An Overview of Climate Change and Mental Health

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DEFINING MENTAL HEALTH

Psychosocial Health

Psychological

Mental Wellness
Mental Problems
Mental Illness

Social

Culture

Context

Psychological

Mental Wellness
Mental Problems
Mental Illness
Culture
Context
HOW DOES CLIMATE CHANGE IMPACT MENTAL 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 Growth

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

Image source: https://www.climaterealityproject.org/blog/climate-change-and-mental-health
ENVIRONMENT-RELATED TRAUMA

Psychoterratic Syndromes

- Ecoanxiety
- Ecoparalysis
- Ecogrief
- Solastalgia
KEY CONSIDERATIONS

Determinants of Health

Triggers and Timing

Image sources: [http://bchealthycommunities.ca/faq](http://bchealthycommunities.ca/faq)
POPULATIONS OF CONCERN

Image source: Indigenous Peoples: https://www.google.com/search?rls=en&q=indigenous+canadians+peoples&tbm=isch&source=univ&client=safari&sa=X&ved=2ahUKEwjx2YO3p33gAhUQh_iHVFhAh0oQ_AUoEgE&biw=1440&bih=862&dpr=2&imgrc=Or2UfmCT5hYpRM:

Homeless: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=X&ei=PtZuXOzcH4T5_AbIh4_QBw&q=Homeless+canadians&oq=Homeless+canadians&gs_l=img.1...104528.104619...104619...0.0.0.7.50.291.5......1....1..gws-wiz.img....0i67j0i10j0i8i8i30j0i24.j0i24.BcYNNZSJ9qk

Outdoor Labourer: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=X&ei=RtZuXK3YDQz56QaPuomgDA&q=Migrants+drought&oq=Migrants+drought&gs_l=img.3...84095.87035.87260...0.0.0.87.959.16......1....1..gws-wiz.img.......0j0i67d1i0j0i30j0j0i24.BkH4eFZdAlltqgcfRIoFOB8bL.Omuz

Migrants: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=X&ei=59RuXNLULQos3gAhXuT98KHV#imgrc=Or2UfmCT5hYpRM:

Sex and gender: https://www.google.com/search?q=intersectionality&client=safari&rls=en&tbm=isch&sa=X&ved=2ahUKEwijp3YOnpcJaMIQg-AKHTZD0Q&UAEsgf&biw=1440&bih=862&dpr=2&imgrc=tpd-QIJsvo2z7M:

Image source: Homelessness: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=X&ei=PtZuXOzcH4T5_AbIh4_QBw&q=Homeless+canadians&oq=Homeless+canadians&gs_l=img.1...104528.104619...104619...0.0.0.7.50.291.5......1....1..gws-wiz.img....0i67j0i10j0i8i8i30j0i24.j0i24.BcYNNZSJ9qk

Image source: Outdoor Labourers: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=X&ei=RtZuXK3YDQz56QaPuomgDA&q=Migrants+drought&oq=Migrants+drought&gs_l=img.3...84095.87035.87260...0.0.0.87.959.16......1....1..gws-wiz.img.......0j0i67d1i0j0i30j0j0i24.BkH4eFZdAlltqgcfRIoFOB8bL.Omuz

Image source: Migrants: https://www.google.com/search?client=safari&rls=en&biw=1440&bih=862&tbm=isch&sa=X&ei=59RuXNLULQos3gAhXuT98KHV#imgrc=Or2UfmCT5hYpRM:

Image source: Sex and gender: https://www.google.com/search?q=intersectionality&client=safari&rls=en&tbm=isch&sa=X&ved=2ahUKEwijp3YOnpcJaMIQg-AKHTZD0Q&UAEsgf&biw=1440&bih=862&dpr=2&imgrc=tpd-QIJsvo2z7M:
## MONITORING AND SURVEILLANCE

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<th>Climate Hazard</th>
<th>Populations of Concern</th>
<th>Potential Mental Health Outcomes</th>
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| **Extreme Heat**<sup>7</sup> | • 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 | • Exacerbated mood or behavioral disorders  
• Violence  
• Aggression  
• Suicide  
• Other | • 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. |

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 Settings
  - 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 ‘impatients’ (people who are emotionally and physically tired of waiting for legislative interventions on climate change) with ‘prescriptions’ for environmental action

- 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\textsuperscript{10,11}.

Psychosocial Adaptation
THANK YOU!

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REFERENCES


