

EXHIBIT A

Pittsburgh Sleep Quality Index (PSQI)

Form Administration Instructions, References, and Scoring

Form Administration Instructions

The range of values for questions 5 through 10 are all 0 to 3.

Questions 1 through 9 are not allowed to be missing except as noted below. If these questions are missing then any scores calculated using missing questions are also missing. Thus it is important to make sure that all questions 1 through 9 have been answered.

In the event that a range is given for an answer (for example, '30 to 60' is written as the answer to Q2, minutes to fall asleep), split the difference and enter 45.

Reference

Buysse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ: The Pittsburgh Sleep Quality Index: A new instrument for psychiatric practice and research. *Psychiatry Research* 28:193-213, 1989.

Scores – reportable in publications

On May 20, 2005, on the instruction of Dr. Daniel J. Buysse, the scoring of the PSQI was changed to set the score for Q5J to 0 if either the comment or the value was missing. This may reduce the DISTB score by 1 point and the PSQI Total Score by 1 point.

PSQIDURAT

DURATION OF SLEEP

IF $Q4 \geq 7$, THEN set value to 0

IF $Q4 < 7$ and ≥ 6 , THEN set value to 1

IF $Q4 < 6$ and ≥ 5 , THEN set value to 2

IF $Q4 < 5$, THEN set value to 3

Minimum Score = 0 (better); Maximum Score = 3 (worse)

PSQIDISTB

SLEEP DISTURBANCE

IF $Q5b + Q5c + Q5d + Q5e + Q5f + Q5g + Q5h + Q5i + Q5j$ (IF Q5JCOM is null or Q5j is null, set the value of Q5j to 0) = 0, THEN set value to 0

IF $Q5b + Q5c + Q5d + Q5e + Q5f + Q5g + Q5h + Q5i + Q5j$ (IF Q5JCOM is null or Q5j is null, set the value of Q5j to 0) ≥ 1 and ≤ 9 , THEN set value to 1

IF $Q5b + Q5c + Q5d + Q5e + Q5f + Q5g + Q5h + Q5i + Q5j$ (IF Q5JCOM is null or Q5j is null, set the value of Q5j to 0) > 9 and ≤ 18 , THEN set value to 2

IF $Q5b + Q5c + Q5d + Q5e + Q5f + Q5g + Q5h + Q5i + Q5j$ (IF Q5JCOM is null or Q5j is null, set the value of Q5j to 0) > 18 , THEN set value to 3

Minimum Score = 0 (better); Maximum Score = 3 (worse)

PSQILATEN

SLEEP LATENCY

First, recode Q2 into Q2new thusly:

IF $Q2 \geq 0$ and ≤ 15 , THEN set value of Q2new to 0

IF $Q2 > 15$ and ≤ 30 , THEN set value of Q2new to 1

IF $Q2 > 30$ and ≤ 60 , THEN set value of Q2new to 2

IF $Q2 > 60$, THEN set value of Q2new to 3

EXHIBIT A

Next

IF $Q5a + Q2new = 0$, THEN set value to 0
IF $Q5a + Q2new \geq 1$ and ≤ 2 , THEN set value to 1
IF $Q5a + Q2new \geq 3$ and ≤ 4 , THEN set value to 2
IF $Q5a + Q2new \geq 5$ and ≤ 6 , THEN set value to 3

Minimum Score = 0 (better); Maximum Score = 3 (worse)

PSQIDAYDYS

DAY DYSFUNCTION DUE TO SLEEPINESS

IF $Q8 + Q9 = 0$, THEN set value to 0
IF $Q8 + Q9 \geq 1$ and ≤ 2 , THEN set value to 1
IF $Q8 + Q9 \geq 3$ and ≤ 4 , THEN set value to 2
IF $Q8 + Q9 \geq 5$ and ≤ 6 , THEN set value to 3
Minimum Score = 0 (better); Maximum Score = 3 (worse)

PSQIHSE

SLEEP EFFICIENCY

Diffsec = Diffsec = Difference in seconds between times for Bed Time (Q1) and Getting Up Time (Q3).

Diffhour = Absolute value of diffsec / 3600

newtib = IF diffhour > 24, then newtib = diffhour - 24

IF diffhour \leq 24, THEN newtib = diffhour

(NOTE, THE ABOVE JUST CALCULATES THE HOURS BETWEEN BED TIME (Q1) AND GETTING UP TIME (Q3))

tmphse = $(Q4 / newtib) * 100$

IF tmphse \geq 85, THEN set value to 0
IF tmphse < 85 and \geq 75, THEN set value to 1
IF tmphse < 75 and \geq 65, THEN set value to 2
IF tmphse < 65, THEN set value to 3
Minimum Score = 0 (better); Maximum Score = 3 (worse)

PSQISLPQUAL

OVERALL SLEEP QUALITY

Q6

Minimum Score = 0 (better); Maximum Score = 3 (worse)

PSQIMEDS

NEED MEDS TO SLEEP

Q7

Minimum Score = 0 (better); Maximum Score = 3 (worse)

PSQI

TOTAL

DURAT + DISTB + LATEN + DAYDYS + HSE + SLPQUAL + MEDS Minimum Score = 0 (better); Maximum Score = 21 (worse)

Interpretation: TOTAL \leq 5 associated with good sleep quality

TOTAL > 5 associated with poor sleep quality