, motive and contexts of discrimination; mean and standard deviation of the degree of discomfort with discrimination*

	Frequency	%
Existence:		
Yes	145	67,40
No	70	32,60
Motive:		
Impairment	125	57,60
Race	1	.50
Age	1	.50
Gender	1	.50
Sexual orientation	1	.50
Economic status	5	2,30
Contexts:		
School	53	37,90
Work	46	33,10
Family	8	5,80
Friends	14	10,10
Health services	20	14,40
Degree of discomfort	Mean	Standard deviation
	3,78	1,168

Table 9. *Spearman's correlations between discrimination with dimensions of quality of life*

	Discrimination
Satisfaction	−.209** (n = 215)
Competence	−.102 (n = 209)
Empowerment	−.237** (n = 215)
Equality of rights	−.092 (n = 214)
Positive discrimination	−.041 (n = 214)

*$p < .05$; ** $p < .01$; *** $p < .001$

n = 53) and work (33.10%, n = 46) are the main contexts of discrimination, followed by health services (14.40%, n = 20). Discrimination experienced in personal relationship with friends (10.10%, n = 14) and family (5.89, n = 8) is less frequent than the contexts mentioned above. The mean score of discomfort level is 3.78 (SD = 1.168).

Spearman's correlation analysis between the quality of life dimensions and discrimination reveal a negative correlation with satisfaction ($r = -.209$, $p < .005$) and empowerment ($r = -.237$, $p < .05$), with high levels of discrimination associated with low levels of satisfaction and empowerment (see Table 9).

Discussion

This empirical research aimed to evaluate the validation of Schalock's multidimensional quality of life model in the Portuguese context. It also intended to analyze the quality of life of disabled people from a sociopolitical perspective, along with the impact of discrimination.

As to the first aim of the study, CFA analyses revealed adequate fit indices; therefore, the validation procedures of the *QoL.Q* for the Portuguese sample were satisfactory. The goodness-of-fit statistics obtained through the CFA procedure, as well as the internal consistency scores, indicate that the final model structure is stable and valid. Removing the sub-scale of social integration is a relevant aspect of this procedure worthy of further analysis.

Verdugo, Schalock et al. (2005), in their study of a sample of blind Spaniards, conducted CFA and found that the four original dimension model lacked goodness-of-fit; additionally, the exploratory factor analysis revealed a three-dimensional model in which 'social integration' was excluded. This dimension was also removed in our study. Only the items related to participating in associations/leisure activities obtained acceptable factor loadings. However, we chose to remove this dimension because these items did not seem to accurately reflect social integration when considering the habits of the Portuguese population. Indeed, a comparative study of 23 EU countries concerning attitudes toward life (Nata & Menezes, 2010) concluded that Portugal is the country with the highest level of sociability; however, Portugal obtained a negative mean score in community involvement, a concept defined by participation in charity or volunteer organizations or in organized activities in the area of residence. As in Spain, Portugal has no established tradition of participation in civic organizations or associations, which may be related to its late democratic transition (Nata & Menezes, 2010). Therefore, due to cultural differences, the dimension of social integration revealed poor fit with respect to a Portuguese sample, whereas the remaining dimensions demonstrated an adequate local fit.

Two important conclusions can be stated concerning the validation of the instrument. The first is related to its multi-dimensional nature; the tested model, which includes 5 factors, has proven to be multi-dimensional, given the fact that when conducting a comparison of scores of AIC, the fit of the first-order global model displayed more adequate fit indices than the second-order global model (Byrne, 2006). The second conclusion relates to the fact that the dimensions of equality of rights and positive discrimination—as proposed by the authors—can be included in this model. Thus, a multi-dimensional model of quality of life composed of five dimensions—satisfaction, competence, empowerment, equality of rights and positive discrimination—fits the Portuguese population, demonstrating the importance of using two sub-scales of rights when measuring individuals' quality of life with a disability.

The second aim of this research was to analyze the quality of life of disabled people from a sociopolitical perspective, accounting for the impact of discrimination. A starting point for this analysis pertains to the dimensions related to participants' satisfaction in life. First, the correlation between satisfaction in life with competence in work/training proved to be the strongest and seems to reflect the importance of positive perceptions about competence in a professional domain. Work is one of the factors with a major impact on the social and material well-being of disabled people (Barnes, Mercer, & Shakespeare, 2005). Additionally, work presents a systematic advantage associated with a substantial reduction in expenses with subsidies/allowances and other services provided by the state (O'Brien & Dempsey, 2004). Understandably, disabled individuals' perception of competence in work/training is highly related to their satisfaction in life. This finding is similar to what Verdugo, Schalock et al. (2005) found with Spaniards with visual impairment, which led these authors to suggest that services for disabled people should focus on interventions promoting the perception of competence in the professional/training area. However, there are numerous obstacles to employment for disabled people, namely physical barriers in buildings, lack of knowledge and the existence of prejudice (Instituto de Emprego e Formação Profissional, 2004). In this study, the results reveal a significant positive correlation between equality of rights with the sense of competence in work/training and a high frequency of discriminatory experiences in the employment context. These findings suggest that an individual focus on promoting employability or perception of competence is insufficient; instead, a broad intervention is required to change the attitudes and practices of employers and the society as a whole. Moreover, employment and training services for disabled people should focus on the promotion and assurance of equality of rights in the workplace (Wagner, Armstrong, Frase, Vandergoot, & Thomas, 2006).

In addition to its correlation with competence in work/training, empowerment is also associated with satisfaction in life. The correlation between self-determination (including 5 items of the original sub-scale of empowerment) with satisfaction found by Verdugo, Schalock et al. (2005) has also been proven to exist in our study. In addition, one might theorize about the influence that the type of impairment has upon the concepts that reflect the individual's reality. For example, in the study by Verdugo, Schalock et al. (2005) with a sample of blind Spaniards, the concept of self-determination was chosen instead of the construct of empowerment. In the present study, the dimension of empowerment is adequate for the sample and is associated with equal rights, which in turn are correlated with positive discrimination. These results suggest that power and being in control of one's life is associated with a political dimension, which, while referenced in Schalock's model (1996), had no concrete expression in the *QoL.Q*.

To fully address the impact of discrimination on the quality of life of disabled people, we must examine some findings more closely. First, the significant negative correlation between empowerment and discrimination prompts us to consider the relevance of a rights' dimension in promoting and assessing the empowerment of disabled people (due to the correlation mentioned above). In addition, a high frequency level of discrimination based on disability has been experienced by more than half of the sample in such important contexts as school and work while participants reveal a high mean score for empowerment. This finding might signify that the quality of life of Portuguese disabled people is determined by individual empowerment rather than by their access to and use of empowering social structures and social attitudes.

In fact, discrimination occurs so often in disabled people's everyday life (e.g., Gilson & De Poy, 2002; McCarthy, 2003) that it is regarded as a profound structural violence; it has a marked negative impact on the well-being of disabled people, their families and communities (Stancliffe, 2001). This research reveals both a significant negative correlation between discrimination and satisfaction as well as a high score mean in the discomfort felt in discriminating experiences. This finding seems to demonstrate the severe impact that discrimination has on people's lives. Considering this discriminatory framework, the high level of consensus concerning the importance of equality of rights is easily understandable and clearly addresses the need felt by disabled people to be recognized as equal to all other citizens.

In conclusion, this empirical study reveals that disabled individuals' quality of life is marked by the relationship between their satisfaction in life and their perception of competence in their work/training and their degree of empowerment. The results regarding empowerment suggest that disabled people only have an individual level of empowerment, as more than half of the participants report high levels of discrimination in contexts that are fundamental for social inclusion and that cause a significant psychological impact. The participants' high level of consensus on the subject of equal rights, as well as the association between this political dimension and empowerment, should cause us to reflect on the urgent need to promote a critical political consciousness on disabled individuals' quality of life and the discrimination to which they are exposed.

It is therefore critical to take into account the relevance of rights and empowerment in promoting disabled individuals' quality of life instead of focusing on personal tragedy (Oliver, 1990) and biological determinism (Barnes et al, 2005), which 'blam[e] the victim' (Nelson & Prillentensky, 2005) and perpetuate the oppression of disabled people through sociopolitical means (Meekosha, 2004). Power and being in control of one's life—which are important to every human being—should not be understood as imposing on someone else. Instead, power is a matter of mutual responsiveness that should exist in the various contexts of a person's life (Herrmann, 2005).

We thus question whether the medical model is able to promote the quality of life of disabled people (van Campen & Iedema, 2007; Vash, 2004). By reassessing the medicalization of disability (Barton, 1993), this model engenders policies that build barriers by assuming that personal and misfortunate circumstances create obstacles (Barnes et al, 2005). Studies on disabled individuals' quality of life should take into account the barriers and discrimination that disabled people face throughout their lives. These studies should also include a political dimension to unveil the dimensions that influence satisfaction in life and not just the perceptions thereof.

Some limitations of the present study will now be discussed. First, the fact that we used an instrument that was originally developed for subjects with intellectual disabilities on a group of participants with various types of impairments (mainly physical) should be taken into consideration. Although the instrument has proven to be adequate, it is possible that the type of impairment plays an important role in an individual's quality of life. Therefore, future research focusing on physical disabilities is important for better understanding the quality of life of this population.

A limitation of this study may be the abnormal distribution of the sample and the bias it might reflect; it may not be representative of the disabled Portuguese population. This distribution was to be expected, as it reflects the social conditioning that disabled people face. Our sample was the one we managed to gain access to, thus representing a part of the disabled population that has achieved some degree of social inclusion. We tried to overcome one of the conditioning factors that society imposes on disabled people, such as physical inaccessibility, with an on-line questionnaire. Nevertheless, the fact remains that we have not reached a significant number of disabled people who are not integrated in society and who do not have access to it. Future studies should attempt to overcome this limitation.

Finally, this study reveals that disabled individuals' quality of life should be understood in a sociopolitical context, promoting equality (Schalock & Verdugo, 2003) and conceptualizing disability as resulting from the interaction between an individual and the society. This understanding implies that it is everyone's responsibility to promote a good quality of life and respect for the civil rights of disabled people.

References

Barnes C., Mercer T., & Shakespeare T. (2005). *Exploring disability: A sociological introduction*, (2nd ed.), Cambridge, UK: Polity Press.

Barton L. (1993). The struggle for the citizenship: The case of disabled people. *Disability and Society*, *8*(3), 235–248. http://dx.doi.org/10.1080%2F02674649366780251

Briggs S. R., & Cheek J. M. (1986). The role of factor analysis in the development and evaluation of personality scales. *Journal of Personality*, *54*, 106–148. http://dx.doi.org/10.1111%2Fj.1467-6494.1986.tb00391.x

Brown M. (2006). *Participation objective, participation subjective*. San Jose, CA: The Center for Outcome Measurement in Brain Injury. Retrieved from http://www.tbims.org/combi/pops

Bryman A., & Cramer D. (2003). *Análise de dados em ciências sociais. Introdução às técnicas utilizando o SPSS para windows* [Quantitative data analysis for social sciences: introduction to the techniques using the SPSS for Windows] (3rd ed.). Oeiras, Portugal: Celta.

Byrne B. M. (2006). *Structural equation modelling with EQS: Basic concepts, applications, and programming*. (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Cummins R. A. (1997). Self-rated quality of life scales for people with an intellectual disability: A review. *Journal of Applied Research in Intellectual Disabilities 10*, 119–216. http://dx.doi.org/10.1111%2Fj.1468-3148.1997.tb00017.x

Cummins R. A. (2000). Objective and subjective quality of life: An interactive model. *Social Indicators Research*, *52*, 55–72. http://dx.doi.org/10.1023/A:1007027822521

Cummins R. A. (2001). Self-rated quality of life scales for people with an intellectual disability: A reply to Ager & Hatton. *Journal of Applied Research in Intellectual Disabilities 14*, 1–11. http://dx.doi.org/10.1046%2Fj.1360-2322.2001.00057.x

De Mayer J., Vanderplasschen W., & Broekaert E. (2009). Exploratory study on drug users' perspectives on quality of life: More than health-related quality of life? *Social Indicators Research*, *90*, 107–126. http://dx.doi.org/10.1007%2Fs11205-008-9315-7

Farquhar M. (1995). Definitions of quality of life: A taxonomy. *Journal of Advanced Nursing*, *22*, 502–508. http://dx.doi.org/10.1046%2Fj.1365-2648.1995.22030502.x

Felce D. & Perry J. (1996). Assessment of quality of life. In R. L. Schalock (Ed.), *Quality of life: Volume I: Conceptualization and measurement* (pp. 63–73). Washington, DC: American Association on Mental Retardation.

Ferdinand R., & Smith M. A. (2003). *Nebraska developmental disabilities provider profiles*. Nebraska, Lincoln: The Arc of Nebraska.

Gardner J. F., & Nudler S. (1997). Beyond compliance to responsiveness: Accreditation reconsidered. In R. L. Schalock (Ed.), *Quality of life: Volume II: Application* *to persons with disabilities* (pp. 135–48). Washington, DC: American Association on Mental Retardation.

Garratt A., Schmidt L., Mackintosh A., & Fitzpatrick R. (2002). Quality of life measurement: Bibliographic study of patient assessed health outcome measures. *BMJ*, *324*, 1417–1419. http://dx.doi.org/10.1136%2Fbmj.324.7351.1417

Gettings R. M. & Bradley V. J. (1997). *Core Indicators Project*. Alexandria, VA: National Association of State Directors of Developmental Disabilities Services, Inc.

Gilson S., & DePoy E. (2002). Theoretical approaches to disability content in social work education. *Journal of Social Work Education*, *38*, 153–165.

Hays R. D., Hahn H., & Marshall G. (2002). Use of the SF-36 and other health-related quality of life measures to assess persons with disabilities. *Archives of Physical Medicine and Rehabilitation*, *83*(Supplement 2), S4–S9. http://dx.doi.org/10.1053%2Fapmr.2002.36837

Herrmann P. (2005). Empowerment: The core of social quality. *European Journal of Social Quality*, *5*(1/2), 289–299. http://dx.doi.org/10.3167%2F146179105780337558

Hu L.-T., & Bentler P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76–99). Thousand Oaks, CA, Sage.

Hughes C., Hwang B., Kim J., Eisenman L. T., & Killian D. J. (1995). Quality of life in applied research: A review and analysis of empirical measures. *American Journal on Mental Retardation*, *99*, 623–641.

Huppert F., & Whittington J. (2003). Evidence for the independence of positive and negative well-being: Implications for quality of life assessment. *British Journal of Health Psychology*, *8*, 107–122. http://dx.doi.org/10.1348%2F135910703762879246

Instituto de Emprego e Formação Profissional (2004). *Valor acrescentado do Trabalhador com (d)eficiência* [Added value of the worker with (dis)abilities]. Lisboa, Portugal: Palmigráfica.

Joyce C. R. B., McGee H. M., & O'Boyle C. A. (1999). *Individual quality of life: Approaches to Conceptualization and Assessment*. Australia, AU: Harwood.

Keith K. D., & Schalock R. L. (2000). *Cross-cultural perspectives on quality of life*. Washington, DC: American Association on Mental Retardation.

Lachapelle Y., Wehmeyer M. L., Haelewyck M.-C., Courbois Y., Schalock K., Verdugo M. A., & Walsh P. N. (2005). The relationship between quality of life and self-determination: An international study. *Journal of Intellectual Disability Research*, *49*, 740–744. http://dx.doi.org/10.1111%2Fj.1365-2788.2005.00743.x

Little T. D., Cunningham W. A., Shahar G., & Widaman K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, *9*, 151–173. http://dx.doi.org/10.1207%2FS15328007SEM0902_1

Maroco J. (2007). *Análise estatística – com utilização de SPSS* [Statistical analysis – using the SPSS]. Lisboa, Portugal: Edições Sílabo.

McCarthy H. (2003). The disability rights movement: Experiences and perspectives of selected leaders in the disability community. *Rehabilitation Counseling Bulletin*, *46*, 209–223. http://dx.doi.org/10.1177%2F003435520304600402

Meekosha H. (2004). Drifting down the gulf stream: Navigating the cultures of disability studies. *Disability & Society*, *19*(7), 721–733. http://dx.doi.org/10.1080%2F0968759042000284204

Nata G., & Menezes I. (2007). Escala de Suporte dos Direitos das Minorias [Minorities' Rights Support Scale], In *Diferença cultural e democracia: Identidade, cidadania e tolerância na relação entre maioria e minorias* [Cultural difference and democracy: Identity, citizenship and tolerance between the majority and the minorities] (Doctoral dissertation). University of Porto, Porto, Portugal.

Nata G., & Menezes I. (2010). Ciclos de vida e atitudes perante a vida: Satisfação com a vida, religiosidade e redes de relações sociais. [Life cycle and attitudes towards life: Satisfaction with life, religiousness and social networks]. In J. M. Pais & V. S. Ferreira (Eds.), *Tempos e transições de vida: Portugal ao espelho da Europa* [Times and life transitions: Portugal in the mirror of Europe] (pp.225–254). Lisboa, Portugal: Imprensa de Ciências Sociais.

Nelson G., & Prilleltensky I. (2005). *Community psychology: In pursuit of liberation and well-being*. New York, NY: Pallgrave MacMillan.

Nelson G., Lord J., & Ochocka J. (2001). *Shifting the paradigm in community mental health: Towards empowerment and community*. Toronto, Canada: University of Toronto Press.

O'Brien J., & Dempsey I. (2004). Comparative analysis of employment services for people with disabilities in Australia, Finland, and Sweden. *Journal of Policy and Practice in Intellectual Disabilities*, *1*, 126–135. http://dx.doi.org/10.1111%2Fj.1741-1130.2004.04027.x

Oliver M. (1990). *The politics of disablement*. Basingstoke, UK: McMillan.

Pallant J. (2001). *SPSS survival manual- a step by step guide to data analysis using SPSS for Windows*. Buckingham, UK: Open University Press.

Pfeiffer D. (2000). The devils are in the details: The ICIDH2 and the disability movement. *Disability & Society*, *15*, 1079–1082. http://dx.doi.org/10.1080%2F713662020

Prilleltensky I., Nelson G., & Peirson L. (2001). The role of power and control in children's lives: An ecological analysis of pathways towards wellness, resilience and problems. *Journal of Community and Applied Social Psychology*, *11*, 143–158. http://dx.doi.org/10.1002%2Fcasp.616

Renwick R., Brown I., & Rafael D. (2000). Person-centered quality of life: Contributions from Canada to an international understanding. In K. D. Keith & R. L. Schalock (Eds.), *Cross-cultural perspectives on Quality of Life* (pp. 5–22). Washington, DC: American Association on Mental Retardation.

Schalock R. L., & Keith K. D. (1993). *Quality of Life Questionnaire*. Worthington, OH: IDS Publishing Corporation.

Schalock R. (2004). The emerging disability paradigm and its implications for policy and practice. *Journal of Disability Policy Studies*, *14*, 204–215. http://dx.doi.org/10.1177%2F10442073040140040201

Schalock R. L. (1996). Reconsidering the conceptualization and measurement of quality of life. In R. L. Schalock (Ed.), *Quality of life: Volume I: Conceptualization and measurement* (pp. 123–139). Washington, DC: American Association on Mental Retardation.

Schalock R. L., & Verdugo M. A. (2003). *Calidad de vida: Manual para profesionales de la educación, salud y servicios sociales*. Madrid, Spain: Alianza Editorial.

Sousa J., Casanova J. L., Pedroso P., Moita A., Gomes A. T., Seiceira F., ... Alves T. (2007). *Mais qualidade de vida para as pessoas com deficiências e incapacidades – uma estratégia para Portugal* [More quality of life for people with disabilities and impairment – a strategy for Portugal]. Vila Nova de Gaia, Portugal: CRPG.

Stancliffe R. J. (2001). Living with the support in the community: Predictors of choice and self-determination. *Mental Retardation and Developmental Disabilities Research Reviews*, *7*, 91–98. http://dx.doi.org/10.1002%2Fmrdd.1013

Tate D. G., Kalpakjian C. Z., & Forchheimer M. B. (2002). Quality of life issues in individuals with spinal cord injury. *Archives of Physical Medicine and Rehabilitation*, *83*(Suppl 2), S18–S25. http://dx.doi.org/10.1053%2Fapmr.2002.36835

Thompson V. L., Noel J. G., & Campbell J. (2004). Stigmatization, discrimination, and mental health: The impact of multiple identity status. *American Journal of Orthopsychiatry*, *74*, 529–544. http://dx.doi.org/10.1037%2F0002-9432.74.4.529

Ubel P., Loewenstein G., & Jepson C. (2003). Whose quality of life? A commentary exploring discrepancies between health state evaluations of patients and the general public. *Quality of Life Research 12*, 599–607.

van Campen C., & Iedema J. (2007). Are persons with physical disabilities who participate in society healthier and happier? Structural equation modelling of objective participation and subjective well-being. *Quality of Life Research*, *16*, 635–645. http://dx.doi.org/10.1007%2Fs11136-006-9147-3

Vash C. (2004). Viewing disability through differing lenses: Medical, political and psychological. *Rehabilitation Counselling Bulletin*, *47*, 247–250. http://dx.doi.org/10.1177%2F00343552040470040601

Verdugo M. A., Prieto G., Caballo C., & Peláez A. (2005). Factorial structure of the Quality of Life Questionnaire in a Spanish sample of visually disabled adults. *European Journal of Psychological Assessment*, *21*, 44–55. http://dx.doi.org/10.1027%2F1015-5759.21.1.44

Verdugo M. A., Schalock R. L., Keith K. D., & Stancliffe R. J. (2005). Quality of life and its measurement: Important principles and guidelines. *Journal of Intellectual Disability Research*, *49*, 707–717. http://dx.doi.org/10.1111%2Fj.1365-2788.2005.00739.x

Wagner C., Armstrong A., Frase R., Vandergoot D., & Thomas D. (2006). Evidence-based employment practices in vocational rehabilitation. In K. J. Hagglund & A. W. Heinemann (Eds.), *Handbook of applied disability and rehabilitation research* (pp.179–210). New York, NY: Springer Publishing Company.

Ware J. E., Kosinski M., & Keller S. D. (1996). A 12-item short-form health survey. *Medical Care*, *34*, 220–233. http://dx.doi.org/10.1097%2F00005650-199603000-00003

Ware J. E., Kosinski M., & Keller S. D. (2002). *How to score version 2 of SF-36 health survey*. Lincoln, RI: Quality Metric.

Wehmeyer M. L., & Schalock R. (2001). Self-determination and quality of life: Implications for special education services and supports. *Focus on Exceptional Children*, *33*(8), 1–16.

Wehmeyer M. L., & Schwartz M. (1998). The relationship between self-determination, quality of life, and life satisfaction for adults with mental retardation. *Education and Training in Mental Retardation and Developmental Disabilities*, *33*, 3–12.

World Health Organisation (2001). *The International Classification of Functioning, Disability and Health*—icf. Geneve, Switzerland, Author.

World Health Organisation (2004). *The World Health Organization Quality of Life (WHOQOL)-BREF* —icf. Geneve, Switzerland, Author.

World Health Organisation Quality of Life Group (1998). The World Health Organization Quality of Life assessment (WHOQOL): Development and general psychometric properties. *Social Science & Medicine*, *46*, 1569–1585.