Climate Change Threatens the Health of British Columbians

“Climate change is the greatest threat to global health in the 21st century”

A literature review investigated the links between climate change and the Preparatory Health of As defined in the Ottawa Charter for Health Promotion: peace, food, shelter, sustainable resources, education, income, social justice/equity, and sustainable ecosystems. All are necessary components of healthy communities across the province, and all are increasingly threatened by anthropogenic climate change.

Reassessing climate change as a public health issue provides this complex phenomenon with personal relevance. Implications for nursing practice are explored as nurses are well-positioned to lead climate action across British Columbia.

Methods

The VIU library database was searched using the terms: climate change, health, British Columbia, and each of the Ottawa Charter priorities of health.

Scholarly peer-reviewed, quantitative articles and grey literature published in the last seven years were analyzed and included in the literature review.

Summary

Climate change erodes peace by acting as a threat multiplier. It escalates the risk of collective violence by increasing resource scarcity, forcing mass migration, and creating motives for personal, group, and state crimes. Wars over scarce resources such as fresh water and crop-lands will become increasingly likely, jeopardizing state sovereignty and world order, including international claims to Canada’s Arctic.

Climate change increases forced migration through Extreme Weather Events (EWEs), desertification, and sea-level rise. In Canada, the frequency of EWEs has been on the rise. A single wildfire event, the 2016 Fort Mc-Murray fire destroyed $36 billion worth of structures and displaced 88,000 people. Between 2009-2054, British Columbia is projected to lose $4.4 billion in structures due to floods and storm surges linked to climate change.

Education

Education is affected through four mechanisms: events lowering income and wages, events increasing manufacturing activity, and events creating large-scale displacement and direct environmental effects (e.g., pollution or heat waves). Heat and increased pollution levels are associated with lower school attendance and lower test scores.

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Income

Food systems in B.C. are affected by warmer temperatures, ocean acidification and variability in precipitation. Fungal pathogens decrease agricultural yields and compromise food safety. Warmer, increasingly acidic oceans lead to elevated levels of Vibrio parahaemolyticus and harmful algal blooms, contaminating seafood and threatening fish populations along the BC coast. Drought in California impacts B.C.’s food imports. Transitioning to local produce will be necessary to maintain the local food supply.

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EWEs create financial losses by decreasing property values, agriculture production, tourism, and cultural activities. Increased temperatures escalated BC’s Mountain Pine Beetle infestation, resulting in a possible loss of $2.5 billion in manufacturing activity, 27,000 direct jobs, and $250 million from stumpage. Other economic costs include worsening acute/chronic health conditions, public health treatments, mental stress, and increasing consumer costs.

Social Justice & Equity

Social status, gender, poverty, power and access to resources influence how people are affected by climate change. Rural areas lacking emergency services and Indigenous communities are at greatest risk for adverse health outcomes. Climate change endangers traditional food gathering practices and cultural activities of Indigenous peoples in northern B.C.

Key Points:

• Climate change affects the health of British Columbians through each prerequisite of health in the Ottawa Charter.
• Given the scope of these effects, nurses have both an ethical and a professional responsibility to take action on climate change.
• Nurses must promote climate change adaptation, that is dealing with the effects of climate change.

• Nurses must also promote climate change mitigation, that is acting to reduce the severity of climate change.
• By taking leadership in climate action, nurses can join other health professionals and achieve the greatest public health opportunity of the 21st century.

Limitations:

• Difficulty finding examples of global climate change projections within the context of B.C.
• Uncertainty in climate change models within B.C.
• Scarcity of research on the health effects of climate change within B.C.