

**Personal Wellbeing Index –
School Children
(PWI-SC)
(English)
4th Edition**

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MANUAL

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CONTENTS

1. Introduction	4
1.1 Measuring and Defining quality of life	4
1.2 The Personal Wellbeing Index (PWI) Scale.....	4
1.3 Psychometric Characteristics	6
1.4 Parallel Forms and Translations of the PWI Scale.....	7
1.5 The PWI-SC Scale	7
1.5.1 The test item: Domain on “Feeling Part of the Community”.....	7
2. Scale Administration	9
2.1 Ethics	9
2.2 General Procedure.....	9
2.3 Specific Procedures: Use of 0-10 Likert Response Scale	9
2.3.1 Standard Instructions.....	9
2.3.2 Pre-testing (Optional).....	8
2.4 Additional School-Children/Adolescent Specific Items (Optional).....	10
3. Happy with Life as a Whole and The PWI-SC Scale	11
3.1 Happy with Life as a Whole [Optional]	11
3.2 Personal Wellbeing Index – School Children/Adolescents [Life Domains].....	11
4. Data Analysis	13
4.1 Data Cleaning.....	13
4.2 Data Analysis of “Happiness with Life as a Whole” and Personal Wellbeing Index-School Children Scale Items	13
4.3 Data Analysis converting raw scores into the standard 0 – 100 scale format.....	12
4.4 Data interpretation.....	13
5. Reference List	14

1. Introduction

1.1 What is quality of life?

The Australian Centre on Quality of Life defines Quality of Life as:

'Quality of life is both objective and subjective. Each of these two dimensions comprise several domains which, together, define the dimensional construct. Objective domains are measured through culturally relevant indices of objective wellbeing. Subjective domains are measured through questions of satisfaction. Objective and subjective data cannot be validly combined.'

Measuring Quality of Life

From the above definition, it is evident that the quality of life (QOL) construct has a complex composition. Because of this complexity, there is no standard form of measurement. Rather, a huge number of instruments have been devised to measure components of the construct. The Directory of Instruments (<https://www.acqol.com.au/instruments#measures>) describes some 800 instruments which purport to measure life quality in some form, with each one containing an idiosyncratic mixture of independent and dependent variables.

It is also notable that many QOL instruments have been developed for highly selected groups in the population; particularly 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 such groups cannot be norm-referenced back to the general population.

In an attempt 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). However, in 2001, ComQol-5 (Cummins, 2002c) was abandoned for reasons described in the document 'Vale ComQol: Caveats to using the Comprehensive Quality of Life Scale' (Cummins, 2002d)

The major reasons for this action were the realization that the objective scale did not factor as intended, together with new 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) which is designed to measure Subjective Wellbeing (SWB).

1.2 The Personal Wellbeing Index (PWI-Adult)

The adult PWI scale contains seven items of satisfaction, each one corresponding to a different quality of life domain as: standard of living, health, achieving in life, personal relationships, personal safety, community-connectedness, and future security. There is

also an optional 8th domain of and spirituality-religion. Evidence for the adequacy 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).

The seven domains forming the PWI are also 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 Measuring Subjective Wellbeing in children

The PWI- SC is a specialist version of the PWI, designed for use with school-age children and adolescents. While the adult version of the scale (PWI-A) has received great attention in terms of its psychometric performance and population norms (see the PWI-A manual), the PWI-SC has received less attention. Nevertheless, entering PWI-SC into Google Scholar produces a list of over 700 publications. So clearly there is a wealth of information which is yet to be systematically tapped in an overview. However, the publications that have been produced point to a psychometric performance of the scale that is very similar to the adult version (Casas, 2016, 2017; Casas & González-Carrasco, 2018; Tomyne & Cummins, 2011a, 2011b; Tomyne, Fuller Tyszkiewicz, & Cummins, 2013). So, in the absence contrary information, the output of the PWI-SC is assumed to be an adequately reliable and valid measure of Subjective Wellbeing (SWB), with one caveat. And this concerns the age of the children.

An excellent account of the very substantial challenges faced by researchers studying the SWB of children is provided by Alison Gluskie (2011). She describes three main theories that contribute to understanding the cognitive development of children. Vygotsky’s sociocultural theory views the child’s uniquely experienced social and cultural context as a principal influence on the development of cognition (Vygotsky, 1962, 1978). Brofenbrenner’s Ecological Systems Theory (Brofenbrenner, 1979; Brofenbrenner & Morris, 1998) runs a somewhat similar line; that the whole of child development, including cognition, occurs as the child interacts with their unique and complex multidimensional environment.

While both approaches have the benefit of being based on the obvious necessity for a developing child to interact with their environment, both fall short on two fronts. First is the almost impossible task of specifying the hierarchical order of child-environment interactions that optimize cognitive development. Second is their weak focus on the child’s interactive experience being dependent on their psychological developmental stage.

Piaget’s Cognitive Developmental Theory (Piaget, 1926, 1955, 1969) not only incorporates the child’s exploration of the environment but also, and more importantly for the current discussion, it outlines four stages of cognitive development. He proposes that normally developing children move through these stages in their own time, but in a fixed sequence, as the brain develops and matures.

The third developmental stage is described as Concrete Operational and spans approximately 7-11 years of age. It is generally agreed that, within this age range, immature cognitive development imposes severe limitations on the validity of children’s responses to self-evaluative questions (Bullinger & Ravens-Sieberer, 1995; Huebner, 2004; Huebner, Suldo, Smith, & McKnight, 2004). Piaget describes this concrete stage of cognition as logical and organised, involving the use of mental operations such as classification, conservation, and seriation. However, children in this group are likely not to understand words that are abstract

or require abstract thinking, such as temporal concepts. Piaget also characterized thinking at this stage as dichotomous, with children engaging in ‘all or nothing’ thinking. This is consistent with the finding that children in this age range tend to respond to measurement scales using only the extreme ends of the available response continuum (Chambers & Johnston, 2002), reporting themselves to experience the variable being measured either completely, or not at all.

It has been proposed that this tendency for dichotomous thinking may be the cause of the reported decrease in levels of SWB as children move through the 10y to 12y age range (see, e.g. Casas, 2017, Table 3). The natural positivity that all people feel due to the presence of Homeostatically Protected Mood (Cummins, 2017a) will influence both age groups to rate their level of SWB positively. However, whereas the 12y group can distinguish between grades of positivity, the 10y group is more inclined to respond dichotomously, rating them self at the top of the scale and, thereby, yielding a higher SWB rating than the older group.

From about 11y, it is generally agreed that the capacity for abstract thinking starts to develop, as the Formal Operational stage (Eisenberg, 1986; Kohlberg, 1984). This heralds the start of adult cognition, which includes the capacity to understand abstract concepts, as required by the items of the PWI-SC. However, the age of 11y is a group average, with the necessary consequence that half of such a group will be aged closer to 10y than 12y. Moreover, individual differences in rates of maturation, together with differential exposure to the environmental factors discussed earlier by Brofenbrenner and Vygotsky, will delay the achievement of Formal Operational cognition in some children.

Recommendation:

It is recommended that recruitment for the PWI-SC is restricted to children aged at least 12y.

1.4 Psychometric Characteristics

Psychometric Equivalence of PWI-A and PWI-SC:

Tomyn, A.J., Fuller-Tyszkiewicz, M. & Cummins, R.A. (2013). The Personal Wellbeing Index: Psychometric Equivalence for Adults and School Children. *Social Indicators Research*, 110, (3), 913-924. doi: 10.1007/s11205-011-9964-9.

“This study confirms the psychometric equivalence of the child and adult forms of the Personal Wellbeing Index using multiple-group confirmatory factor analysis. The child sample comprised 1,029 Victorian high-school students (aged 11–20) sampled across three independent studies. The adult sample comprised 1,965 Australian adults drawn from the Australian Unity Wellbeing Index. The results demonstrated strict factorial invariance between both versions, suggesting that the PWI measures the same underlying construct in adolescent and adult populations. These findings provide support for quantitative comparisons between adult and adolescent SWB data as valid.”

The basic psychometric characteristics of the PWI-A have been described (Cummins, Eckersley, Pallant, Van Vugt & Misajon, 2002) and a further description of 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).

Further results concerning scale composition, reliability, validity, and sensitivity are provided in the many Reports on the Australian Unity Wellbeing Index
<https://www.acqol.com.au/publications#reports>

1.5 Parallel Forms and Translations of the PWI Scale

Three parallel forms of the PWI have been created to allow an appropriate version of the scale to be used with 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 aged at least 12y, and adolescents.

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

The PWI-Adult offers spirituality-religion as an 8th domain. The exclusion of this domain from the PWI-SC and PWI-ID does not cause psychometrically different results from the PWI-adult (e.g. Lau, 2006; Lau, Cummins, Chan, McGillivray & Li, 2006; Lau, Cummins, Lam, Li, McGillivray, J., & Chan 2006.).

The PWI-A has been translated and validated for cross-cultural use many countries. Details on these translations can be found at:
<https://www.acqol.com.au/instruments#measures>

1.6 The PWI-SC Scale

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

- a) The PWI-SC uses simplified item wording.
- 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).

1.6.1 The Domain on “Feeling Part of the Community”

A noteworthy item is the sixth question of the PWI which taps the subjective wellbeing (SWB) domain of “community connectedness”. When compared with the other items of the PWI, this item carries high abstractness and complexity. Many different question formats have been trialled to identify wording which will be easily understood by the less cognitively competent groups, while retaining its character as a domain of this scale.

In the current PWI-SC scale, the question “How happy do you feel about doing things outside your home?” replaces the adult version “How satisfied are you with feeling part of your community?” 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.

While the current question is not a precise substitute for the original question in the PWI-A scale, it provides an approximation until further empirical evidence provides a more suitable version.

2. Scale Administration

2.1 Ethics

Prior to administering the PWI, it is the responsibility of the 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 data collection 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 the scale distribution,
- (b) Each respondent should be provided with their own printed copy of the questionnaire (Test items and response scale),
- (c) Advise the respondents that **it is fine to skip** items they do not understand. Do not provide the meaning of any item. Doing so creates a different scale.
- (d) The scale items should be SELF-COMPLETED by the respondents, either in written or verbal (e.g. interview) format,
- (e) The administrator should allow each child/adolescent to respond in an entirely private manner, and assure that their individual response will remain confidential and anonymous.
- (f) 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 administrator should take respondents verbally over the 11-choice happiness scale, indicating the two response anchors of 'not at all happy' and 'very, very happy'. See following for instructions:

“You will be asked about how happy you feel about some areas of your life. You can rate your feelings from zero to 10.”

“On this scale, zero means you are NOT AT ALL HAPPY with the area. 10 means you feel VERY, VERY HAPPY with the area.”

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

2.4 Additional School-Child/Adolescent Specific Items (Optional)

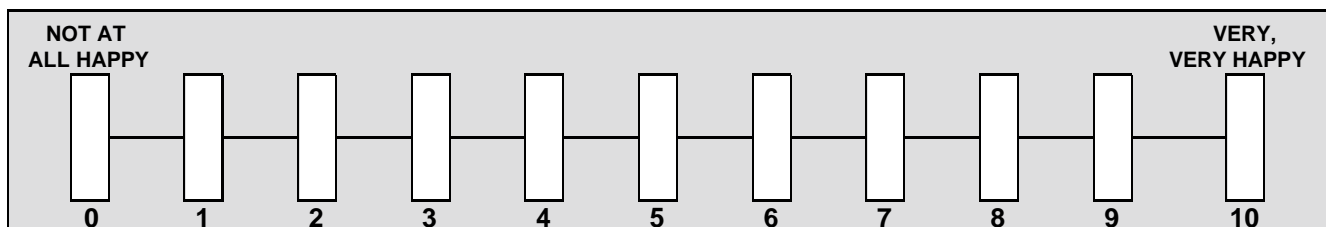
For the children/adolescent age group, there are in some life aspects/issues which are specific to this group that may be useful to measure. An example is the item on the 'personal relationship' domain. In the Adult and SC versions of the PWI, the fourth item asks, respectively, 'How satisfied are you with your relationships?' and 'How happy do you feel about getting on with the people you know?' As with all items, these are intentionally broadly worded and non-specific.

If more specific information on which social network is providing the maximum degree of relationship with happiness, 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 included in the calculation of the PWI average score.

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

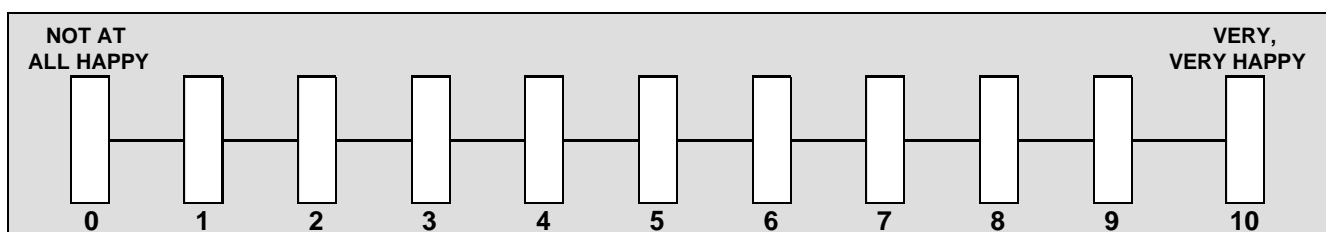
3.1 Happy with Life as a Whole [Optional]

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

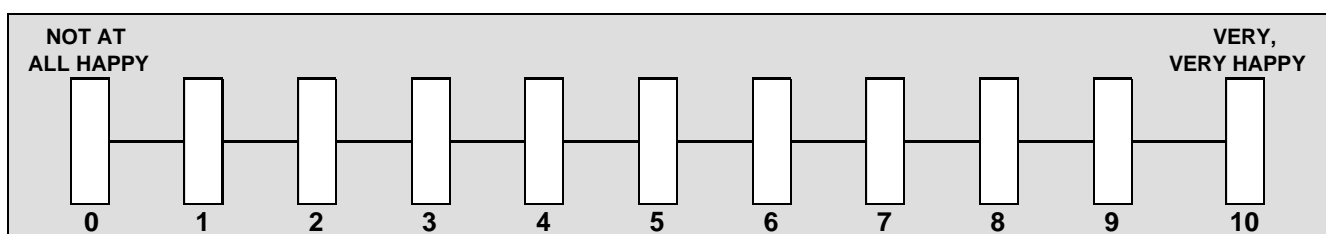


3.2 Personal Wellbeing Index – School Children/Adolescents [Life Domains]

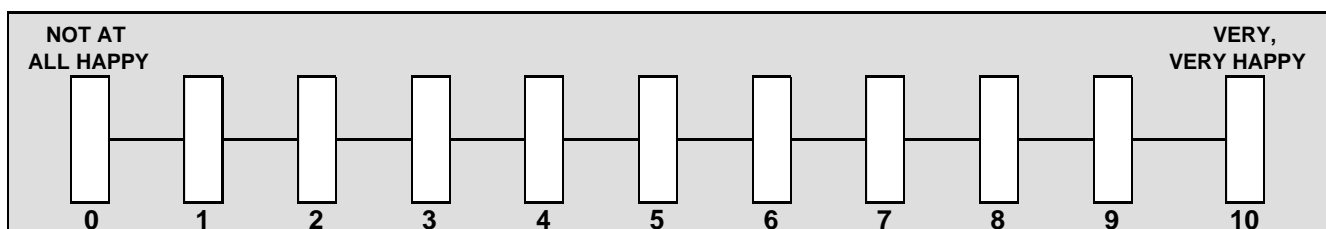
1. [Domain: Standard of Living] How happy are you ... about the things you have? Like the money you have and the things you own?



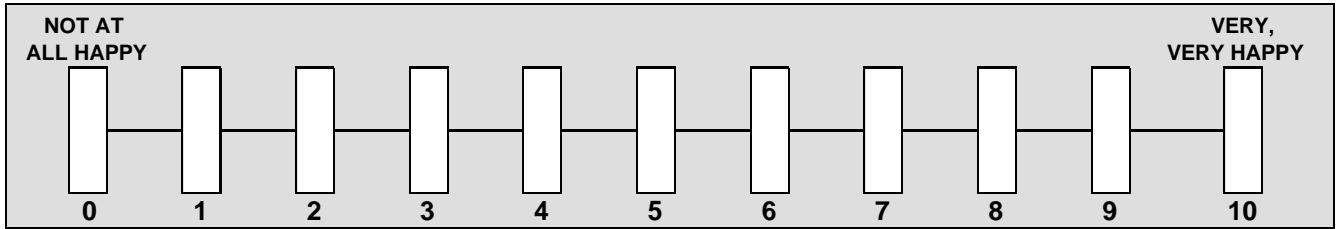
2. [Domain: Personal Health] How happy are you ... with your health?



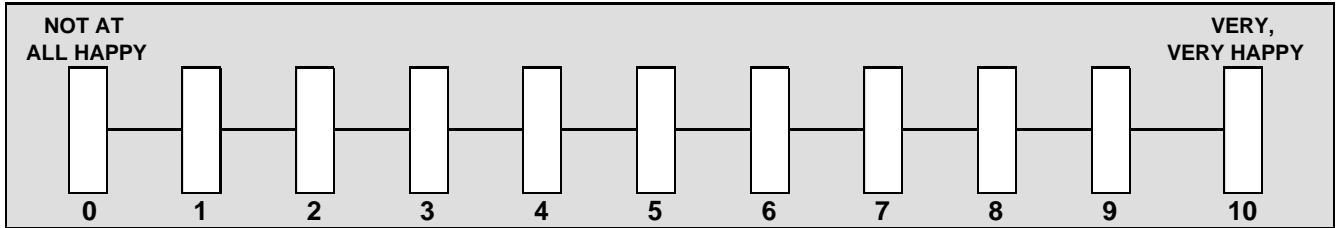
3. [Domain: Achieving in Life] How happy are you ...
with the things you want to be good at ?



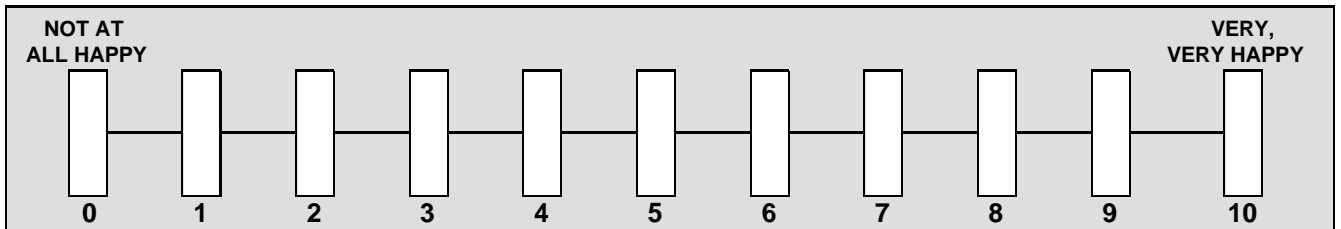
4. **[Domain: Personal Relationships]** How happy are you ...
about getting on with the people you know ?



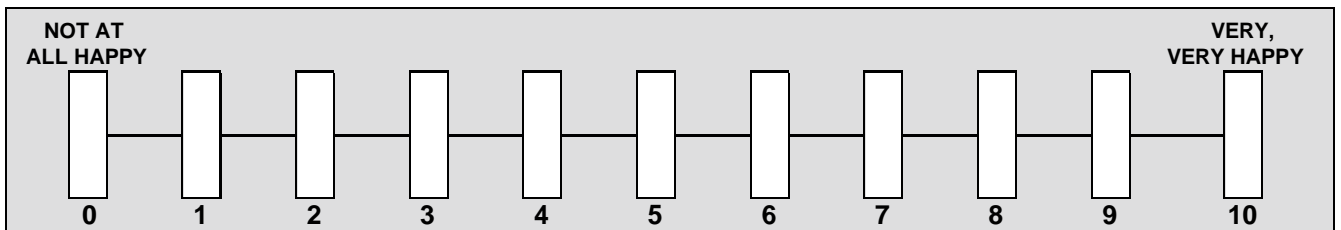
5. **[Domain: Personal Safety]** How happy are you ...
about how safe you feel ?



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 how your life will be when you get older ?



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 Personal Wellbeing Index items. Such data may indicate a response set due to either immaturity, 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 7 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.

It is recommended to standardize all 0 to 10 data into units of a 0 to 100 percentage points (pp). This is achieved by shifting the decimal point one step to the right. E.g. a value of 6.0 becomes 60pp. This standardization allows for comparisons with other results.

Data interpretation

Data derived on the Personal Wellbeing Index scale items may be used either at the level of happiness with individual domains, or the domain scores may be aggregated and averaged to form a measure of Subjective Wellbeing

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 (see the PWI-A Manual). Each domain should contribute unique variance.

The level of Subjective Wellbeing can be referenced to two types of normative data as follows (Khor, Fuller-Tyszewicz, & Hutchinson, 2020):

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

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

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PWI Manuals:

Both English and translated versions of the PWI manuals are Available from the Australian Centre on Quality of Life, Deakin University.

<https://www.acqol.com.au/instruments#measures>

PWI-A : The International Wellbeing Group (2013). *Personal Wellbeing Index – Adult*. 5th Edition.

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