

# Package ‘KHQ’

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**Title** Methods for Calculating 'KHQ' Scores and 'KHQ5D' Utility Index Scores

**Version** 0.2.0

**Description** The King's Health Questionnaire (KHQ) is a disease-specific, self-administered questionnaire designed specific to assess the impact of Urinary Incontinence (UI) on Quality of Life. The questionnaire was developed by Kelleher and collaborators (1997) <[doi:10.1111/j.1471-0528.1997.tb11006.x](https://doi.org/10.1111/j.1471-0528.1997.tb11006.x)>. It is a simple, acceptable and reliable measure to use in the clinical setting and a research tool that is useful in evaluating UI treatment outcomes. The KHQ five dimensions (KHQ5D) is a condition-specific preference-based measure developed by Brazier and collaborators (2008) <[doi:10.1177/0272989X07301820](https://doi.org/10.1177/0272989X07301820)>. Although not as popular as the SF6D <[doi:10.1016/S0895-4356\(98\)00103-6](https://doi.org/10.1016/S0895-4356(98)00103-6)> and EQ-5D <<https://euroqol.org/>>, the KHQ5D measures health-related quality of life (HRQoL) specifically for UI, not general conditions like the others two instruments mentioned. The KHQ5D can be used in the clinical and economic evaluation of health care. The subject self-rates their health in terms of five dimensions: Role Limitation (RL), Physical Limitations (PL), Social Limitations (SL), Emotions (E), and Sleep (S). Frequently the states on these five dimensions are converted to a single utility index using country specific value sets, which can be used in the clinical and economic evaluation of health care as well as in population health surveys. This package provides methods to calculate scores for each dimension of the KHQ; converts KHQ item scores to KHQ5D scores; and also calculates the utility index of the KHQ5D.

**License** MIT + file LICENSE

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**URL** <https://github.com/augustobrusaca/KHQ>

**BugReports** <https://github.com/augustobrusaca/KHQ/issues>

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## R topics documented:

KHQ5D . . . . .	2
KHQ5DFreq . . . . .	4
KHQ5D_data . . . . .	6
KHQConvKHQ5D . . . . .	7
KHQScores . . . . .	9
KHQ_Conv_KHQ5D_data . . . . .	11
KHQ_data_Kelleher . . . . .	12
Utility_Index_data . . . . .	14
<b>Index</b>	<b>16</b>

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KHQ5D	<i>Convert the health states of the KHQ5D to index value</i>
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## Description

Function used to convert the scores of the five dimensions of the KHQ5D to a single utility index using country specific value set.

## Usage

```
KHQ5D(
  scores,
  country,
  type,
  author,
  year,
  source,
  ignore.invalid = FALSE,
  weights = NULL,
  save.xlsx = FALSE,
  filename = NULL,
  sheetName = NULL
)
```

**Arguments**

scores	data.frame with colnames RL, PL, SL, E, and S representing Role limitation, Physical limitation, Social Limitation, Emotions and Sleep. Alternatively a data.frame with the KHQ5D health profiles can be provided in a five digit format e.g., data.frame(state = c(11111, 22432, 34241, 43332)) or only the five digit e.g., 11111, c(11111), c(11111, 22432, 34241).
country	string specifying the country in which the value set scores were calculated.
type	string specifying method type used in deriving value set scores.
author	string specifying the author of the article containing the value set scores.
year	string specifying the year the article containing the value set scores was published.
source	string specifying the version of the King's Health Questionnaire used.
ignore.invalid	logical to indicate whether to ignore items data with invalid, incomplete or missing data; Default: FALSE.
weights	logical to indicate whether or not save the weights of each score of the KHQ5D. If weights = TRUE the weights will be generated and if weights and save.xlsx = TRUE an Excel file will be saved with the weights of each score plus the utility index under filename = "Res_KHQ5D_weig_uti_ind.xlsx" and sheetName = "Weights_Utility_Index". It is also possible to indicate another name, both for the file and for the sheet; Default: NULL.
save.xlsx	logical to indicate whether or not save the results; Default: FALSE.
filename	string specifying the file name if save.xlsx = TRUE; Default: "Res_KHQ5D_uti_ind.xlsx". If weights = true, default: "Res_KHQ5D_weig_uti_ind.xlsx".
sheetName	string specifying the sheet name if save.xlsx = TRUE; Default: "Utility_Index". If weights = true, default: "Weights_Utility_Index".

**Details**

Named vector RL, PL, SL, E and S represent Role limitation, Physical limitation, Social Limitation, Emotions and Sleep, respectfully.

**Value**

A data frame with utility index scores of the KHQ5D.

**See Also**

[KHQConvKHQ5D](#) and [KHQ5DFreq](#)

**Examples**

```
KHQ5D(scores = c(RL=1,PL=1,SL=1,E=1,S=1), country = "UK",
  type = "SG", author = "Brazier", year = 2008,
  source = "KHQ", ignore.invalid = TRUE, weights = NULL)
```

```
KHQ5D(scores = c(RL=1,PL=1,SL=1,E=1,S=1), country = "UK",
```

```

type = "SG", author = "Brazier", year = 2008,
source = "KHQ", ignore.invalid = TRUE,
weights = NULL, save.xlsx = FALSE,
filename = "Res_KHQ5D_util_ind.xlsx",
sheetName = "Utility_Index")

KHQ5D(scores = 11111, country = "UK", type = "SG",
author = "Brazier", year = 2008, source = "KHQ",
ignore.invalid = TRUE)

KHQ5D(scores = c(11111), country = "UK", type = "SG",
author = "Brazier", year = 2008, source = "KHQ",
ignore.invalid = TRUE)

KHQ5D(scores = c(11111, 22432, 34241, 43332, 22141),
country = "UK", type = "SG", author = "Brazier",
year = 2008, source = "KHQ", ignore.invalid = TRUE)

scores.df <- data.frame(
  RL = c(1,2,3,4,2),
  PL = c(4,3,4,3,2),
  SL = c(1,2,2,4,1),
  E = c(1,3,4,3,4),
  S = c(1,2,1,2,1))

KHQ5D(scores = scores.df, country = "UK", type = "SG",
author = "Brazier", year = 2008, source = "KHQ",
ignore.invalid = TRUE)

scores.df2 <- data.frame(state = c(11111, 22432, 34241, 43332, 22141))

KHQ5D(scores = scores.df2, country = "UK", type = "SG",
author = "Brazier", year = 2008, source = "KHQ",
ignore.invalid = TRUE)

KHQ5D(scores = scores.df2$state, country = "UK", type = "SG",
author = "Brazier", year = 2008, source = "KHQ",
ignore.invalid = TRUE)

KHQ5D(scores = KHQ5D_data, country = "UK", type = "SG",
author = "Brazier", year = 2008, source = "KHQ",
ignore.invalid = TRUE, weights = TRUE)

```

---

KHQ5DFreq

*Cumulative frequency analysis*


---

### Description

Function used to calculate the frequency, percentage, cumulative frequency and cumulative percentage for each health profile in an KHQ5D dataset

**Usage**

```
KHQ5DFreq(
  scores,
  save.xlsx = FALSE,
  filename = NULL,
  sheetName = NULL,
  ignore.invalid = FALSE
)
```

**Arguments**

scores	data.frame with colnames RL, PL, SL, E, and S representing Role limitation, Physical limitation, Social Limitation, Emotions and Sleep. Alternatively a data.frame with the KHQ5D health profiles can be provided in a five digit format e.g., data.frame(state = c(11111, 22432, 34241, 43332)).
save.xlsx	logical to indicate whether or not save the results; Default: FALSE.
filename	string specifying the file name if save.xlsx = TRUE; Default: "Res_KHQ5D_Frequency.xlsx".
sheetName	string specifying the sheet name if save.xlsx = TRUE; Default: "Frequency".
ignore.invalid	logical to indicate whether to ignore items data with invalid, incomplete or missing data; Default: FALSE.

**Details**

Named vector RL, PL, SL, E and S represent Role limitation, Physical limitation, Social Limitation, Emotions and Sleep, respectfully.

**Value**

A data frame with the Health states, Frequency, Percentage, Cumulative frequency and Cumulative percentage for each five digit profile in an KHQ5D dataset.

**See Also**

[KHQConvKHQ5D](#) and [KHQ5D](#)

**Examples**

```
scores.df <- data.frame(
  RL = c(1,2,3,4,2),
  PL = c(4,3,4,3,2),
  SL = c(1,2,2,4,1),
  E = c(1,3,4,3,4),
  S = c(1,2,1,2,1))

KHQ5DFreq(scores = scores.df, ignore.invalid = TRUE)

scores.df2 <- data.frame(state = c(11111, 22432, 34241, 43332, 22141))

KHQ5DFreq(scores = scores.df2, ignore.invalid = TRUE)
```

```

KHQ5DFreq(scores = scores.df2$state, ignore.invalid = TRUE)

KHQ5DFreq(scores = c(11111,11111,22432, 34241, 43332, 22141),
  ignore.invalid = TRUE)

KHQ5DFreq(scores = KHQ5D_data, ignore.invalid = TRUE)

KHQ5DFreq(scores = scores.df, save.xlsx = FALSE,
  filename = "Res_KHQ5D_Frequency.xlsx",
  sheetName = "Frequency",
  ignore.invalid = TRUE)

```

---

KHQ5D\_data

*KHQ five dimension data*


---

### Description

This data set contains an example of 30 responses of the KHQ5D.

### Usage

KHQ5D\_data

### Format

This data frame has 30 rows and the following 5 columns:

- RL** Role Limitations: 1. Your bladder problem does not affect your household tasks, job, or normal daily activities outside the home; 2. Your bladder problem slightly affects your household tasks, job, or normal daily activities outside the home; 3. Your bladder problem moderately affects your household tasks, job, or normal daily activities outside the home; 4. Your bladder problem affects your household tasks, job, or normal daily activities outside the home a lot.
- PL** Physical Limitations: 1. Your bladder problem does not affect your physical activities or ability to travel; 2. Your bladder problem slightly affects your physical activities or ability to travel; 3. Your bladder problem moderately affects your physical activities or ability to travel; 4. Your bladder problem affects your physical activities or ability to travel a lot.
- SL** Social Limitations: 1. Your bladder problem does not limit your ability to see/visit friends or affect your family life; 2. Your bladder problem slightly limits your ability to see/visit friends or affects your family life; 3. Your bladder problem moderately limits your ability to see/visit friends or affects your family life; 4. Your bladder problem limits your ability to see/visit friends or affects your family life a lot.
- E** Emotions: 1. Your bladder problem does not make you feel depressed or anxious and nervous; 2. Your bladder problem makes you feel slightly depressed or anxious and nervous; 3. Your bladder problem makes you feel moderately depressed or anxious and nervous; 4. Your bladder problem makes you feel depressed or anxious and nervous a lot.

**S** Sleep: 1. Your bladder problem does not affect your sleep; 2. Your bladder problem slightly affects your sleep; 3. Your bladder problem moderately affects your sleep; 4. Your bladder problem affects your sleep a lot.

## Source

Example data

## References

Brazier J, Czoski-Murray C, Roberts J, Brown M, Symonds T, Kelleher C. Estimation of a preference-based index from a condition-specific measure: the King's Health Questionnaire. *Med Decis Making*. 2008 Jan-Feb;28(1):113-26. doi:10.1177/0272989X07301820. [PubMed](#)

## Examples

```
KHQ5D(scores = KHQ5D_data, country = "UK", type = "SG",  
author = "Brazier", year = 2008, source = "KHQ",  
ignore.invalid = TRUE)
```

```
KHQ5D(scores = KHQ5D_data, country = "UK", type = "SG",  
author = "Brazier", year = 2008, source = "KHQ",  
save.xlsx = FALSE, filename = "Res_KHQ5D_util_ind.xlsx",  
sheetName = "Utility_Index", ignore.invalid = TRUE)
```

---

KHQConvKHQ5D

*Convert KHQ items to KHQ5D health states*

---

## Description

Function used to convert the KHQ item scores to KHQ5D scores.

## Usage

```
KHQConvKHQ5D(  
  scores,  
  save.xlsx = FALSE,  
  filename = NULL,  
  sheetName = NULL,  
  ignore.invalid = FALSE  
)
```

**Arguments**

<code>scores</code>	data.frame containing 9 items that compose the KHQ5D; colnames must be 3a, 3b, 4a, 4b, 4d, 5c, 6a, 6b, and 7a.
<code>save.xlsx</code>	logical to indicate whether or not save the results; Default: FALSE.
<code>filename</code>	string specifying the file name if <code>save.xlsx = TRUE</code> ; Default: "KHQ_conv_KHQ5D.xlsx".
<code>sheetName</code>	string specifying the sheet name if <code>save.xlsx = TRUE</code> ; Default: "Scores".
<code>ignore.invalid</code>	logical to indicate whether to ignore items data with invalid, incomplete or missing data; Default: FALSE

**Details**

Nine items of the KHQ are used to calculate the KHQ5D scores. The items must be named equal the number in the original questionnaire (3a, 3b, 4a, 4b, 4d, 5c, 6a, 6b, 7a).

**Value**

A data frame with scores of the KHQ five dimensions (KHQ5D).

**See Also**

[KHQ5D](#)

**Examples**

```
scores.df <- data.frame(
  "3a" = c(4,3,4,3,2), "3b" = c(4,3,4,3,2),
  "4a" = c(1,3,4,3,4), "4b" = c(1,3,4,3,4),
  "4d" = c(2,2,3,4,2), "5c" = c(2,2,3,4,2),
  "6a" = c(3,2,2,4,1), "6b" = c(3,2,2,4,1),
  "7a" = c(1,3,4,3,4), check.names = FALSE)

KHQConvKHQ5D(scores = scores.df, ignore.invalid = FALSE)

scores.df2 <- data.frame(
  "3a" = c(4,3,4,3,2), "3b" = c(4,3,4,3,2),
  "4a" = c(1,3,4,3,4), "4b" = c(1,3,4,3,4),
  "4d" = c(2,2,3,4,2), "5c" = c(2,2,3,4,2),
  "6a" = c(3,2,2,4,1), "6b" = c(3,2,2,4,1),
  "7a" = c(1,3,4,3,4), check.names = FALSE)

KHQConvKHQ5D(scores = scores.df2, save.xlsx = FALSE,
  filename = "KHQ_conv_KHQ5D.xlsx", sheetName = "Scores",
  ignore.invalid = TRUE)

KHQConvKHQ5D(scores = KHQ_Conv_KHQ5D_data, save.xlsx = FALSE,
  filename = "KHQ_conv_KHQ5D.xlsx", sheetName = "Scores",
  ignore.invalid = TRUE)
```



---

 KHQScores

*Generate scores for each dimension of the KHQ*


---

### Description

Function used to generate scores for each dimension of the KHQ.

### Usage

```
KHQScores(
  scores,
  country,
  author,
  year,
  ignore.invalid = FALSE,
  mean.na = FALSE,
  save.xlsx = FALSE,
  filename = NULL,
  sheetName = NULL
)
```

### Arguments

<code>scores</code>	data.frame containing all the KHQ items. See the 'Details' for information on naming the data.frame columns.
<code>country</code>	string specifying the country to calculate the correct KHQ structure scores. Most countries where the KHQ has been translated use the same structure as the original version (Kelleher et al., 1997), so use UK. If the structure of your country has changed, use your country's acronym.
<code>author</code>	string specifying the author of the article who published the structure used to calculate the score.
<code>year</code>	string specifying the year the article with the structure used to calculate the scores was published.
<code>ignore.invalid</code>	logical to indicate whether to ignore items data with invalid, incomplete or missing data; Default: FALSE.
<code>mean.na</code>	logical to indicate whether or not to use the mean of the dimension items when there is NA in the data; Default: FALSE.
<code>save.xlsx</code>	logical to indicate whether or not save the results; Default: FALSE.
<code>filename</code>	string specifying the file name if <code>save.xlsx = TRUE</code> ; Default: "Res_Scores_Dimensions_KHQ.xlsx".
<code>sheetName</code>	string specifying the sheet name if <code>save.xlsx = TRUE</code> ; Default: "Scores".

## Details

If using the original structure the items must be named equal the number in the original questionnaire published by Kelleher and collaborator in 1997 (1, 2, 3a, 3b, 4a, 4b, 4c, 4d, 5a, 5b, 5c, 6a, 6b, 6c, 7a, 7b, 8a, 8b, 8c, 8d, 8e, 9a, 9b, 9c, 9d, 9e, 9f, 9g, 9h, 9i, 9j, 9k).

If using the Brazilian structure the items must be named equal the number in the questionnaire published by Brusaca and collaborator in 2021 (1, 2, 3a, 3b, 3c, 3d, 3e, 4a, 4b, 4c, 5a, 5b, 5c, 6a, 6b, 7a, 7b, 7c, 8a, 8b, 8c, 8d, 8e, 8f, 8g, 8h, 8i, 8j).

## Value

A data frame with scores of each dimension of the KHQ.

## Examples

```
scores_UK <- data.frame(
  "1" = c(1,2,3,4,5,NA), "2" = c(1,2,3,4,NA,NA),
  "3a" = c(1,2,3,4,NA,NA), "3b" = c(1,2,3,4,NA,NA),
  "4a" = c(1,2,3,4,NA,NA), "4b" = c(1,2,3,4,NA,NA),
  "4c" = c(1,2,3,4,NA,1), "4d" = c(1,2,3,4,NA,1),
  "5a" = c(1,2,3,4,1,NA), "5b" = c(1,2,3,4,NA,1),
  "5c" = c(1,2,3,4,0,1), "6a" = c(1,2,3,4,NA,NA),
  "6b" = c(1,2,3,4,NA,NA), "6c" = c(1,2,3,4,NA,NA),
  "7a" = c(1,2,3,4,NA,NA), "7b" = c(1,2,3,4,NA,NA),
  "8a" = c(1,2,3,4,NA,NA), "8b" = c(1,2,3,4,NA,NA),
  "8c" = c(1,2,3,4,NA,NA), "8d" = c(1,2,3,4,NA,NA),
  "8e" = c(1,2,3,4,NA,NA), "9a" = c(0,1,2,3,NA,NA),
  "9b" = c(0,1,2,3,NA,NA), "9c" = c(0,1,2,3,NA,NA),
  "9d" = c(0,1,2,3,NA,NA), "9e" = c(0,1,2,3,NA,NA),
  "9f" = c(0,1,2,3,NA,NA), "9g" = c(0,1,2,3,NA,NA),
  "9h" = c(0,1,2,3,NA,NA), "9i" = c(0,1,2,3,NA,NA),
  "9j" = c(0,1,2,3,NA,NA), "9k" = c(0,1,2,3,NA,NA),
  check.names = FALSE)

KHQScores(scores = scores_UK, country = "UK",
  author = "Kelleher", year = 1997, ignore.invalid = TRUE,
  mean.na = FALSE)

KHQScores(scores = scores_UK, country = "UK",
  author = "Kelleher", year = 1997, ignore.invalid = TRUE,
  mean.na = FALSE, save.xlsx = FALSE,
  filename = "Res_Scores_Dimensions_KHQ.xlsx",
  sheetName = "Scores")

KHQScores(scores = KHQ_data_Kelleher, country = "UK",
  author = "Kelleher", year = 1997, ignore.invalid = TRUE,
  mean.na = FALSE, save.xlsx = FALSE,
  filename = "Res_Scores_Dimensions_KHQ.xlsx",
  sheetName = "Scores")
```

---

KHQ\_Conv\_KHQ5D\_data     *KHQ data to convert to KHQ5D scores*

---

**Description**

This data set contains an example of 30 responses of the KHQ items used to convert to KHQ5D scores.

**Usage**

KHQ\_Conv\_KHQ5D\_data

**Format**

This data frame has 30 rows and the following 9 columns:

- 3a** Role Limitations: Q - To what extent does your bladder problem affect your household tasks (e.g., cleaning, shopping etc)? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 3b** Role Limitations: Q - Does your bladder problem affect your job, or your normal daily activities outside the home? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 4a** Physical Limitations: Q - Does your bladder problem affect your physical activities (e.g., going for a walk, run, sport, gym etc)? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 4b** Physical Limitations: Q - Does your bladder problem affect your ability to travel? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 4d** Social Limitations: Q - Does your bladder problem limit your ability to see/visit friends? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 5c** Personal Relationship: Q - Does your bladder problem affect your family life? R - 0 = Not applicable; 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 6a** Emotions: Q - Does your bladder problem make you feel depressed? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 6b** Emotions: Q - Does your bladder problem make you feel anxious or nervous? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 7a** Sleep/Energy: Q - Does your bladder problem affect your sleep? R - 1 = Never; 2 = Sometimes; 3 = Often; 4 = Very much.

**Source**

Example data

**References**

Brazier J, Czoski-Murray C, Roberts J, Brown M, Symonds T, Kelleher C. Estimation of a preference-based index from a condition-specific measure: the King's Health Questionnaire. *Med Decis Making*. 2008 Jan-Feb;28(1):113-26. doi:10.1177/0272989X07301820. [PubMed](#)

## Examples

```
KHQConvKHQ5D(scores = KHQ_Conv_KHQ5D_data, ignore.invalid = TRUE)
```

```
KHQConvKHQ5D(scores = KHQ_Conv_KHQ5D_data, save.xlsx = FALSE,
  filename = "KHQ_conv_KHQ5D.xlsx", sheetName = "Scores",
  ignore.invalid = TRUE)
```

---

KHQ_data_Kelleher	<i>KHQ data</i>
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---

## Description

This data set contains an example of 30 responses of the KHQ.

## Usage

```
KHQ_data_Kelleher
```

## Format

This data frame has 30 rows and the following 32 columns:

- 1** General Health Perception: Q - How would you describe your health at the present? R - 1 = Very good; 2 = Good; 3 = Fair; 4 = Poor; 5 = Very poor.
- 2** Incontinence Impact: Q - How much do you think your bladder problem affects your life? R - 1 = Not at all; 2 = A little; 3 = Moderately; 4 = A lot.
- 3a** Role Limitations: Q - To what extent does your bladder problem affect your household tasks (e.g., cleaning, shopping etc)? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 3b** Role Limitations: Q - Does your bladder problem affect your job, or your normal daily activities outside the home? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 4a** Physical Limitations: Q - Does your bladder problem affect your physical activities (e.g., going for a walk, run, sport, gym etc)? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 4b** Physical Limitations: Q - Does your bladder problem affect your ability to travel? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 4c** Social Limitations: Q - Does your bladder problem restrict your social life? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 4d** Social Limitations: Q - Does your bladder problem limit your ability to see/visit friends? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 5a** Personal Relationship: Q - Does your bladder problem affect your relationship with your partner? R - 0 = Not applicable; 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 5b** Personal Relationship: Q - Does your bladder problem affect your sex life? R - 0 = Not applicable; 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.

- 5c** Personal Relationship: Q - Does your bladder problem affect your family life? R - 0 = Not applicable; 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 6a** Emotions: Q - Does your bladder problem make you feel depressed? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 6b** Emotions: Q - Does your bladder problem make you feel anxious or nervous? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 6c** Emotions: Q - Does your bladder problem make you feel bad about yourself? R - 1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = A lot.
- 7a** Sleep/Energy: Q - Does your bladder problem affect your sleep? R - 1 = Never; 2 = Sometimes; 3 = Often; 4 = Very much.
- 7b** Sleep/Energy: Q - Do you feel worn out or tired? R - 1 = Never; 2 = Sometimes; 3 = Often; 4 = Very much.
- 8a** Severity Measures: Q - Do you do any of the following; if so how much? Wear pads to keep dry? R - 1 = Never; 2 = Sometimes; 3 = Often; 4 = Very much.
- 8b** Severity Measures: Q - Do you do any of the following; if so how much? Be careful how much fluid you drink? R - 1 = Never; 2 = Sometimes; 3 = Often; 4 = Very much.
- 8c** Severity Measures: Q - Do you do any of the following; if so how much? Change your underclothes when they get wet? R - 1 = Never; 2 = Sometimes; 3 = Often; 4 = Very much.
- 8d** Severity Measures: Q - Do you do any of the following; if so how much? Worry in case you smell? R - 1 = Never; 2 = Sometimes; 3 = Often; 4 = Very much.
- 8e** Severity Measures: Q - Do you do any of the following; if so how much? Get embarrassed because of your bladder problem? R - 1 = Never; 2 = Sometimes; 3 = Often; 4 = Very much.
- 9a** Symptom Severity Scale: Q - Frequency: Going to the toilet very often; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9b** Symptom Severity Scale: Q - Nocturia: Getting up at night to pass urine; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9c** Symptom Severity Scale: Q - Urgency: A strong and difficult to control desire to pass urine; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9d** Symptom Severity Scale: Q - Urge incontinence: Urinary leakage associated with a strong desire to pass urine; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9e** Symptom Severity Scale: Q - Stress incontinence: Urinary leakage with physical activity, e.g., coughing, sneezing, running; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9f** Symptom Severity Scale: Q - Nocturnal enuresis: Wetting the bed at night; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9g** Symptom Severity Scale: Q - Intercourse incontinence: Urinary leakage with sexual intercourse; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9h** Symptom Severity Scale: Q - Frequent waterworks infections; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9i** Symptom Severity Scale: Q - Bladder pain; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9j** Symptom Severity Scale: Q - Difficulty passing urine; R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.
- 9k** Symptom Severity Scale: Q - Other (Please specify); R - 1 = A little; 2 = Moderately; 3 = A lot; 0 = Omitted.

**Source**

Example data

**References**

Kelleher CJ, Cardozo LD, Khullar V, Salvatore S. A new questionnaire to assess the quality of life of urinary incontinent women. *Br J Obstet Gynaecol.* 1997 Dec;104(12):1374-9. doi:10.1111/j.1471-0528.1997.tb11006.x. [PubMed](#)

**Examples**

```
KHQScores(scores = KHQ_data_Kelleher, country = "UK",
  author = "Kelleher", year = 1997, ignore.invalid = TRUE)
```

```
KHQScores(scores = KHQ_data_Kelleher, country = "UK",
  author = "Kelleher", year = 1997, save.xlsx = FALSE,
  filename = "Res_Scores_Dimensions_KHQ.xlsx",
  sheetName = "Scores", ignore.invalid = TRUE)
```

---

Utility\_Index\_data      *Value sets of the KHQ5D*

---

**Description**

This data set contains the weights to calculate the utility index of the KHQ5D.

**Usage**

Utility\_Index\_data

**Format**

This data frame has 30 rows and the following 2 columns:

**UK** UK KHQ5D weights. [PubMed](#)

**Variables** FullHealth - Best health, usually indicated as 1; RL2 - Role Limitations: weight for score 2; RL3 - Role Limitations: weight for score 3; RL4 - Role Limitations: weight for score 4; PL2 - Physical Limitations: weight for score 2; PL3 - Physical Limitations: weight for score 3; PL4 - Physical Limitations: weight for score 4; SL2 - Social Limitations: weight for score 2; SL3 - Social Limitations: weight for score 3; SL4 - Social Limitations: weight for score 4; E2 - Emotions: weight for score 2; E3 - Emotions: weight for score 3; E4 - Emotions: weight for score 4; S2 - Sleep: weight for score 2; S3 - Sleep: weight for score 3; S4 - Sleep: weight for score 4; Year - Year in which the weight of each item in the five dimensions of the KHQ5D was generated; Author - Author who published the weight of each item in the five dimensions of the KHQ5D; Type - Type of method used to generate the weight of each item from the

five dimensions of KHQ5D; Source - Version of KHQ used to build the KHQ5D items and consequently used to generate the weights of each item in the five dimensions; Health state - Number of health states used to generate the weights of the KHQ5D.

**Source**

<https://pubmed.ncbi.nlm.nih.gov/17641139/>

**References**

Brazier J, Czoski-Murray C, Roberts J, Brown M, Symonds T, Kelleher C. Estimation of a preference-based index from a condition-specific measure: the King's Health Questionnaire. *Med Decis Making*. 2008 Jan-Feb;28(1):113-26. doi:10.1177/0272989X07301820. [PubMed](#)

# Index

## \* dataset

- KHQ5D\_data, [6](#)
- KHQ\_Conv\_KHQ5D\_data, [11](#)
- KHQ\_data\_Kelleher, [12](#)
- Utility\_Index\_data, [14](#)

- KHQ5D, [2](#), [5](#), [8](#)
- KHQ5D\_data, [6](#)
- KHQ5DFreq, [3](#), [4](#)
- KHQ\_Conv\_KHQ5D\_data, [11](#)
- KHQ\_data\_Kelleher, [12](#)
- KHQConvKHQ5D, [3](#), [5](#), [7](#)
- KHQScores, [9](#)

- Utility\_Index\_data, [14](#)