

THE YOUNG DISABILITY QUESTIONNAIRE (YDQ)

USERS GUIDE

Version: 9 – 12 years

(modified 23-02-2024)

GENERAL INFORMATION

The Young Disability Questionnaire is a self-report 24-item questionnaire measuring the consequences of spinal pain in children aged 9-12 years. In addition, it has 4 extra focus questions which are optional at the end of the questionnaire.

It was developed from 2018 to 2021 in three phases:

- Identification of physical and psychological themes important for children having spinal pain¹
- Conceptualisation, generation of items and pilot testing²
- Field testing including item reduction and factor analyses

YDQ questions have been classified according to the ICF health model and contain questions in the domains of:

- Body Function & Structure
- Activity
- Participation
- Environmental Factors
- Personal Factors

TERMS AND CONDITIONS

The YDQ can be used free of charge for clinical and scientific purposes if 1) it is used according to the specifications in the original article and the manual, and 2) it is not modified.

TARGET POPULATION

The YDQ is targeted children aged 9 to 12 years who suffers from pain in any area of the spine. A combination with the Young Spine Questionnaire (YSQ) may be advantageous to identify children with spinal pain (see www.spoergeskemaer.dk/ysq).

YDQ takes approximately 15 minutes to fill out. The younger population may require more time and may need help with reading the questions.

STRUCTURE AND USE

The YDQ is structured into two sections:

1. Section 1

Section 1 consists of 24 questions measuring the consequences of spinal pain. The scale has two subscales measuring a 'physical component' and a 'psychosocial component' and a single sleep question scored on its own. It can be used to measure if the consequences of spinal pain at a single point in time. We believe it can also measure change over time, however, this has not been tested and will be evaluated in a future study. This part of the questionnaire can be used independent of section 2.

2. Section 2 (optional)

Section 2 consists of questions ranking (what matters the most or least) the impact of four major areas of focus:

- The presence of pain
- Limitations in physical activities
- Limitations in social relations
- The effect on mood and concentration

The clinician or researcher can use these four questions to identify the main area(s) that affects the child. This can be used to aim the intervention strategy towards the area(s) which is (are) most important to the child.

SCORING INSTRUCTIONS

SUM SCORE CALCULATION (SECTION 1)

The 24 questions form two sum scores, one for each subscale and a single score for the sleep question (#20). A sum score for the full scale is **not** recommended. The two subscales are presented in Table 1.

Table 1. The physical and psychological subscales of the YDQ.

| Number | Question | Never | Once or twice | Sometimes | Often | Most of the time | Subscale |
|--------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-------------|
| 1 | Take care of myself | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 2 | Head bend forward | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 3 | Lift | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 4 | Bend forward | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 5 | Stand | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 6 | Sit | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 7 | Walk | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 8 | Run | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 9 | Sports | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 10 | Playing | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 11 | Ride a bike | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 12 | Not as much fun | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 13 | Lonely | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 14 | Worried | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 15 | Scared | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 16 | Grumpy or annoyed | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 17 | Sad or upset | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 18 | Concentrate | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 19 | School | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 20 | Sleep | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | Single item |
| 21 | Energy | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | A |
| 22 | Talk to mum and dad | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 23 | Talk to friends | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |
| 24 | Treatment | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | B |

Note: **Subscale A** measures the 'physical component' and has 13 questions whereas **subscale B** measures the 'psychosocial component' and has 10 questions. The sleep question (item #20) is scored on its own. Each question is scored as Never = 0; once or twice = 1; Sometimes = 2; Often = 3; Most of the time = 4.

If more than one answer category is marked in a question, take the lowest score. All question scores are added up for each subscale to create a total score (except for the sleep question, #20). Proportional recalculation³ is used to make a sum score ranging from 0 – 100 for each subscale in YDQ (Table 2). A sum score can only be calculated if ≤ 3 questions are missing for the physical component scale and ≤ 2 in the psychological scale. If more questions are missing the sum score is missing.

Table 2. Raw and final score range of the subscales.

| Subscale | Number of questions | Raw total score range | Final sum score range |
|---------------------------|---------------------|-----------------------|-----------------------|
| A Physical component | 13 | 0 – 52 | 0 – 100 |
| B Psychological component | 10 | 0 – 40 | 0 – 100 |
| Sleep question | 1 | 0 – 4 | 0 – 4 |

Calculating the subscale sum score follows the formula:

$$\frac{\text{Total subscale score}}{4 \times \text{number of subscale questions answered}} \times 100$$

Example where all questions completed (physical component scale)

If all 13 questions are completed, and the total score is 12, the sum score is calculated as follows:

$$\frac{12}{4 \times 13} \times 100 = 23.1\%$$

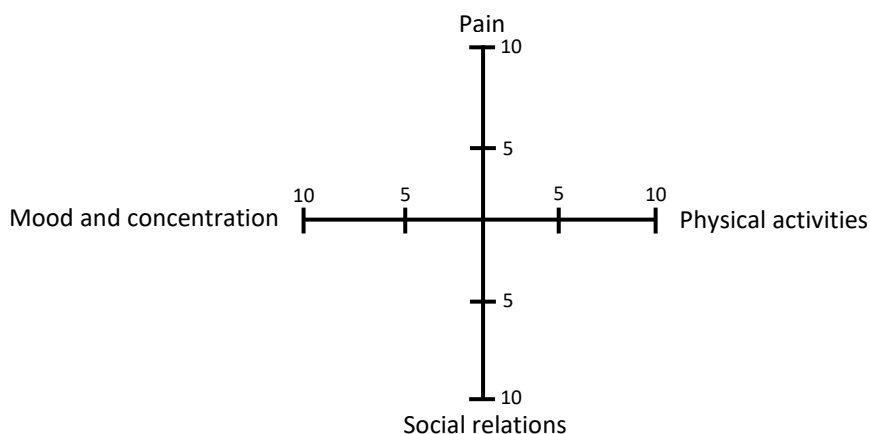
Example where there are 3 missing questions (physical component scale)

If 3 questions are missing, and the total score is 12, the sum score is calculated as follows:

$$\frac{12}{4 \times 10} \times 100 = 30.0\%$$

THE IMPACT QUESTIONS (SECTION 2)

The four questions are scored individually with no summation. When used on an individual level, the impact of each question can be scrutinised directly. When used on a group level, we recommend that the impact of the questions is viewed in a spider diagram:



LANGUAGES

The YDQ is available in several languages (please see www.spoergeskemaer.dk/ydq). If you wish to translate and cross-culturally adapt the YDQ into another language, please send a request to Henrik Hein Lauridsen on e-mail: hlauridsen@health.sdu.dk. Translation and cross-cultural adaptation of the YDQ uses the English version and must follow the guidelines outlined by Beaton et al.⁴ and use the templates on the homepage.

QUESTIONS ABOUT YDQ

Questions about the YDQ can be directed to Henrik Hein Lauridsen on e-mail: hlauridsen@health.sdu.dk.

LITERATURE

1. Lauridsen HH, Stolpe AB, Myburgh C, *et al.* What are important consequences in children with non-specific spinal pain? A qualitative study of Danish children aged 9–12 years. *BMJ Open* 2020;10(10):e037315.
2. Meldgaard E, Lauridsen HH, Hestbaek L. The Young Disability Questionnaire-Spine: item development, pilot testing and conceptualisation of a questionnaire to measure consequences of spinal pain in children. *BMJ Open* 2021;11(5):e045580.
3. Kent P, Lauridsen HH. Managing missing scores on the Roland Morris Disability Questionnaire. *Spine (Phila Pa 1976)* 2011;36(22):1878–84.
4. Beaton DE, Bombardier C, Guillemin F, *et al.* Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine* 2000;25(24):3186–91.