

4817.0.55.001 - Information Paper: Use of the Kessler Psychological Distress Scale in ABS Health Surveys, Australia, 2007-08

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K10 SCORING

The K10 is scored using a five-level response scale based on the frequency of symptoms reported for each question. In most ABS and other Australian surveys, 1 is the minimum score for each item (none of the time) and 5 is the maximum score (all of the time). The sum of these scores yields a minimum possible score of 10 (all answers were 'none of the time') and a maximum possible score of 50 (all answers were 'all of the time') (see Table D).

Table D: K10 Question Scores

Answer	Score
none of the time	1
a little of the time	2
some of the time	3
most of the time	4
all of the time	5
Minimum possible score	10
Maximum possible score	50

In the US, the K10 is typically scored using a system where 0 is the minimum score for an answer (none of the time) and 4 is the maximum score (all of the time), with a possible total minimum score of 0 and maximum score of 40.

CATEGORISING K10 RESULTS (AUSTRALIA)

While no universally agreed categories or groupings exist for K10 scores, a number of different methods are used in Australia, depending on the purpose of administration and the setting in which it is delivered.

In ABS surveys, the score groupings and categories of psychological distress were developed drawing on an amalgam of the work of the Clinical Research Unit for Anxiety and Depression (CRUfAD), Andrews and Slade (2001), and Korten (submitted). Scores are grouped into four levels of psychological distress (see Table E, below).

Table E: ABS K10 score groupings and categorisation

K10 Total Score Levels	Score
10-15	Low
16-21	Moderate
22-29	High
30-50	Very high

Note: In the 1997 SMHWB, the scoring algorithm was reversed, so that low scores indicate high levels of psychological distress and high scores indicate low levels of psychological distress. Users of the 1997 SMHWB Confidentialised Unit Record File (CURF) need to recalculate scores to enable direct comparisons with other ABS surveys, as follows:

Low distress - 45-50 (normally 10-15)
Moderate distress - 39-44 (normally 16-21)
High distress - 31-38 (normally 22-29)
Very high distress - 10-30 (normally 30-50)

OTHER METHODS OF CATEGORISING

Table F, below, shows K10 score groupings and categories used by CRUfAD and GPcare in primary healthcare settings to assist in monitoring distress, rather than identifying the presence of a disorder (Coombs, 2011). This method was also used in the 2001 Victorian Population Health Survey.

Table F: CRUfAD & GPcare score groupings and categorisation

K10 Total Score Levels	Level of psychological distress
10-19	are likely to be well
20-24	are likely to have a mild mental disorder
25-29	are likely to have a moderate mental disorder
30-50	are likely to have a severe mental disorder

Table G shows K10 categories used by specialist mental health services for people who are already in specialist care. While the score groupings are identical to those used by CRUfAD and GPcare in Table F, the description for the corresponding level of psychological distress differs.

Table G: Specialist Mental Health Services score groupings and categorisation

K10 Total Score Levels	Level of psychological distress
10-19	The score indicates that the client or patient may currently not be experiencing significant feelings of distress.
20-24	The client or patient may be experiencing mild levels of distress consistent with a diagnosis of a mild depression and/or anxiety disorder.
25-29	The client or patient may be experiencing moderate levels of distress consistent with a diagnosis of a moderate depression and/or anxiety disorder.
30-50	The client or patient may be experiencing severe levels of distress consistent with a diagnosis of a severe depression and/or anxiety disorder.

There is also a 'Plain English' K10 categorisation, developed with AMHOCN and the Mental Health Association of NSW for interpreting K10 data in the 2002 Healthy Mind Day questionnaire. In this system, grouped scores are categorised into three levels of psychological distress, as shown in Table H below.

Table H, below.

Table H: 'Plain English' score groupings and categorisation

K10 Total Score Levels	Level of psychological distress
10-15	The score reveals that the client or patient may currently not be experiencing significant feelings of distress.
16-30	The client or patient may be experiencing moderate symptoms of depression and/or anxiety. These symptoms may be causing some distress in their everyday life.
31-50	It is likely that the client or patient may be experiencing some form of depression and/or anxiety.

K6 SCORING & CATEGORISATION

The K6 is scored in the US using the same five-level response scale as the K10, where 0 is the minimum score for an answer (none of the time) and 4 is the maximum score (all of the time), with a minimum possible score of 0 and maximum possible score of 24.

Rules for optimal scoring of the K6 screening scale have been identified in Kessler et al (2003 & 2010), using 'dichotomous' (two groupings) and 'polychotomous' (multiple groupings) methods. As each scale item has five response categories and there are six items, the unweighted scale has values in the range 0-24 (US scoring) or 6-30 (Australian scoring). In most applications, based on standard validation studies, respondents with scores of 13-24 are classified as having a probable serious mental illness and those with scores of 0-12 as probably not having a serious mental illness (Kessler et al, 2010). Converted to Australian scoring, categories are as follows:

Table I: K6 Dichotomous score groupings and categorisation

Australian K6 Total Score Levels	Level of psychological distress
6-18	No probable serious mental illness
19-30	Probable serious mental illness

The second method is a polychotomous scoring method where the K6 score groupings are refined into strata that differentiate between levels of serious mental illness (Kessler et al, 2010). Using Stratum-Specific Likelihood Ratio (SSLR) analysis, individual K6 scores are transformed into a score that represents the predicted probability of that person having a serious mental illness (Kessler et al, 2010; Furukuwa et al, 2003). Strata are shown using Australian scores in Table J, below.

Table J: K6 Polychotomous score groupings

Australian K6 Total Score Levels
6
7-13
14-18
19-24
25-30

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