

Cross-cultural adaptation of children's environmental health questionnaires for nursing students in England

Health Education Journal
2020, Vol. 79(7) 826–838
© The Author(s) 2020
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/0017896920915594
journals.sagepub.com/home/hej



Cristina Álvarez-García^a , Carmen Álvarez-Nieto^a,
Rachel Carter^b, Janet Kelsey^b, Sebastián Sanz-Martos^a
and Isabel M López-Medina^a

^aDepartment of Nursing, University of Jaén, Jaén, Spain

^bSchool of Nursing and Midwifery, University of Plymouth, Plymouth, UK

Abstract

Objectives: Children are among the most vulnerable population groups with regard to environmental risks. Nursing students must be fully educated on children's environmental health as they are in a key position to prevent and reduce the effects of environmental hazards. The main objective of this study was to adapt and validate an English language version of two questionnaires about children's health and the environment, to assess the knowledge and skills of student nurses in England.

Design: Observational cross-sectional study.

Setting: A university in Southern England.

Method: The study involves translating, adapting and validating the Children's Environmental Health Knowledge Questionnaire (ChEHK-Q) and the Children's Environmental Health Skills Questionnaire (ChEHS-Q) with nursing students in England ($N=232$).

Results: The psychometric characteristics of both questionnaires were strong. Infit and outfit values were close to 1. The reliability values for the items and people were 0.96 and 0.79 for ChEHK-Q and 0.98 and 0.89 for ChEHS-Q, respectively. Only 52 (22.41%) and 77 (33.62%) participants had at least good knowledge and skills, respectively. Higher knowledge and skills were found with respect to the vulnerability of children and identification of environmental risks in the home. Lower levels of knowledge and skills were found with respect to the effects of pesticides and the assessment of neoplastic pollutants.

Conclusion: Findings demonstrate deficiencies in nursing competencies related to children's environmental health. The use of these questionnaires will facilitate improvement in both knowledge and skills related to children's environmental health among future nurses.

Keywords

Child health, environmental health, nursing students, questionnaire, university

Corresponding author:

Carmen Álvarez-Nieto, Department of Nursing, University of Jaén, Building B3, Office 243, Campus Las Lagunillas, 23071 Jaén, Spain.

Email: calvarez@ujaen.es

- Mukaka MM (2012) A guide to appropriate use of correlation coefficient in medical research. *Malawi Medical Journal* 24: 69–71.
- Navas MJ (1994) Teoría clásica de los tests versus teoría de respuesta al ítem [Classical test theory versus item response theory]. *Psicológica* 15: 175–208.
- Nigatu AS, Asamoah BO and Kloos H (2014) Knowledge and perceptions about the health impact of climate change among health sciences students in Ethiopia: A cross-sectional study. *BMC Public Health* 14: 587.
- Nunnally JC and Bernstein IH (1995) *Teoría Psicométrica*. 2nd ed. Mexico City, Mexico: McGraw-Hill.
- Nursing and Innovation in Healthcare (2018) Children’s environmental health. Available at: <http://cuidosalud.com/en/inv/children-environmental-health/> (accessed 29 August 2019).
- Polit DF and Beck CT (2008) Developing and testing self-report scales. In: Polit DF and Beck CT (eds) *Nursing Research, Generating and Assessing Evidence for Nursing Practice*. 8th ed. Philadelphia, PA: Lippincott Williams & Wilkins, pp.474–505.
- Prieto G and Delgado AR (2003) Análisis de un test mediante el modelo de Rasch [Analysis of a test using the Rasch model]. *Psicothema* 15(1): 94–100.
- Richardson J, Grose J, Doman M, et al. (2014) The use of evidence-informed sustainability scenarios in the nursing curriculum: Development and evaluation of teaching methods. *Nurse Education Today* 34(4): 490–493.
- Streiner DL and Kottner J (2014) Recommendations for reporting the results of studies of instrument and scale development and testing. *Journal of Advanced Nursing* 70(9): 1970–1979.
- Sullivan-Marx E and McCauley L (2017) Climate change, global health, and nursing scholarship. *Journal of Nursing Scholarship* 49(6): 593–595.
- Torres-Alzate HM, Law-Wilson L, Harper DC, et al. (2020) Essential global health competencies for baccalaureate nursing students in the United States: A mixed methods Delphi study. *Journal of Advanced Nursing* 76(2): 725–740.
- Walpole SC, Barna S, Richardson J, et al. (2019) Sustainable healthcare education: Integrating planetary health into clinical education. *The Lancet Planetary Health* 3(1): e6–e7.