
An Overview of Climate Change and Mental Health

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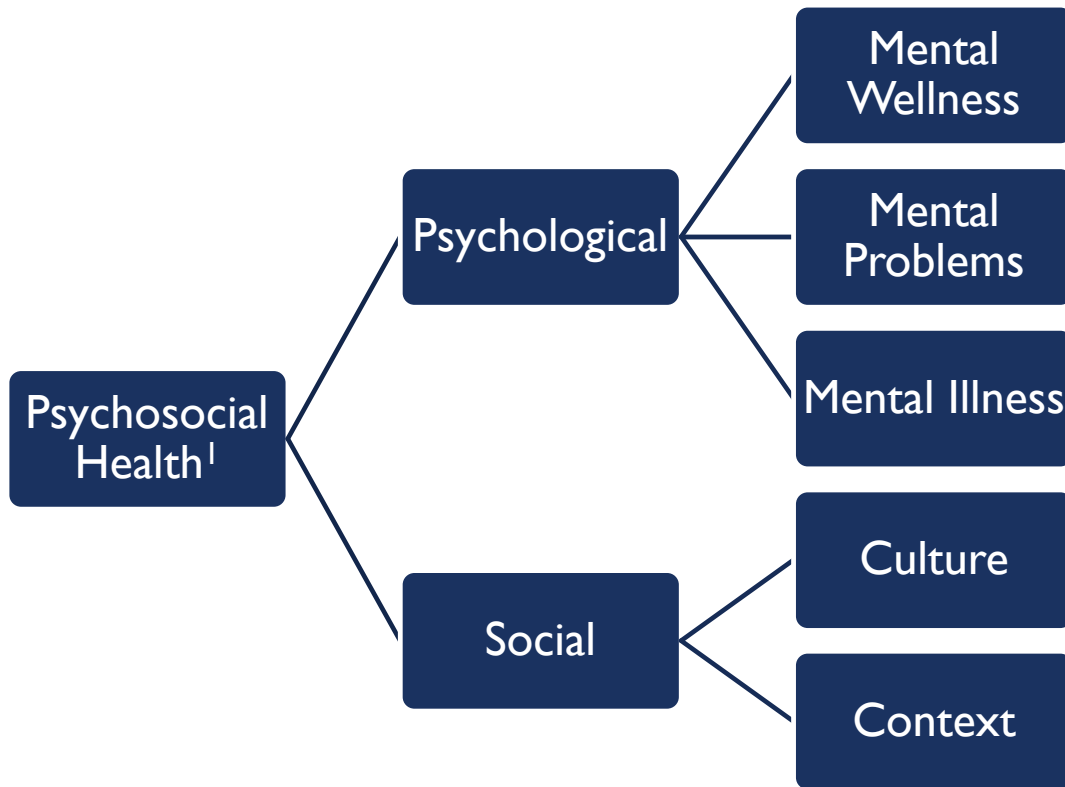
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LEAD AUTHOR: MENTAL HEALTH AND WELLBEING
CHAPTER FOR THE NATIONAL CLIMATE CHANGE
AND HEALTH ASSESSMENT

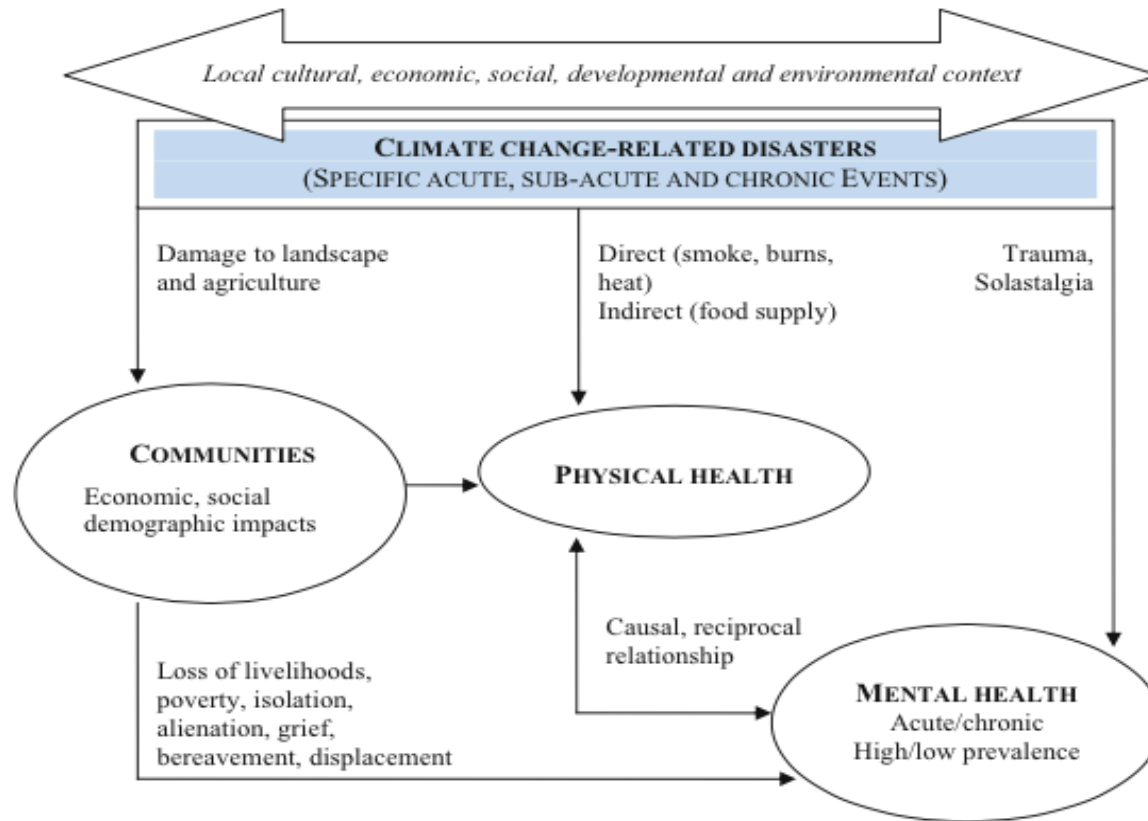
Prairies Regional Adaptation
Collaborative

March 6th, 2019

DEFINING MENTAL HEALTH



HOW DOES CLIMATE CHANGE IMPACT MENTAL HEALTH?



Source: ²Berry, H.L., Bowem, K., Kjellstrom, T. (2010). Climate change and mental health: a causal pathways framework. *Int. J of Public Health*.



HAZARDS: Extreme heat, heat waves, floods, wildfires, mudslides, drought, hurricanes, sea-level rise, extreme temperatures, melting permafrost, polar vortex, vector-borne disease

MENTAL HEALTH OUTCOMES

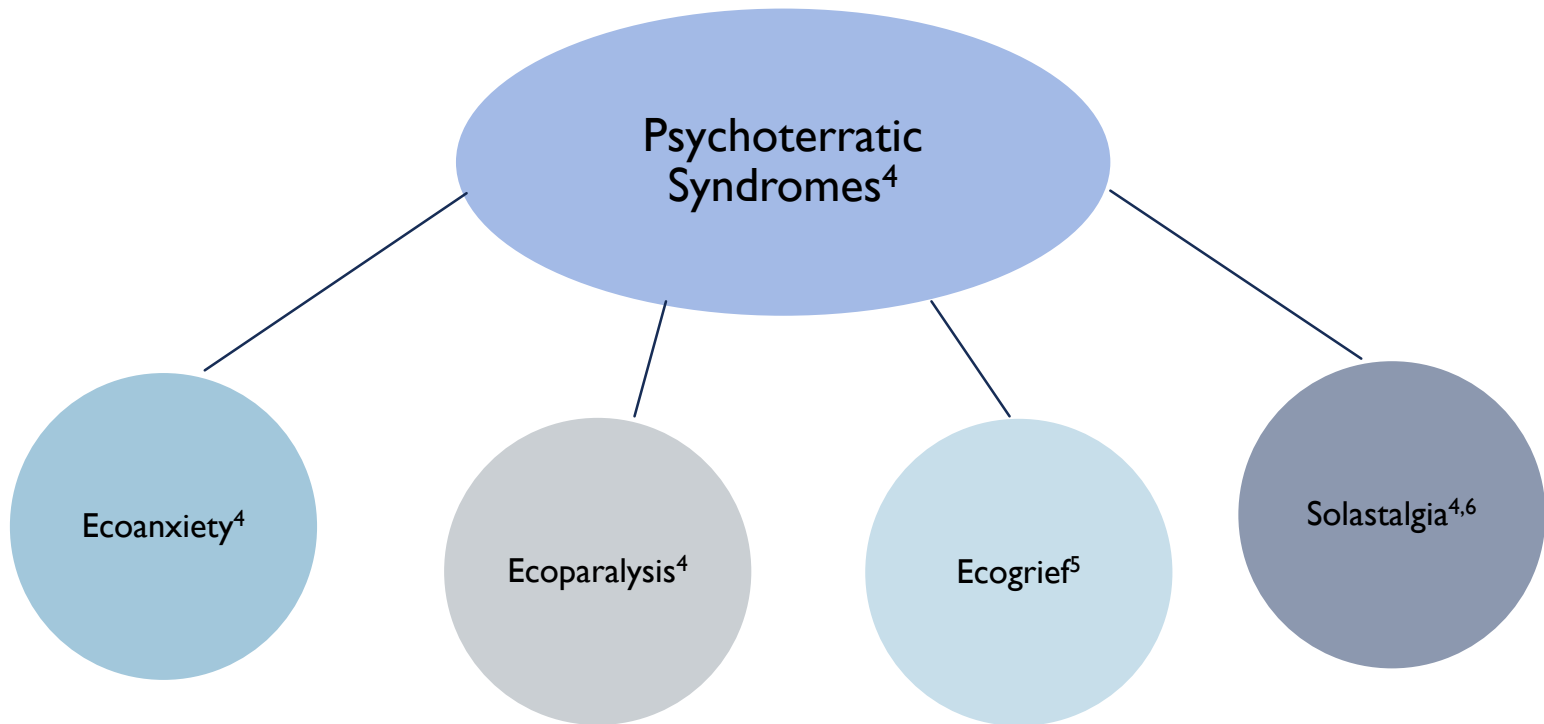
- PTSD
- Major Depressive Disorder (MDD)
- Anxiety
- Depression
- Suicidal Ideation and Suicide
- Violence
- Aggression
- Addiction
- Survivor Guilt
- Vicarious trauma
- Altruism
- Compassion
- Post Traumatic Growth³



Climate hazards can also compound pre-existing mental health problems and illness



ENVIRONMENT-RELATED TRAUMA



KEY CONSIDERATIONS

Determinants of Health



Triggers and Timing



Image sources: <http://bchealthycommunities.ca/faq>
<http://www.todayifoundout.com/index.php/2013/09/the-evolution-of-the-modern-day-calendar/>

POPULATIONS OF CONCERN

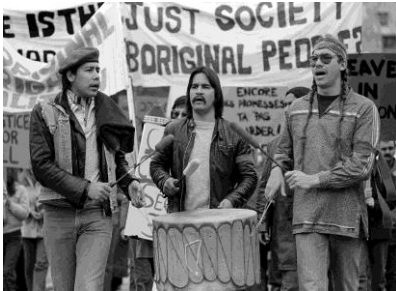


Image source: Indigenous Peoples: https://www.google.com/search?rlz=en&q=indigenous+canadians+peoples+photo&tbm=isch&source=univ&client=safari&sa=X&ved=2ahUKEwjx_S_o3gAhXuT98KHVB3CaMQsAR6BAgAFAE&biw=643&bih=771&dpr=2#imgcr=Or2UfmCTShYpRM:
 Homeless: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=1&ei=59RuXNLULqOf_Qa56aHoDg&q=Homeless+canadians&oq=Homeless+canadians&gs_l=img.3..0.134041.137668.137859..0.0.121.1078.17j1.....1....1.gws-wiz-
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Outdoor Labourer: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=1&ei=PtZuXOzcH4T5_Ablh4_QBw&q=Outdoor+labourers+heat&oq=Outdoor+labourers+heat&gs_l=img.3..2197.6071..6741..0.0.0.73.291.5.....1....1.gws-wiz-
 Migrants: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=1&ei=RtZuXK3YD-OL_QaPuomgDA&q=Migrants+drought&oq=Migrants+drought&gs_l=img.3..84095.87035.87260..0.0.0.87.959.16.....1....1.gws-wiz-
 Sex and gender: https://www.google.com/search?q=intersectionality&client=safari&rls=en&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjx2YOspc3gAHUQH-AKHTJZD0kQ_AUIESgE&biw=1440&bih=862&dpr=2#imgcr=zpd-QLt2u0z7M:

MONITORING AND SURVEILLANCE

Climate Hazard	Populations of Concern	Potential Mental Health Outcomes	Indicators and Measurement Tools
Extreme Heat⁷	<ul style="list-style-type: none"> • People with pre-existing mental health conditions. • People taking psychotropic medications that affect thermoregulation. • Older adults (who have poor thermoregulation). • People with substance use disorders • People living in urban heat islands • Urban poor without access to air conditioning • People who are homeless • Workers exposed to heat and people active outdoors 	<ul style="list-style-type: none"> • Exacerbated mood or behavioral disorders • Violence • Aggression • Suicide • Other 	<ul style="list-style-type: none"> • Monitor emergency department visits after heat waves for an increase in patients reporting mood or behavioral disorders. • Monitoring mortality statistics following extreme heat events – look for co-morbidities related to mental health and incidents of suicide. • Interviews or questionnaires with people who experienced heat waves or extreme heat events to ask about their mental health in relation to heat events. • Review of police records following extreme heat events to monitor elevated incidents of violence or aggression.

Adapted from⁷: Hayes K, Poland B. Addressing mental health in a changing climate: Incorporating mental health indicators into climate change and health vulnerability and adaptation assessments. *Int J Environ Res Public Health*. 2018;15(9). doi:10.3390/ijerph15091806

INTERVENTIONS

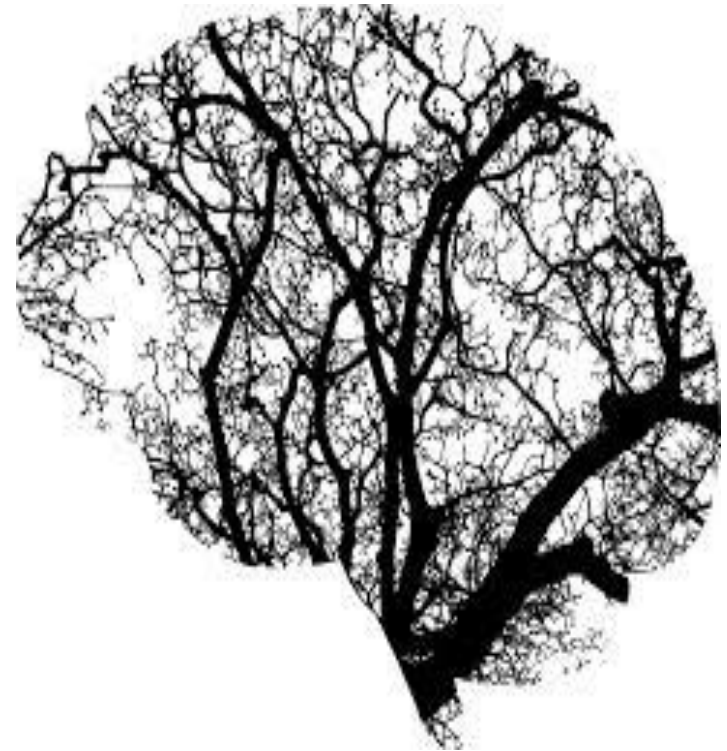


Image sources: <http://dialognews.ca/2017/05/04/province-pledges-6-million-support-post-secondary-mental-health-care/>
<http://s3-us-west-1.amazonaws.com/anxietyfreemethod/ODE4Z-mental-health-service.html>

NOTABLE INTERVENTIONS

- **Surveillance and monitoring:**
 - Mental Health Guidance in Emergency Settings⁸
 - Psychosocial Mapping
- **Guidance:**
 - Mental health and wellness recovery services guide
 - Psychological First Aid
- **Services:**
 - Roving Mental Health Care
 - Peer support
 - Tele-mental health
 - Walk-in mental health care
- **Approaches:**
 - Stepped Care
 - Cognitive-based mental health care (e.g. psychotherapy, mindfulness)
 - Land-based healing



INNOVATIVE APPROACHES

- **Problem-focused coping:**

- NYU Environmental Health Clinic

- Accepts 'impatiens' (people who are emotionally and physically tired of waiting for legislative interventions on climate change) with 'prescriptions' for environmental action⁹

- **Mobile mental health**

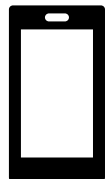
- mHealth technologies

- **Nature-Based Therapies**

- Wilderness therapy
- Forest Bathing
- Ecopsychology

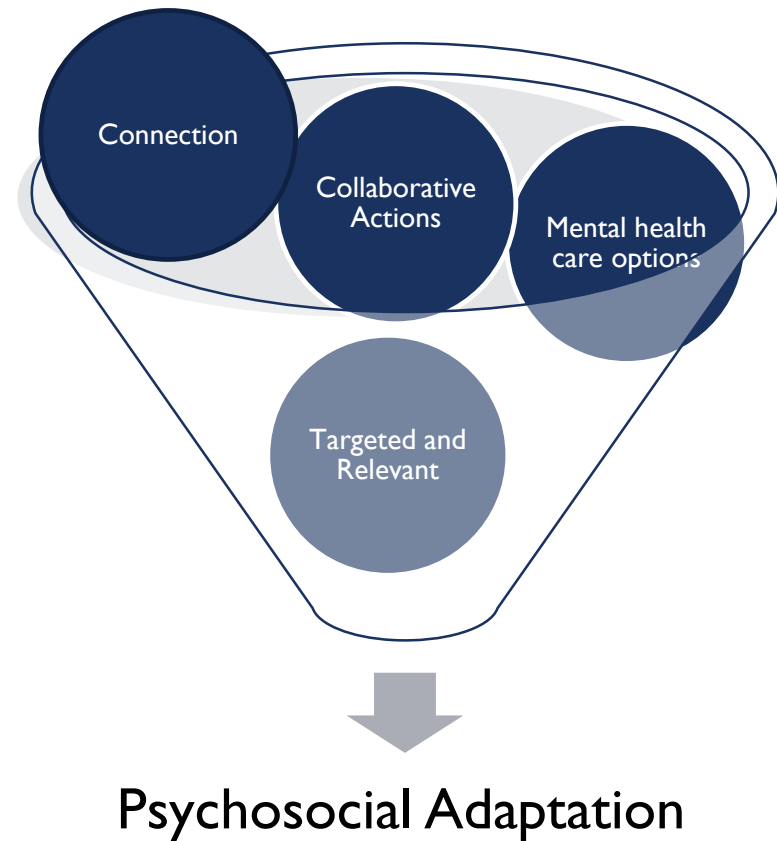
- **Faith-based and spiritually-based interventions**

- Faith in the common good
- Good Grief
- One Earth Sangha
- The Work that Reconnects (WTR)



PSYCHOSOCIAL ADAPTATION

- **Co-benefits of climate change mitigation:**
 - Active Transportation
 - Green Infrastructure
- **Psychosocial adaptation:** Enhancement or building of coping behaviours, practices, tools, or interventions to support mental health and social wellbeing in a changing climate ^{10,11}.



Q&A

THANK YOU!

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