

## ChEHK-Q (English version)

### Children's Environmental Health Knowledge Questionnaire

*This scale could be used for research or clinical purposes provided the source is cited. If you use or modify this scale, please report to authors by –email to: [cagarcia@ujaen.es](mailto:cagarcia@ujaen.es)*

Cite as: Álvarez-García C., Álvarez-Nieto C., Pancorbo-Hidalgo P.L., Sanz-Martos S, López-Medina I.M. Children's Environmental Health Knowledge Questionnaire (ChEHK-Q English version). 2018. Universidad de Jaén. Available at: <http://cuidosalud.com/en/inv/children-environmental-health/>

This questionnaire measures the overall knowledge on sustainability and climate change issues and their effects on healthcare delivery. It could be used for nursing students.

### Scoring instructions

To calculate the overall knowledge score, 1 point is added for each item with a correct answer. The following table shows the correct answer:

	True	False
1	x	
2		x
3	x	
4		x
5		x
6	x	
7		x
8	x	
9	x	
10		x
11	x	
12	x	
13		x
14	x	
15	x	
16	x	
17		x
18	x	
19		x
20		x
21		x
22	x	
23		x
24		x
25		x
26		x

Items answered with “Don’t know” are scored with 0 points. These items can be taken into account to identify areas of ignorance.

The maximum score is 26 points (Knowledge index 100%). Several indices can be calculated from the overall score:

- Knowledge index:  $\text{Overall score} / 26 \times 100$
- Ignorance index:  $\text{Number of Don't know answers} / 26 \times 100$

To categorize the knowledge level of nursing students according to the Knowledge Index, the following ranges are proposed:

- > 90 % = excellent knowledge
- 90 % - 80 % = very good knowledge
- 80 % - 60 % = good knowledge
- 60% - 40% = not enough knowledge
- < 40% = poor knowledge

## ChEHK-Q (English versión)

Sustainability in healthcare means designing and delivering healthcare that uses resources in ways that don't prejudice future health and wellbeing.

Next, there are a series of statements about children's environmental health. Please, read each statement carefully and tick one box, "Yes" or "No", to indicate whether you consider it correct or not according to current clinical practice guidelines. If you don't know, please tick "I don't know".

	True	False	I don't know
1. The paediatric population is more susceptible to environmental threats due to their biological immaturity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The increased energy and metabolic consumption of the paediatric population protects children from environmental hazards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The higher rate of cell growth during the paediatric age increases the risk of health effects caused by environmental factors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Environmental factors do not influence hormonal secretion during puberty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Nitrogen oxide from fossil fuels in the home and tobacco smoke causes redness and burns on the skin.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Particles from animals exacerbate asthma crisis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Increased humidity at home improves respiratory diseases in children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Passive smoking is associated with the development of acute leukemias in children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Childhood leukemia incidence rates are higher in the areas most exposed to radon.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Overexposure to solar ultraviolet radiations can damage the skin of adults more severely than that of children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. During childhood more than half of the expected lifetime solar ultraviolet radiation is absorbed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	True	False	I don't know
12. Lead accumulates in the body affecting the nervous system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Chronic dietary exposure to mercury (fish and shellfish) is less toxic to children's central nervous system than to adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Exposure to pesticides increases the risk of developing attention deficit problems in school-aged children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Children born to smoking mothers during pregnancy are at risk of lower intellectual capacity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Exposure to organic solvents during fetal development can cause learning disabilities in children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Water containing nitrates can only cause intoxication during childhood.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Chlorination of water forms sub-products from the disinfection process that have been classified as carcinogenic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. The major source of childhood exposure to pesticides is through ambient air.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. The main route of exposure to mercury is through cereal intake.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Exposure to lead through diet occurs mainly through fish intake.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Food colourings and preservatives are associated with central nervous system problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Genetically modified foods cause fewer allergic reactions in children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Schools and nurseries are environmentally safe places.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Children are exposed to higher concentrations of air pollutants at home than outdoors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Parks and gardens are the areas with the least environmental pollutants where children can play.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>