

PERSONAL OUTCOMES SCALE

ADMINISTRATION AND STANDARDIZATION MANUAL

Stichting Arduin Universiteit Gent

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Purpose and Use of the Personal Outcomes Scale

As the concept of quality of life (QOL) has evolved from a philosophical concept to both a measurable construct and an action-oriented change agent, there has emerged in the field a corresponding need to develop, implement, and use a systematic approach to the assessment of domain-referenced quality of life outcomes. As discussed below, these outcomes can be used for multiple purposes at both the individual and organization level.

The *Personal Outcomes Scale* (POS) represents one such assessment approach to the measurement of QOL outcomes. The Scale is based on the QOL conceptual framework summarized in Table 1, and the QOL measurement framework summarized in Table 2 (see pages 9 and 10). As described in this Manual, the proper administration and use of the POS results in the assessment of QOL indicators related to the eight core (and universal) QOL domains shown in Table 1. This assessment includes both subjective/self-report and objective/direct observation ratings.

Individual-Level Uses of POS Data

1. Provides feedback to the person regarding his/her status on the eight domains composing a life of quality, and whether or not personal and organizational-level quality improvement strategies have made a difference in the person's life.
2. Establishes an expectation that change is possible and can occur in the multiple dimensions composing a life of quality.
3. Confirms that the organization serving the client is committed to a holistic approach to the person.
4. Compares subjective and objective assessments of quality of life indicators.

Organization-Level Uses of POS Data

Provides individual and aggregate information/data that can be used to:

1. Share information about client outcomes and changes in those outcomes over time. (Self Evaluation)
2. Determine which individual, organization-referenced, and community factors predict outcome scores. (Evidence-Based Practices)
3. Use information about outcomes and their significant predictors as a basis for data tutorials, right to left thinking, and targeting significant predictor variables (Quality Improvement).

Assessment Model

The *Personal Outcomes Scale* (POS) has been developed jointly by Stichting Arduin and the Universiteit Gent (Vakgroep Orthopedagogiek) for the purpose of assessing a person's quality of life (QOL) based on specific indicators associated with each of the eight core QOL domains that have been validated in a series of cross-cultural studies (Jenaro et al., 2005; Schalock et al, 2005; Schalock & Verdugo, 2002; Wang et al., 2007). These eight domains are personal development and self determination (that reflect a person's level of independence); interpersonal relations, social inclusion, and rights (that reflect a person's social participation); and emotional, physical, and material well-being. The Scale's development has been guided by three significant trends impacting the field of intellectual disabilities: (a) reframing quality; (b) assessing personal outcomes based on a validated QOL conceptual and measurement framework; and (c) involving multiple stakeholders in the process of selecting relevant QOL-related indicator items, administering the assessment instrument, and developing and using the final instrument and resulting data.

Reframing Quality

The concept of quality of life has evolved significantly in the field of intellectual and closely related developmental disabilities over the last two decades. Introduced initially as a sensitizing notion that during the 1980s and 1990s grounded and guided our thinking about what an individual values and desires, during the past decade the concept has evolved from: a concept to a measurable construct, a model that describes what to a framework that suggests how, an idiographic (microsystem) focus to a multi-system

perspective, and an idea to an action-oriented change agent. As a result of these changes, we are moving to the development of a more detailed and empirically based model of QOL that is being used internationally as an important conceptual and measurement framework for assessing personal outcomes, guiding organization and systems-level policies and practices, and implementing quality improvement strategies.

The reliable and valid assessment of personal QOL-related personal outcomes is basic to reframing quality. In addition, reference is made in the QOL assessment literature to the etic (universal) and emic (culture-bound) properties of a construct or phenomenon. Initial investigations into the etic and emic properties of the QOL construct were hampered by different concepts being rated across studies and the lack of empirically validated QOL domains and indicators. More recent studies based on the QOL conceptual and measurement frameworks summarized later in Tables 1 and 2 have increased our understanding of the etic and emic properties of the construct and suggest that: (a) QOL factors and domains are more culture free, whereas QOL indicators are more cultural based (Jenaro et al. 2005; Schalock et al., 2005); and (b) that particular aspects of personal well-being, as a measure of subjective well-being, may also show both etic and emic properties (Cummins et al., 2008; Lau et al., 2005).

Quality of Life Conceptual and Measurement Framework

The *QOL conceptual framework* that guided the development of the POS is that the QOL concept is characterized by its being multidimensional, hierarchical, and has both etic (universal) and emic (culture-bound) properties. Table 1 summarizes these characteristics in terms of component (left column) and definition and examples (right column). The importance of this QOL conceptual framework is that it provides the firm

foundation for: (a) measuring and reporting personal outcomes; (b) using QOL-related factors, domains, and indicators in the implementation and evaluation of individualized supports and program practices; and (c) guiding quality improvement strategies (Schalock et al., 2008 a&b).

Table 1. Quality of Life Conceptual Framework

<u>Component</u>	<u>Definition and Examples</u>
QOL Factor	Higher Order Construct (e.g. <u>Independence, Social Participation, and Well-Being</u>)
QOL Domains	Set of Factors Defining Multidimensionality of QOL <ul style="list-style-type: none"> >Personal Development & Self-Determination (<u>Independence</u>) >Interpersonal Relations, Social Inclusion, Rights (<u>Social Participation</u>) >Emotional, Physical, Material Well-Being (<u>Well-Being</u>)
QOL Indicators	QOL-Related Perceptions, Behaviors and Conditions That Define Operationally Each QOL Domain <ul style="list-style-type: none"> >Personal Development: ADLs and IADLs >Self-Determination: choices, decisions, control > Interpersonal Relations: social networks friendships >Social Inclusion: community integration/participation >Rights: human and legal >Emotional Well-Being: safety and security >Physical Well-Being: health and nutritional status >Material Well-Being: financial status, employment
Indicator Items	Specific items used to assess personal outcomes on the basis of perceived well-being ('self report') or an objective indicator of the person's life experiences and circumstances ('direct observation')

The *QOL measurement framework* shown in Table 2 has emerged from a combination of qualitative and quantitative studies that have been guided by the following QOL conceptual principles (Brown et al., 2004; Schalock et al, 2002): QOL is multidimensional and influenced by personal and environmental factors and their interactions, has the same components for all people, and has both subjective and objective aspects.

Table 2. Quality of Life Measurement Framework

-
1. Is based on a QOL conceptual framework such as that shown in Table 1.
 2. Focuses on personal outcomes that are person-defined and valued aspirations and measured in reference to QOL domains and indicators.
 3. Involves persons with disabilities in the design and administration of the assessment instrument.
 4. Measures both subjective (i.e. perceptual) and objective (i.e. life events and circumstances) indicators. Criteria for selecting specific indicator items are that those indicator items: reflect what people want in their lives, relate to current and future policy issues, are those that the service provider has some control over, can be used for reporting and quality improvement purposes, and are relevant to different diagnostic groups and persons without disabilities.
 5. Is sensitive to both the etic (universal) and emic (culture-bound) properties of the QOL domains and indicators.

6. Incorporates the systems perspective that captures the multiple environments impacting individuals with disabilities at the micro, meso, and macrosystems levels.
 7. Uses multivariate research designs to evaluate the influence that personal and environmental variables have on assessed QOL-related outcome variables.
-

The Development of the Personal Outcomes Scale (POS)

By design, the POS captures the universal aspects of quality of life (as reflected in QOL factors and domains) and the more culturally-based properties of the construct (as reflected in the specific indicator items assessed). This goal was accomplished by using the expertise of multiple stakeholders in implementing the following 10 steps in the Scale's development.

1. The initial item pool was derived from previous research and published literature regarding domain-specific indicator items such as those shown in Table 1.
2. From the beginning our intent was to develop parallel forms of a scale that would allow for the measurement of both subjective and objective indicators (see Table 2 item 4). Our intent was operationalized in the *Personal Outcomes Scale* in the form of a Self Report and a Direct Observation version. For comparability purposes, the content of each item should be (and eventually was) the same for Self Report and Direct Observation.
3. Expert judges in the field from Belgium, the Netherlands and the United States evaluated each item in reference to four criteria: first, does the item reflect what people want in their lives ('importance'); second, does the item relate to current and future policy issues ('relevance'); third, are the items assessed those that the service/supports provider has some control over ('feasibility'); and fourth, can the ratings on the items be used for reporting and quality improvement purposes.
4. Focus groups in Belgium and the Netherlands composed of important stakeholders (e.g. professionals, organization personnel, clients, and families)

- evaluated each potential item/indicator identified in step three in reference to its value and importance (that is its cultural relevance/emic property) to them. Based on this process, 124 items reflecting the eight QOL domains became potential assessment items.
5. After receiving the input from the focus groups the authors developed the parallel wording for the Self Report and Direct Observation versions. In addition, during this phase the authors finalized the 3-point rating scale for each item.
 6. A pilot version of the scale was administered in community based services and large facilities in Belgium and the Netherlands. Forty advanced master students in Special Education were trained in how to administer the scale and how to be an interviewer. For each interview, the interviewer rated on a 3-point Likert scale the: ease of presentation, administration, time required, clarity of the item to the person, level of understanding of the respondent, willingness of the respondent to provide the scores/information, and clarity of the language used in the instrument.
 7. Cronbach's alphas were calculated from the pilot study to determine internal consistency. The Scale was refined through these analyses, together with the feedback from the interviewers on the themes referenced in step 6. Some indicator-items were removed from the Scale, resulting in 6 items per domain. These 6 items represented the highest alpha's per domain, and the item's validation based on its clarity and robustness as evaluated by the interviewers.
 8. A second pilot study (conducted in two facilities in the Netherlands and one in Belgium) involved administration by two Master Trainers of the 6 items per domain version of the Scale to 79 clients (or their proxies) who were interviewed

9. The assessment instrument was finalized, including administration and scoring instructions. In addition, this initial version of the POS Standardization Manual was developed and published online (www.poswebsite.org).
10. With the finalization of the POS and the publication of the initial version of the Standardization Manual, the process was set in motion for the following activities:
 - a) the administration of the POS to all clients of Arduin and several facilities throughout Belgium and the Netherlands;
 - b) the use of the instrument for further studies regarding its reliability and validity;
 - and c) the use of the instrument for multiple research purposes.

Administration Procedures

Interviewer Qualifications

The POS should be *administered* by a professional who has extensive experience in the field of ID and training in the administration and scoring of behavioral assessments. This professional should be familiar with the QOL-framework, in knowledge, competence, and attitude. In administering the Scale, the interviewer should be sensitive to the cultural characteristics of the clients who are providing self-report information and the respondents who are providing direct observation information. The interviewer should be aware that responses may vary due to personal characteristics, experiences, and circumstances of respondents, and that accommodation may need to be made with respect to the language spoken and interviewing techniques, such as using prompts, augmentative and alternative communications.

Interviewer Training Guidelines

1. It is essential that users of the POS are trained in its proper administration, scoring and interpretation. This training process involves the following seven aspects conducted or supervised by a certified POS Instructor or Master Trainer.
2. Overview of the concept and meaning of quality of life and the QOL conceptual and measurement frameworks (Tables 1 and 2).
3. Overview of the POS including two sections (Self Report and Direct Observation), response format (3-point Likert rating scale), and Interviewer and Respondent Qualifications.
4. Familiarity with the actual items and their meaning. Appendix A contains a description of each item for both the Self Report and Direct Observation versions.

5. Administration procedures as described in the directions and general guidelines discussed in the following sections.
6. Scoring directions as described in the section on Scoring Procedures (pp. 20-23).
7. Conducting one or more practice sessions. Each potential interviewer should actually administer the Scale to a partner during the training session. The person should score the items, and demonstrate that he/she can determine raw and total scores and enter the data correctly on the POS Summary Form.
8. Demonstrating administration and scoring validity. The instructor needs to observe # 7 and provide feedback about any problems encountered in the practice session and provide the opportunity for a second practice session if necessary.

Respondent Qualifications

Respondents must have known the person being rated for at least three months and have had the recent opportunity to observe the person in one or more environments for a substantial period of time (3-6 months). A respondent may be a parent, relative, guardian, direct support staff, teacher, or any other individual who works or lives with the person being evaluated and understands their current life experiences and circumstances.

Directions for Self Report Version

1. For those clients who can read and understand the items, the client is asked to give his position on the respective item.
2. For those clients for whom the item needs to be read to and explained, a rating is made based on the conversation with the client regarding the item.
3. If the client cannot respond for him or herself, a person who knows the individual well should independently provide the rating as if he or she were the person.

4. The client or proxy understands clearly the intent of the assessment and that the information obtained on the Scale will NOT be used to evaluate the person's ability or eligibility for services or supports, but rather provide information about the individual's QOL and how it might be improved.
5. All items on the Scale should be evaluated on the basis of self-report by the client (or the client's proxy). The respondent may need to be encouraged to rate each item with frequent verbal encouragement and reinforcement provided throughout the Scale's administration. The interviewer may need to use augmentative and alternative communication.
6. If a proxy is used, he or she must know well the person being rated, and have had the recent opportunity to observe the person in one or more environments for a substantial period of time (at least a year). A proxy respondent may be a parent, relative, guardian, direct support staff, teacher, or any other individual who works or lives with the client and who understands the person's current life experiences and circumstances.

Directions for Direct Observation Version

1. The respondent must have known the person being rated and have had the recent opportunity to observe the person in one or more environments for a substantial period of time (3-6 months). A respondent may be a parent, relative, guardian, direct support staff, teacher, or any other individual who works or lives with the person being evaluated and who understands the person's current life experiences and circumstances.
2. The respondent understands clearly the intent of the assessment and that the information obtained on the Scale will NOT be used to evaluate the person's ability or eligibility for services or supports, but rather to provide information to clients, parents, staff, and other stakeholders about the client's quality of life (as measured on the Scale's items) and to develop strategies to improve the person's QOL.

General Guidelines for the Administration of the POS

1. Make sure the interview takes place in a room that is comfortable to the respondent. The place in which the person lives ensures privacy and confidentiality. The actual interview should occur after the interviewer and the client or respondent have spent a little time 'getting to know one another.' This 'pre-interview time' can be used to discuss topics (e.g. the person's job, hobbies, or family life) that are of interest to the person.
2. You may change the order in which you assess the domains, beginning with those domains that are most enjoyable or least stressful to the person.

3. In addition to the client, a person can be present during the assessment to assist in clarifying the items. If this is the case, the person's input should focus on giving examples and helping clarify the question, NOT to answer for the client. In addition, during the interview/conversation the interviewer should have a direct line of sight to the client so that the interviewer can focus on the client during the conversation.
4. Make sure you communicate clearly to the client or respondent the importance of QOL to the person, the purpose of the interview, the assurance that the POS is not a test, and that there are no right or wrong answers.
5. If an item is difficult or the respondent does not provide an answer, the best procedure is to go to the next item and come back later in the assessment and ask about the question again.
6. Do not hesitate to confirm the answers with additional probes, especially when you're not sure an accurate answer is given. However, if there is doubt about a rating, even after additional probes, choose the lower rating.
7. If in a Self Report assessment the client either finds the assessment stressful or asks to leave, then the best procedure is to give the client a rest period or come back later. Remember: it is the client's interview.
8. The Self-Report and Direct Observation versions should not be completed during the same session. Separate assessment sessions avoid contamination in interpreting or evaluating the scoring of the items.
9. Make every effort to keep your language clear and simple, and check often to see whether the person understands what you're saying.

Scoring Procedures

Overview

Each indicator item is assessed in two ways: on the basis of the person's self report (i.e. subjectively) and on the basis of direct observation of the person's experiences and circumstances (i.e. objectively). The advantages to this approach are that it is sensitive to the: (a) empirical finding that there is little or no correlation between subjective and objective measures of quality of life (Cummins, 1997); (b) historical emphasis in QOL assessment on the importance of perceptual factors, satisfaction, and subjective well-being (Bonham et al., 2004; Cummins et al., 2008); (c) finding that objective QOL measures are better for organization transformations and quality improvement (Schalock & Felce, 2004); and (d) potential discrepancies between the perception of the person and the objective evaluation of his/her life experiences and circumstances (Schalock et al., 2007).

The POS uses a 3-point Likert rating scale for both the Self-Report and Direct-Observation versions. Likert-type scales, which are easily understandable and meaningful to the respondent and thus can be used to capture a wide range of variance in attitudes and behaviors, provide an efficient and reliable method for assessing personal outcomes in psychometrically sound ways (Hartley & MacLean, 2006). Self report and direct observation ratings are transferred onto the POS Summary Profile and used for analysis, reporting and quality improvement purposes.

Scoring via the Electronic Version of the POS

As there is an electronic, web-based version of the POS, users can complete the POS electronically and obtain the Summary Profile electronically.

Hard Copy Scoring

The interviewer needs to transfer the scores (3, 2 or 1) for each item onto the Summary Profile shown below. Directions are: a) each item’s score is entered into the respective cell on the Summary Form (e.g. Personal Development, Item # 1): b) scores for the six items for each domain are totalled to produce the Domain Score; c) the two or three respective Domain Scores are summed to produce a Factor Score; and d) the three Factor Scores are summed to produce a QOL Index Score for both Self Report and Direct Observation.

POS Summary Form

			Self Report	Direct Observation
Factor	Domain	Item	Score	Score
Independence	Personal Development	1.		
		2.		
		3.		
		4.		
		5.		
		6.		
		Total		
	Self-Determination	1.		
		2.		
		3.		
		4.		
		5.		
		6.		
		Total		
Total Score For Independence Factor				
Social	Interpersonal Relations	1.		

Participation		2.		
		3.		
		4.		
		5.		
		6.		
		Total		
		Social Inclusion	1.	
	2.			
	3.			
	4.			
	5.			
	6.			
	Total			
	Rights	1.		
		2.		
		3.		
		4.		
		5.		
		6.		
Total				
Total Score For Social Participation Factor				
Well-being	Emotional Well-being	1.		
		2.		
		3.		
		4.		
		5.		
		6.		
		Total		
	Physical Well-being	1.		
		2.		
		3.		
		4.		
		5.		
		6.		
		Total		
	Material Well-being	1.		
		2.		
		3.		
		4.		
		5.		
6.				
Total				

Total Score For Well-being Factor			
Quality of Life Index (Total of Independence plus Social Participation plus Well-being)	Quality of Life Self Report Index		
	Quality of Life Direct Observation Index		

Standardization Data

Overview

Our approach to standardization has been to focus on establishing three indices of reliability and three indices of validity. The reliability indices are a measure of internal consistency (Alpha coefficients), inter-rater reliability, and the consistency between self report and direct observation. The validity indices include content, construct, and concurrent validity.

Each reliability and validity indices is summarized in the individual tables that follow on subsequent pages. These tables will be updated based on additional reliability and validity studies, and published in subsequent versions of this Standardization Manual.

In total, data for reliability and validity determination were collected during the period of July 2008 until December 2008. Data for developing standard scores (i.e. normative data) are collected from June 2008 until December 2010.

Reliability Indices

Internal Consistency

Data were collected on 399 clients (level of ID: 34,9% mild, 31,7% moderate, 18,8% severe, 14,6% profound). The data were used to calculate Cronbach's Alpha coefficients. These coefficients are shown in Table 3 A.

Table 3 A Internal Consistency Coefficients (Cronbach's Alpha) for the eight domains

	Self-Report (Consumer or Family)	Direct Observation
Personal Development	.70	.69
Self-Determination	.75	.80
Interpersonal Relations	.67	.70
Social Inclusion	.73	.74
Rights	.47	.40
Emotional Well-being	.72	.69
Physical Well-being	.59	.60
Material Well-being	.25	.25
Total	.88	.85

In addition to the above coefficients, Cronbach's Alpha coefficients were calculated between factor scores. These coefficients are reported in table 3B.

Table 3 B Internal Consistency Coefficients (Cronbach's Alpha) for factor scores.

	Independance	Social Inclusion	Well-being	Total score
Self-Report				
Total	.84	.79	.74	.88
Consumer	.58	.73	.79	.84
Family	.78	.78	.73	.86
Direct Observation	.85	.78	.66	.85

To determine mean differences between consumers, proxies and staff responses a separate study was conducted. This study involved three trained interviewers who are master students in the Department of Special Education of the Ghent University who interviewed clients and respondents under two conditions. First, 42 clients (intellectual level mild with the necessary receptive and expressive language; 60,5 % male, 39,5 % female; age range 19 to 72 years, $M = 38$, standard deviation [SD] = 14,09) and 42 family members (who acted as proxies) were interviewed separately on the Self Report version of the POS. Second, for the same 42 clients, two staff members ($n=84$) were interviewed on the Direct Observation version of the POS. The relationship between the mean scores of consumer, proxy and staff responses was analyzed, using t - tests for paired samples. The results suggested no significant differences in total mean scores (consumer/staff, $t(40) = 1.78$, $p=.09$; consumer/proxy, $t(35) = 1.03$, $p=0.31$; staff/proxy, $t(36) = -.512$, $p=0.60$; staff/staff, $t(37) = 1.48$, $p=0.14$).

Interrespondent Reliability

The same study as described above was used to determine interrespondent reliability. The interrespondent reliability coefficients consumer vs proxy are reported in Table 4

(column 1) . The interrespondent reliability coefficients staff member 1 vs staff member 2 are reported in Table 4 (column 2).

Table 4. Inter-respondent Reliability Coefficients

Domain	Self Report Client versus Proxy (family members)	Direct Observation Staff Member 1 versus Staff Member 2
Personal development	.57*	.67*
Self-Determination	.47*	.29
Interpersonal Relations	.68*	.67*
Social Inclusion	.76*	.78*
Rights	.78*	.76*
Emotional Well-being	.60*	.69*
Physical Well-being	.45*	.79*
Material Well-being	.55*	.79*
Total	.70*	.78*

* $p < 0.01$

Consistency Between Self Report and Direct Observation

Data were collected during the second pilot study on 79 clients (54,4% male, 45,6 % female; age ranged from 18-79) and 79 respondents (direct support staff or family members) to determine the correlation between the Self Report and Direct Observation

versions of the Scale (these data were collected in four facilities by two trained interviewers). These data are reported in Table 5 A.

Table 5 A. Pearson's Correlation Coefficients Between
Self Report and Direct Observation Versions of the POS (n=79)

Domain	Version <i>Correlation between Self-Report and Direct Observation</i>
Personal Development	.78*
Self-Determination	.72*
Interpersonal Relations	.52*
Social Inclusion	.74*
Rights	.80*
Emotional Well-being	.42*
Physical Well-being	.63*
Material Well-being	.71*
Total	.83*

* $p < 0.01$

Subsequently data on 399 Arduin clients have been collected to determine the correlation between Self Report (client or family or mixed client/family) and Direct Observation.

These data are reported in Table 5 B. (Coefficients are reported cfr respondent type and the total).

Table 5 B. Pearson's Correlation Coefficients Between
Self Report and Direct Observation Versions of the POS (n=399)

Domain	Self-report vs Direct Observation	
Personal development	Client	.70
	Family	.75
	mixed	.84
Self-Determination	Client	.50
	Family	.60
	mixed	.75
Interpersonal Relations	Client	.48
	Family	.58
	mixed	.58
Social Inclusion	Client	.69
	Family	.71
	mixed	.74
Rights	Client	.75
	Family	.59
	mixed	.76
Emotional Well-being	Client	.47
	Family	.49
	mixed	.48
Physical Well-being	Client	.52
	Family	.50
	mixed	.52
Material Well-being	Client	.66
	Family	.58
	mixed	.63
Total score	Client	.71
	Family	.76
	mixed	.80

(all significant at $p < 0.01$)

Validity Indices

Content Validity

Content validity is the extent to which an assessment instrument actually measures the sample of behaviors under consideration. We are approaching content validity from two perspectives: descriptive and empirical. In reference to descriptive content validity, we have employed two procedures: a) during the Scale's development we completed the 10 steps as described previously in the section entitled "The Development of the Personal Outcomes Scale (POS)"; and b) the indicators that were used in all stages of the Scale's development were those reported in the international research literature on QOL (Schalock & Verdugo, 2002).

Construct Validity

Construct validity is the extent to which a test measures the underlying theoretical characteristic or concept of the phenomenon being studied. We approached the demonstration of construct validity from two perspectives: descriptive and empirical. In reference to descriptive, and as described in the 10 steps used in the development of the POS, our work was based on a conceptual and measurement model (see Tables 1 and 2), expert judgments, focus groups, and the selection of final items on the basis of clearly described and literature referenced criteria (Verdugo et al., 2008).

In reference to the empirical perspective, inter-correlations were computed between the eight QOL-domains and the total score for each version of the Scale. Our rationale is that these domains should be intercorrelated, but not highly intercorrelated. Table 6 presents the inter correlation coefficients for the Self Report version, and Table 7 for the

Direct Observation version.

Table 6. Inter-correlations of POS Subscales (n=79): Self Report

	PD	SD	IPR	SI	R	EWB	PHWB	MWB
PD								
SD	.65**							
IPR	.47**	.40**						
SI	.50**	.50**	.48**					
R	.46**	.47**	.43**	.39**				
EWB	.16	.19	.43**	.20	.31**			
PHWB	-.01	-.06	.14	.13	.32**	.43**		
MWB	.28*	.18	.27*	.11	.39**	.38**	.23*	
Total score	.71**	.67**	.73**	.69**	.73**	.59**	.41**	.54**

* $p < 0.05$ (two-tailed); ** $p < 0.01$ (two-tailed)

Key: PD (Personal Development), SD (Self-Determination), IPR (Interpersonal Relations), SI (Social Inclusion), R (Rights), EMB (Emotional Well-Being), PHWB (Physical Well-Being), MWB (Material Well-Being)

Table 7. Inter-correlations of POS Subscales (n=79): Direct Observation

	PD	SD	IPR	SI	R	EWB	PHWB	MWB
PD								
SD	.73**							
IPR	.31**	.48**						
SI	.48**	.47**	.38**					
R	.43**	.55**	.45**	.48**				
EWB	.09	.12	.42**	.29**	.24*			
PHWB	-.12	-.22*	.09	.21	.25*	.49**		
MWB	.24*	.34**	.26*	.26*	.53**	.30**	.11	
Total score	.64**	.71**	.69**	.72**	.77**	.57**	.35**	.59**

* $p < 0.05$ (two-tailed); ** $p < 0.01$ (two-tailed)

Key: PD (Personal Development), SD (Self-Determination), IPR (Interpersonal Relations), SI (Social Inclusion), R (Rights), EMB (Emotional Well-Being), PHWB (Physical Well-Being), MWB (Material Well-Being)

In addition to the data summarized in Tables 6 and 7, to determine whether or not the POS discriminates appropriately between groups, analyses of variance were computed using data from those 79 clients involved in the second pilot study. These potential differences were analyzed based on age, gender, and level of intellectual functioning (mild-moderate-severe-profound). The rationale used in the interpretation of these analyses is that there should be no differences in assessed QOL between ages or

gender, but that there should be significant mean differences among the four levels of intellectual functioning. Based on the analyses to date, there are no age or gender differences ($F=1.525$ and $.386$ respectively; $p>.1$) but there is a significant difference among the four levels of intellectual functioning ($F(3/76) = 11.6$, $p<0.00$).

Concurrent Validity

Concurrent validity is the extent to which a person's score on a certain test (in this case the POS) correlates with a criterion measure, which is usually that person's score on another test (in this case the GENCAT-Scale; Verdugo et al. 2008). We approached the demonstration of concurrent validity through the administration of the Direct Observation version of the POS and the GENCAT (which is based on objective measures of QOL-indicators only). In this study the POS was administered by a trained interviewer using the 'Directions for Direct Observation Version' described earlier in the Manual. The GENCAT was completed by a respondent under the direction of the same trained interviewer, who initially explained the purpose of the study and gave a brief overview of the GENCAT. During the respondents completion of the GENCAT, the interviewer was available for clarifying any items and answering any questions from the respondents. Participants were 58 individuals (36 male, 22 female) with intellectual disabilities who are supported by Arduin Foundation in the Netherlands and VZW Tordale in Belgium. These concurrent validity coefficients are presented in Table 8.

Table 8. Concurrent Validity Coefficients
 Pearson's Correlation Coefficients Between
 Direct Observation Version of the POS and the GENCAT

Domain	<i>Correlation between Direct Observation POS and GENCAT</i>
Personal Development	.61*
Self-Determination	.79*
Interpersonal Relations	.57*
Social Inclusion	.37*
Rights	.47*
Emotional Well-being	.55*
Physical Well-being	.65*
Material Well-being	.23
Total	.87*

* $p < 0.01$

References

- Anastasi, A & Urbina, S. (1997). *Psychological testing* (7th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Bonham, G. S., Basehart, S., Schalock, R. L., Marchand, C. G., Kirchner, N., & Rumenap, J. M. (2004). Consumer-based quality of life assessment: The Maryland Ask Me! Project. *Mental Retardation*, 42 (5), 338-355.
- Brown, I., Keith, K.D., & Schalock, R. L. (2004). Quality of life conceptualization, measurement, and application: Validation of the SIRG-QOL consensus principles. *Journal of Intellectual Disabilities Research*, 48 (4 and 5), 451.
- Cummins, R. A. (1997). Assessing quality of life. In R. I. Brown (Ed.), *Assessing quality of life for people with disabilities: Models, research, and practice* (pp. 116-150). London: Stanley Thornes Publishes Ltd.
- Cummins, R. A., Mellor, D., Stokes, M., & Lau, A. L.D. (2008). Measures of subjective wellbeing. In E. Mofu and T. Oakland (Eds.), *Assessment in rehabilitation and health* (pp. 25-40). New York: Allyn and Bacon.
- Hartley, S. L. & MacLean, W. E. Jr. (2006). A review of the reliability and validity of Likert-type scales for people with intellectual disability. *Journal of Intellectual Disability Research*, 50 (Part II), 813-827.
- Jenaro, C., Verdugo, M.A., Caballo, C., Balboni, G., Lachappele, Y., Otbrebski, W., & Schalock, R. L. (2005). Cross-cultural study of person-centered quality of life domains and indicators: A replication. *Journal of Intellectual Disability Research*, 49 (10), 734-739.
- Lau, A. L.D., Cummins, R. A., & McPherson, W. (2005). An investigation into the cross-

- cultural equivalence of a personal well-being index. *Social Indicators Research*, 72, 403-430.
- Schalock, R. L., Brown, I., Brown, R., Cummins, R. A., Felce, D., Matikka, L., Keith, K.D., & Parmenter, T. (2002). Conceptualization, measurement, and application of quality of life for persons with intellectual disabilities: Results of an international panel of experts. *Mental Retardation*, 40, 457-470.
- Schalock, R. L. & Felce, D. (2004). Quality of life and subjective well-being: Conceptual and measurement issues. In E. Emerson, C. Hatton, T. Thompson, and T. R. Parmenter (Eds.), *International handbook of applied research in intellectual disabilities* (pp. 261-279). London: John Wiley and Sons, Ltd.
- Schalock, R. L., Gardner, J. F. & Bradley, V. J. (2007). *Quality of life for persons with intellectual and other developmental disabilities: Applications across individuals, organizations, communities, and systems*. Washington, DC: American Association on Intellectual and Developmental Disabilities.
- Schalock, R. L. & Verdugo, M.A. (2002). *Handbook on quality of life for human service practitioners*. Washington, DC: American Association on Mental Retardation.
- Schalock, R L. , Bonham. G. S., & Verdugo, M.A. (2008 a). The conceptualization and measurement of quality of life: implications for program planning and evaluation in the field of intellectual disabilities. *Evaluation and Program Planning*, 31(2), 181-190.
- Schalock, R. L., Verdugo, M.A., Jenaro, C., Wang, M., Wehmeyer, M., Xu, J. & Lachapelle, Y. (2005). A cross-cultural study of quality of life indicators. *American Journal on Mental Retardation*, 110, 298-311.

- Schalock, R. L., Verdugo, M.A., Bonham, G. S., Fantova, F., & van Loon, J. (2008b). Enhancing personal outcomes: Organizational strategies, guidelines, and examples. *Journal of Policy and Practice in Intellectual Disabilities*, 5 (1), 18-28.
- Verdugo, M.A., Arias, B., Gomez, L.E., & Schalock, R. L. (2008). *The GENCAT Scale of Quality of Life: Standardization Manual*. Barcelona: Department of Social Action and Citizenship, Generalitat of Catalonia. (Available from Laura E. Gomez: lauraelisabet@usal.es).
- Schalock, R. L., Gomez, L., & Arias, L. (in press). Developing multi-dimensional quality of life scales focusing on context: The Gencat Scale. *Siglo Cero* (Spain).
- Wang, M., Schalock, R. L., Verdugo, M.A. & Jenaro, C. (2007). The cross-cultural validation and analysis of quality of life domains: Demonstrating construct comparability and measurement equivalence. Paper presented at the SIRG-QOL Roundtable, San Diego, CA;, December 7, 2007.