

**Personal Wellbeing Index –  
School Children  
(PWI-SC)  
(English)  
3<sup>rd</sup> Edition**

**Robert A. Cummins**

**Anna L. D. Lau**

School of Psychology  
Deakin University

**MANUAL  
2005**



Revisions were made to this edition of the manual by :

Robert A. Cummins Ph.D., F.A.Ps.S.  
School of Psychology  
Deakin University  
221 Burwood Highway  
Melbourne  
Victoria 3125  
AUSTRALIA

e-mail: robert.cummins@deakin.edu.au

Anna L.D. Lau, Ph.D  
School of Psychology  
Deakin University  
221 Burwood Highway  
Melbourne  
Victoria 3125  
AUSTRALIA

e-mail: anna.lau@deakin.edu.au

**All correspondence to this English version should be made to the first author:  
Robert A. Cummins, PhD., F.A.Ps.S.**

### **Acknowledgment**

We would like to thank Dr Jane McGillivray for her valuable suggestions on the test contents, Ann-Marie James and Viggie Tang for assisting with the preparation of this document.

Published by the Australian Centre on Quality of Life, School of Psychology, Deakin University

ISBN 1 74156 051 9

Date of Revision: 6 October 2010

# CONTENTS

<b>1. Introduction.....</b>	<b>4</b>
1.1 Measuring and Defining quality of life.....	4
1.2 The Personal Wellbeing Index (PWI) Scale.....	4
1.3 Psychometric Characteristics.....	5
1.4 Parallel Forms and Translations of the PWI Scale.....	5
1.5 The PWI-SC Scale.....	5
1.5.1 The test item: Domain on “Feeling Part of the Community”.....	6
<b>2. Scale Administration.....</b>	<b>7</b>
2.1 Ethics.....	7
2.2 General Procedure.....	7
2.3 Specific Procedures: Use of 0-10 Likert Response Scale.....	7
2.3.1 Standard Instructions.....	7
2.3.2 Pre-testing (Optional).....	8
2.4 Additional School-Children/Adolescent Specific Items (Optional).....	8
<b>3. Happy with Life as a Whole and The PWI-SC Scale.....</b>	<b>9</b>
3.1 Happy with Life as a Whole [Optional].....	9
3.2 Personal Wellbeing Index – School Children/Adolescents [Life Domains].....	9
<b>4. Data Analysis.....</b>	<b>12</b>
4.1 Data Cleaning.....	12
4.2 Data Analysis of “Happiness with Life as a Whole” and Personal Wellbeing Index- School Children Scale Items.....	12
4.3 Data Analysis converting raw scores into the standard 0 – 100 scale format.....	12
4.4 Data interpretation.....	13
<b>5. Reference List.....</b>	<b>14</b>

# 1. Introduction

---

## 1.1 Measuring and Defining quality of life

The quality of life (QOL) construct has a complex composition, so it is not surprising that there is neither an agreed definition nor a standard form of measurement. This is not due to a lack of ideas. Cummins' web-site Directory of Instruments (<http://acqol.deakin.edu.au/instruments/instrument.php>) describes some 800 instruments which purport to measure life quality in some form, but each one contains an idiosyncratic mixture of dependent variables.

It is also notable that many QOL instruments have been developed for highly selected groups in the population; particularly in regard to scales devised to monitor medical conditions or disability types. Such scales are unsuitable for use with the general population. On the other hand, most scales devised for use with general population samples cannot be used with all sectors of the population, such as people with cognitive impairment and children. These are important limitations since it means that the QOL experienced by minority groups cannot be norm-referenced back to the general population.

To remedy this situation, the Comprehensive Quality of Life Scale (ComQol) was developed. The details of ComQol test development have been published (Cummins, 1991; Cummins, McCabe & Romeo, 1994; Gullone & Cummins, 1999; Marriage & Cummins, 2004) and these ComQol manuals continue to be available from <http://acqol.deakin.edu.au>. However, in 2001, the ComQol was abandoned for reasons described in the document 'Caveats to using the Comprehensive Quality of Life Scale' (<http://acqol.deakin.edu.au/instruments/index.htm>). The major reasons for this action were the realization that the objective scale did not factor as intended, and also, the understanding that creating a multiplicative composite between satisfaction and importance was statistically inappropriate (Trauer & Mackinnon, 2001). The satisfaction scale, however, was retained to form the basis of a new scale, the Personal Wellbeing Index (PWI).

## 1.2 The Personal Wellbeing Index (PWI) Scale

The adult PWI scale contains eight items of satisfaction, each one corresponding to a quality of life domain as: standard of living, health, life achievement, personal relationships, personal safety, community-connectedness, future security and spirituality-religion. The PWI differs from the ComQol in substituting 'Satisfaction with future security' for the original 'satisfaction with own happiness'. Evidence for the adoption of the seven domains has been presented in earlier publications (Cummins 1996 and 1997; Cummins, McCabe, Romeo, Reid & Waters, 1997 and The International Wellbeing Group, 2006).

These eight items, that form the PWI, are theoretically embedded, as representing the first level deconstruction of the global question 'How satisfied are you with your life as a whole?' Empirical testing shows that these domains function as intended (see below).

### 1.3 Psychometric Characteristics

The basic psychometric characteristics of the PWI-A have been described (Cummins, Eckersley, Pallant, Van Vugt & Misajon, 2002) and detailed data concerning scale composition, reliability, validity, and sensitivity are provided in the many Reports on the Australian Unity Wellbeing Index (<http://acqol.deakin.edu.au/index.htm>) and other countries (e.g. Lau, Cummins & McPherson, 2004; Tiliouine, Cummins & Davern, 2004).

The cumulative psychometric characteristics of the adult scale are published in Cummins, R.A., Eckersley, R., Lo, S.K., Okerstrom, E., Hunter, B., & Davern, M. (2003).

### 1.4 Parallel Forms and Translations of the PWI Scale

Parallel forms of the PWI have been created to allow an appropriate version of the scale to be used with all population sub-groups. These parallel forms are:

PWI-A: designed for use with the general adult population.

PWI- SC: designed for use with school-age children and adolescents.

PWI-PS: designed for use with pre-school age children.

PWI-ID: designed for use with people who have an intellectual disability or other form of cognitive impairment.

Unlike the original PWI adult version however, the last three parallel versions contain seven items as spirituality-religion is under investigation for determination of its inclusion. Its current exclusion does not yield psychometrically different data from the PWI-adult version (e.g. Lau, 2006; Lau, Cummins, Chan, McGillivray & Li, 2006; Lau, Cummins, Lam, Li, McGillivray, J., & Chan 2006.). The PWI has been translated and validated for cross-cultural use in countries outside Australia. Details on them can be found in the Reference List Section.

The PWI has been translated and validated for cross-cultural use in countries outside Australia. Details on them can be found in the Reference List Section and also in the PWI-Adult manual.

### 1.5 The PWI-SC Scale

The difference between the PWI-A and the PWI-SC is that:

- a) The PWI-SC uses the simplified item wording of the PWI-ID
- b) The response scale uses happiness, rather than satisfaction. While it is recognized that these two terms are not equivalent, they yield very similar data (Cummins, Eckersley, Pallant, Misajon & Davern, 2001a; Cummins, et al., 2001b; Lau, Cummins & McPherson, 2004).

### **1.5.1 The test item: Domain on “Feeling Part of the Community”**

With regards to the above-mentioned 1.5(b), a noteworthy item is the sixth question of the PWI which taps subjective wellbeing (subjective QOL) of “community-connectedness”. When compared with the other items of the PWI, this item carries high abstractness and complexity which has required more rigor and trials of many different question formats to identify the optimal substitute, which will be easily understood by the less cognitively competent groups, while fulfilling still, as an item representing the first (i.e. broadest) level deconstruction of life quality.

In the current PWI-SC scale, and also the PWI-ID format, the question “How happy do you feel about doing things outside your home?” replaces “How satisfied are you with feeling part of your community?” in the PWI-A version. The aim of this item is to tap the extent to which a person is happy or satisfied with their sense of ‘connectedness’ or ‘belonging’ with their community. The term ‘community’ may take the form of a distinct group (e.g. school) or the larger community (e.g. district-based), which is to be left at the discretion of the respondents’ personal interpretation. This “sense of connectedness” or “belonging” may be derived through either behavioral or non-behavioral acts, with or without other people, outside the home.

The current question format “How happy do you feel about doing things outside your home?”, has been adopted as it is found to be generally inclusive of the above-mentioned considerations. A limitation, however, is that the question does suggest a more dominant behavioral orientation which may not necessarily be the case, as indicated above. Nonetheless, this question is preferred as people who are less cognitively competent e.g. children, intellectual disability are found to relate better to such a context. While the current question may not be an exact substitute for the original question in the PWI-A scale, it will provide as an optimal approximate at this stage, until further empirical evidence suggests an enhanced version.

## 2. Scale Administration

---

### 2.1 Ethics

Prior to conducting the test, it is the responsibility of the test administrator to ensure that:

- (a) appropriate ethics approval has been obtained from the relevant authority under which they are operating, and also
- (b) that approval for such testing has been obtained from each child's parent or legal guardian.

### 2.2 General Procedure

- (a) It is important that the children/adolescents understand the nature of the task prior to testing taking place,
- (b) Immediately prior to testing, each respondent should be provided with their own printed copy of the questionnaire (Section 3: Test items and response scale),
- (c) The test items should be SELF-COMPLETED by the respondents, either in written or verbal (e.g. interview) format,
- (d) The test administrator should allow each child/adolescent to respond in an entirely private manner, and assured that their individual response will remain confidential and anonymous.
- (e) It should be emphasised that there is NO time limit.

### 2.3 Specific Procedures: Use of 0-10 Likert Response Scale

#### 2.3.1 Standard Instructions

The test administrator should take respondents verbally over the 11-point happiness scale, indicating the two response anchors of 'very sad/'very happy' and the neutral mid-position of 'neither happy nor sad'. See following for instructions:

“You will be asked a few questions about how happy you feel, using a scale from zero to 10.”

“On this scale, zero means you feel VERY SAD. 10 means you feel VERY HAPPY. And the middle of the scale is 5, which means you feel NOT HAPPY OR SAD.”

[Test administrator can hold questionnaire up and point to the respective anchor points upon their mention.]

### **2.3.2 Pre-testing (Optional)**

Whether further explanation or practice items are required (as is the case for pre-school age children), is at the discretion of the test administrator. If there is any doubt as to whether a particular respondent can understand and respond validly to the scale (e.g. younger children), the pre-test procedures described in the PWI-PS Manual should be employed.

## **2.4 Additional School-Children/Adolescent Specific Items (Optional)**

For the children/adolescent age group, there are in some instances, life aspects/issues which are specific to this group that may be useful to tap. An example is the item on the 'personal relationship' domain. In both the Adult and current SC versions of the PWI, the fourth item asks 'How satisfied are you with your relationships?' and 'How happy do you feel about getting on with the people you know?', respectively. As previously stated, they have been broadly worded to represent the first level deconstruction of life quality as a whole.

If more specific information on which source of network is providing the maximum degree of relationship with happiness, is desired for diagnostic or research purposes, this item may be split into additional items to tap networks which are known to feature dominantly in the children/adolescent age group. For this group, we recommend two additional items as 'How happy are you with your family?' and 'How happy are you with your friends'. Such additional items, however, should NOT be considered as components of the PWI test items and hence, be included in the calculation of the Index average score.

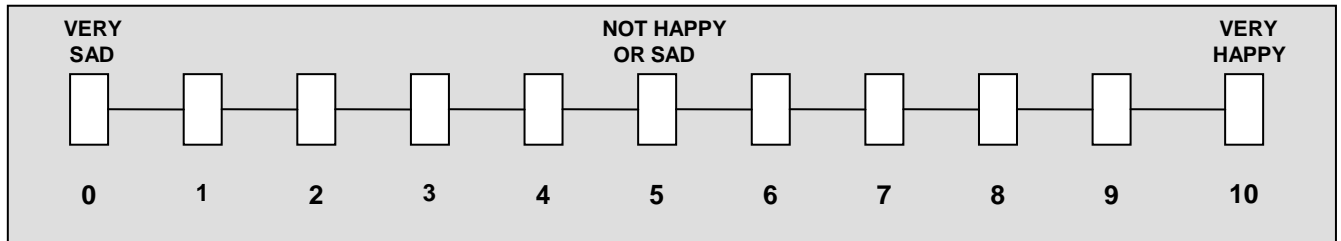


# 3. Happy with Life as a Whole and The PWI-SC Scale

---

## 3.1 Happy with Life as a Whole [Optional]

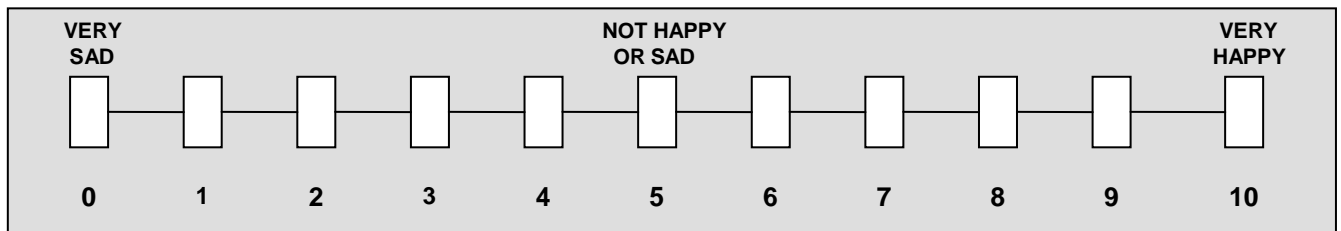
1. How happy are you...  
with your life as a whole ?



## 3.2 Personal Wellbeing Index – School Children/Adolescents [Life Domains]

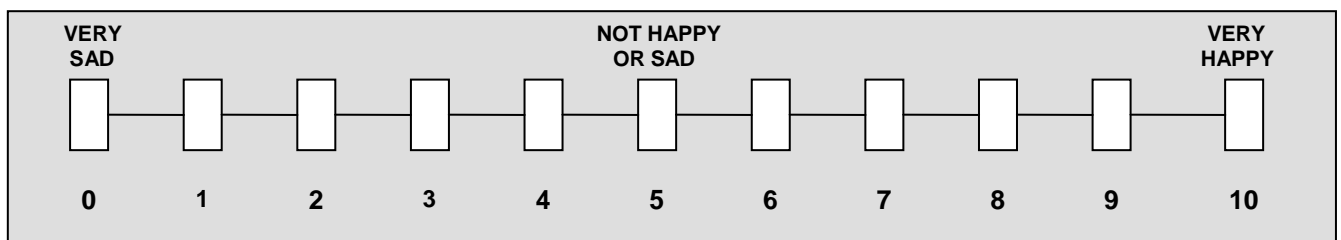
1. [Domain: Standard of Living]

How happy are you ...  
about the things you have? Like the money you have and the things you own?



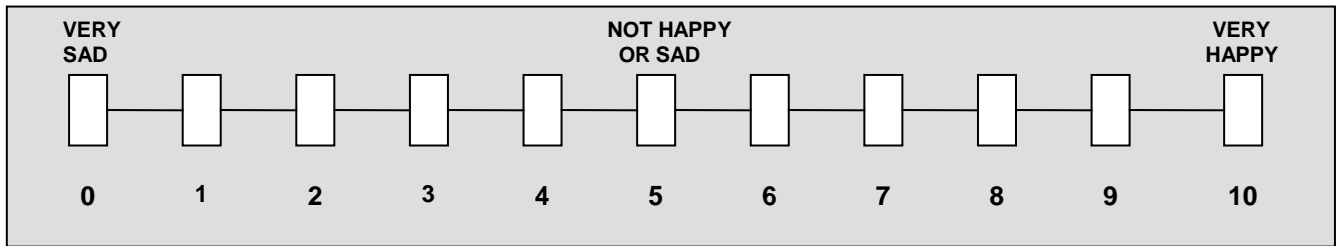
2. [Domain: Personal Health]

How happy are you ...  
with your health?



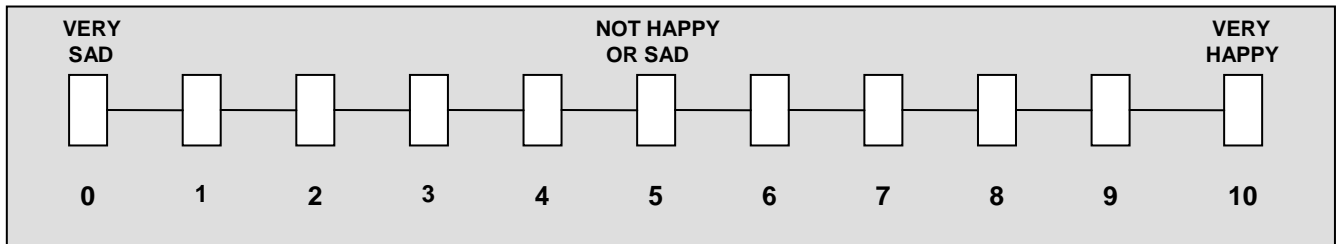
3. [Domain: Achievement in Life]

How happy are you ...  
with the things you want to be good at ?



4. [Domain: Personal Relationships]

How happy are you ...  
about getting on with the people you know ?



5. [Domain: Personal Safety]

How happy are you ...  
about how safe you feel ?



6. [Domain: Feeling Part of the Community]

How happy are you ...  
about doing things away from your home ?



**7. [Domain: Future Security]**

How happy are you ...

**about what may happen to you later on in your life ?**

VERY SAD					NOT HAPPY OR SAD						VERY HAPPY
0	1	2	3	4	5	6	7	8	9	10	

# 4. Data Analysis

---

## 4.1 Data Cleaning

It is essential that all data are checked for response sets. These are evident when the respondent scores at the top or the bottom of the scale for all eight Personal Wellbeing Index items. Such data may indicate a response set due to either acquiescence or a lack of understanding. No matter the cause, the lack of variation will distort the data analysis. Hence, data sets from individual respondents showing **consistently maximum or minimum scores on all 8 domains should be eliminated prior to data analysis.**

## 4.2 Data Analysis of “Happiness with Life as a Whole” and Personal Wellbeing Index-School Children Scale Items.

Standardize all data into units of a 0 to 100 point distribution. This is achieved by shifting the decimal point one step to the right. E.g. a value of 6.0 becomes 60 points.

## 4.3 Data Analysis converting raw scores into the standard 0 – 100 scale format

Mark Stokes and Bob Cummins  
School of Psychology, Deakin University

For the purpose of creating results that can be simply compared with one another, we convert all data to a standard form, which makes it look as though they had all been rated on a 0 – 100 point scale. The values derived from this process are called ‘percentage of scale maximum’ (%SM). This conversion does not alter the statistical properties of the data, since the process is a simple linear conversion, but it has the advantage that data from the PWI and other scales can be directly compared in terms of their means and standard deviations.

The conversion of PWI scores, which have been derived from a 0 – 10 response scale, is simple. The conversion is achieved by simply shifting the decimal point to the right. For example, a score of 7 becomes 70 %SM, or a mean score of 6.56 becomes 65.6%SM.

When comparisons are to be made with other data that have been derived from different response scales, such as ones that use a 1 – 5 rating, then the values derived from the scale can be converted to the standard 0 – 100 %SM through the use of the formula below.

$$\frac{X - k^{\min}}{k^{\max} - k^{\min}} \times 100$$

X = the score or mean to be converted

k<sup>min</sup> = the minimum score possible on the scale

ie If a scale is score from 1 to 5, then  $k^{\min} = 1$   
If a scale is score from -5 to +5, then  $k^{\min} = -5$

$k^{\max}$  = the maximum score possible on the scale  
ie If a scale is score from 1 to 5, then  $k^{\max} = 5$   
If a scale is score from -5 to +5, then  $k^{\max} = +5$

#### Example 1

A mean score of 3.5 on a scale rated from 1 to 5.

$$\frac{3.5 - 1}{5 - 1} \times 100 = 62.5\% \text{ SM}$$

#### Example 2

A mean score of +3.5 on a scale rated from -5 to +5.

$$\frac{+3.5 - (-5)}{+5 - (-5)} \times 100 = \frac{+8.5}{+10} \times 100 = 85.0\% \text{ SM}$$

### 4.4 Data interpretation

Data derived on the Personal Wellbeing Index scale items may be used either at the level of individual domains, or the domain scores may be aggregated and averaged to form the Personal Wellbeing Index (PWI).

The item “Happiness with Life as a Whole” **IS NOT** a component of the PWI and hence, should be analysed as a separate variable. This item is used to test the construct validity of the PWI using multiple regression. Each domain should contribute unique variance and the normative data using this technique are shown in Appendix B and C.

The mean of the domain scores derived from the PWI constitutes a measure of Subjective Wellbeing. Such a datum can be referenced to two types of normative data as follows:

- (a) If the datum is the score of an individual person, it can be referenced to the normal distribution of individuals within a population. The Australian normative range for individuals is 50-100 points.
- (b) If the datum is the mean score of a group, it can be referenced to the normal distribution of group means. The normative range for Western means is 70-80 points. The normative range for Australia is 73.4 – 76.4 points.

Note: These values are generally ‘around 10 percentage points lower for Asian populations’ due to a cultural response bias e.g. Chinese (Lau, Cummins & McPherson, 2005).

## 5. Reference List

---

- Cummins, R.A. (1991) The Comprehensive Quality of Life Scale - Intellectual Disability: An initial report. *Australia and New Zealand Journal of Developmental Disabilities*, 17, 259-264.
- Cummins, R.A. (1996) The domains of life satisfaction: An attempt to order chaos. *Social Indicators Research*, 38, 303-332.
- Cummins, R.A. (1997). *Assessing quality of life for people with disabilities*. In: Quality of Life for Handicapped People, Second Edition, R.I. Brown (Ed.). Cheltenham, England: Stanley Thomas, pp. 116-150.
- Cummins, R.A. (2002) Proxy responding for subjective well-being: A review. *International Review of Research in Mental Retardation*, 25, 183-207.
- Cummins, R.A., Eckersley, R., Lo, S.K., Okerstrom, E., Hunter, B., & Davern, M. (2004). *Australian Unity Wellbeing Index: Cumulative Psychometric Record*. Melbourne: Australian Centre on Quality of Life, School of Psychology, Deakin University. [http://acqol.deakin.edu.au/index\\_wellbeing/index.htm](http://acqol.deakin.edu.au/index_wellbeing/index.htm)
- Cummins, R.A., Eckersley, R., Pallant, J., Misajon, R., & Davern, M. (2001a). *Australian Unity Wellbeing Index: Survey 2, Report 1.0*. Australian Centre on Quality of Life, School of Psychology, Deakin University, Melbourne.
- Cummins, R.A., Eckersley, R., Pallant, J., Van Vugt, J., & Misajon, R. (2002). Developing a national index of subjective wellbeing: The Australian Unity Wellbeing Index. *Social Indicators Research*, 64, 159-190.
- Cummins, R.A., Eckersley, R., Pallant, J., Van Vugt, J., Shelly, J., Pusey, S.M., & Misajon, R. (2001b). *Australian Unity Wellbeing Index: Survey 1, Report 1.0*. Australian Centre on Quality of Life, School of Psychology, Deakin University, Melbourne.
- Cummins, R.A., McCabe, M.P., Romeo, Y. & Gullone, E. (1994) *The Comprehensive Quality of Life Scale - Intellectual Disability: Results from a Victorian survey*. Proceedings, 29th National Conference of the Australian Society for the Study of Intellectual Disability, 93-98.
- Cummins, R.A., McCabe, M.P., Romeo, Y., Reid, S., & Waters, L. (1997) An initial evaluation of the Comprehensive Quality of Life Scale - *Intellectual Disability*. *International Journal of Disability, Development and Education*, 44, 7-19.

- Gullone, E. & Cummins R.A. (1999). The Comprehensive Quality of Life Scale: A psychometric evaluation with an adolescent sample. *Behaviour Change*, 16, 127-139.
- Lau, A.L.D (2006). *Subjective Wellbeing Measurement for Special Populations (With Intellectual impairment, Children)*. Workshop, Conference on quality of Life in Asia, Hong Kong Society for Quality of Life, Hong Kong, May.
- Lau, A.L.D., Cummins, R.A. and McPherson, W. (2005). An investigation into the cross-cultural equivalence of the Personal Wellbeing Index. *Social Indicators Research*, 72, 403-432.
- Lau, A.L.D., Cummins, R.A., Chan, C.C.H., McGillivray, J., Li, E.P.Y. (2006). *Measuring subjective wellbeing of people with cognitive impairment using the Personal Wellbeing Index..* 8th Australian Centre on Quality of Life, Melbourne, Deakin University, Australia, November.
- Lau, A.L.D., Cummins, R.A., Lam, P.K.W., Li, E.P.Y., McGillivray, J., & Chan, C.C.H. (2006). *A modified version of the Personal Wellbeing Index for measuring subjective wellbeing of people with cognitive impairment.* 7th Conference of the International Society for Quality of Life Studies, Grahamstown, South Africa, July.
- Marriage, K. & Cummins, R.A. (2004). Subjective quality of life and self-esteem in children: The role of primary and secondary control in coping with everyday stress. *Social Indicators Research*, 66, 107-122.
- Petito, F. and Cummins, R.A. (2000). Quality of life in adolescence: The role of perceived control, parenting style and social support. *Behaviour change*, 17, 196-207.
- Tiliouine, H., Cummins, R.A., & Davern, M. (2005). Measuring wellbeing in developing countries: The case of Algeria. *Social Indicators Research* (In press).
- Trauer, T., & Mackinnon, A. (2001). Why are we weighting? The role of importance ratings in quality of life measurement. *Quality of Life Research*, 10, 579-585.

**PWI Manuals:**

Available from Melbourne: Australian Centre on Quality of Life, Deakin University.  
[http://acqol.deakin.edu.au/instruments/wellbeing\\_index.htm](http://acqol.deakin.edu.au/instruments/wellbeing_index.htm)

PWI-A : The International Wellbeing Group (2006). *Personal Wellbeing Index – Adult*.

Other translated versions on PWI-A: (E.G.)

- Arabic : translated by Tiliouine, H. (2002)
- Chinese - Cantonese : translated by Lau, A.L.D. (2002)
- Mandarin : translated by Zhanjun, X (2003)
- Tibetan : translated by Dave Webb (2005)
- Croatian : translated by Lipovean, L.K. (2003)
- Dutch : translated by Renty, J. (2002)
- Italian : translated by Verri, A. (2002)
- Japanese : translated by Naoi, A (2003)
- Mexican : translated by Rojas, M (2003)
- Slovakia : translated by Dzuka, J. (2002)
- Spanish - Spain : translated by Casa, F. (2002)
- Argentina : translated by Tonin, G. (2002)

PWI-ID : Cummins, R.A. and Lau, A.L.D. (2005). *Personal Wellbeing Index – Intellectual Disability*. 3<sup>rd</sup> Edition.

Cummins, R.A. and Lau A.L.D. (2005). *Personal Wellbeing Index – Intellectual Disability*. 3<sup>rd</sup> Edition (Chinese-Cantonese).

PWI-SC : Cummins, R.A. and Lau, A.L.D. (2005). *Personal Wellbeing Index – School Children*. 3<sup>rd</sup> Edition.

Cummins, R.A. and Lau, A.L.D. (2005). *Personal Wellbeing Index – School Children*. 3<sup>rd</sup> Edition (Chinese-Cantonese).

PWI-PS : Cummins, R.A. and Lau, A.L.D. (2005). *Personal Wellbeing Index – Pre-School*. 3<sup>rd</sup> Edition.

Cummins, R.A. and Lau, A.L.D. (2005). *Personal Wellbeing Index – Pre-School*. 3<sup>rd</sup> Edition (Chinese-Cantonese).