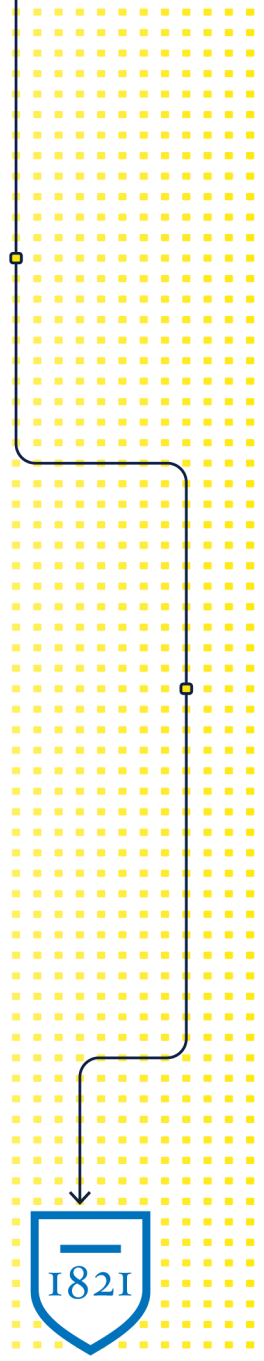
Climate Conscious Care: Assessing School Nurses Knowledge, Attitudes and Behaviors

Karen May, PhD, RN, CNE

Widener University

Objective

- Identify the threats posed by climate change to children with chronic health conditions



Global climate change over the next 30-50 years is projected to cause food production to

Decrease in all regions of the world

Increase in all regions of the world

Increase in many high-income country regions and decrease in many low- income country regions

Not change

Global climate change is projected to result in:

More frequent and heavy rainfall events in many regions

Constant and severe drought

Wetter soils year round in the interior regions of the continents

More frequent frost

Climate change will have consequences for the Earth system and human lives

Aim of the study

- This descriptive correlational study sought to assess the knowledge, attitudes, and behaviors of school nurses related to the health impacts of climate change.

Review of Literature

- School age and adolescent students are particularly vulnerable to the consequences climate change, which include poor air quality, increasing temperatures, and increasing pollen counts.

- Burbank & Peden (2018)

- Pieters et al. (2015)

PROTECTING CHILDREN FROM THE ENVIRONMENT

Air Pollution: An unseen threat to children's health.

Each year, air pollution causes

570,000 deaths

in children under 5. This includes indoor, outdoor and second-hand smoke.

In children, air pollution can:

- Stunt brain development
- Reduce lung function & trigger asthma

It can also set the stage for problems later in life from:

- Stroke
- Cardiovascular disease
- Cancers
- Chronic respiratory illnesses

Nearly a million children die from pneumonia each year. Half of those are linked to air pollution.

World Health Organization

Eco-medicine

- the new patterns of disease and poverty that stem from the adverse human impact on the environment. According to the literature, nurses working in all disciplines have faced barriers implementing this framework into their routine way of providing care.

- Leffers, McDermott-Levy, Smith, and Sattler (2014)

Study design

- Descriptive study
- A convenience sample of School Nurses were invited to participate in the study.
- Qualtrics
- The climate change instrument was developed by Rebecca Franzen, EdD from the University of Wisconsin

Results

Descriptive Statistics			
	Mean	Std. Deviation	N
knowledge	10.5417	2.10546	24
attitude	59.9091	8.40894	33
behavior	27.4242	5.69007	33

- Knowledge score
- Attitude scale
- Behavior scale

Results

Correlations

		knowledge	attitude	behavior
knowledge	Pearson Correlation	1	.531**	.429*
	Sig. (2-tailed)		.008	.036
	N	24	24	24
attitude	Pearson Correlation	.531**	1	.398*
	Sig. (2-tailed)	.008		.022
	N	24	33	33
behavior	Pearson Correlation	.429*	.398*	1
	Sig. (2-tailed)	.036	.022	
	N	24	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Results

- The results suggest more continuing education on climate change and climate conscious care is needed for school nurses.
- The current challenge is not only to be more prepared to treat a greater number of illnesses induced by climate change, it is also to maintain expertise and adapt to a changing environment.

Impact on Nursing Education

- Nurses must address the impact of climate change on a local level by making changes in practice and engaging in research so that they are prepared with the knowledge, and skills to offer expertise in environmental health and the care of school age populations

- Nurse Climate Challenge

References

- References
- Alliance of Nurses for Healthy Environments. (2017). Laura Anderko - Researching the health impacts of climate change [Video]. Retrieved from https://www.youtube.com/watch?v=oSVmnCwFLp8
- Anåker, A., Nilsson, M., Holmner, Å., & Elf, M. (2015). Nurses' perceptions of climate and environmental issues: A qualitative study. Journal of Advanced Nursing, 71(8), 1883–1891. https://doi.org/10.1111/jan.12655
- Burbank, A. J., & Peden, D. B. (2018). Assessing the impact of air pollution on childhood asthma morbidity: How, when, and what to do. Current Opinion in Allergy & Clinical Immunology, 18(2), 124–131. https://doi.org/10.1097/ACI.0000000000000422
- Environmental Protection Agency. (2014). Air quality flag program. Retrieved from https://airnow.gov/air-quality-flag-program
- Environmental Protection Agency. (n.d.). Environmental justice. Retrieved from https://www.epa.gov/environmentaljustice.
- Hsiang, S., Burke. M, & Miguel, E. (2013). Quantifying the Influence of Climate on Human Conflict. Science, 341, (6151), 1235367 DOI: 10.1126/science.1235367
- Leffers, J., & Butterfield, P. (2018). Nurses play essential roles in reducing health problems due to climate change. Nursing Outlook, 66(2), 210–213. https://doi.org/10.1016/j.outlook.2018.02.008
- Leffers, J., McDermott-Levy, R., Smith, C. M., & Sattler, B. (2014). Nursing education's response to the 1995 Institute of Medicine report: Nursing, health, and the environment. Nursing Forum, 49(4), 214–224. https://doi.org/10.1111/nuf.12072
- Lilienfeld, E., Nicholas, P., Breakey, S. (2018). Addressing climate change through a lens within the framework of the United Nations Sustainable Development Goals. Nursing Outlook, 66, 482-494. https://doi.org/10.1016/j.outlook.2018.06.010
- McDermott-Levy, R., Jackman-Murphy, K., Leffers, J. (2018). Integrating Climate Change into nursing curricula. Nurse Educator, 44 (1) 43-47. https://doi.org/10.1097/NNE0000000000000525
- National Institute of Environmental Health Sciences. (2018). Air pollution. Retrieved from https://www.niehs.nih.gov/health/topics/agents/air-pollution/index.cfm
- Nicholas, P. K., & Breakey, S. (2017). Climate change, climate justice, and environmental health: Implications for the nursing profession. Journal of Nursing Scholarship, 49(6), 606–616. https://doi.org/10.1111/jnu.12326
- Nuss, H. J., Hester, L. L., Perry, M. A., Stewart, B. C., Reagon, V. M., & Collins, P. (2016). Applying the social ecological model to creating asthma-friendly schools in Louisiana. Journal of School Health, 86(3), 225–232. https://doi.org/10.1111/josh.12369
- Philadelphia Federation of Teachers (2019, May15) Caucus petition leads to new air conditioning units in Philly schools retrieved http://www.workingeducators.org/new_air_conditioning_units_in_philly_schools
- Pieters, N., Koppen, G., Van Poppel, M., De Prins, S., Cox, B., Dons, E., Nawrot, T. S. (2015). Blood pressure and same-day exposure to air pollution at school: Associations with nano-sized to coarse PM in children. Environmental Health Perspectives, 123(7), 737–742. https://doi.org/10.1289/ehp.1408121


Nurses
Climate
Challenge