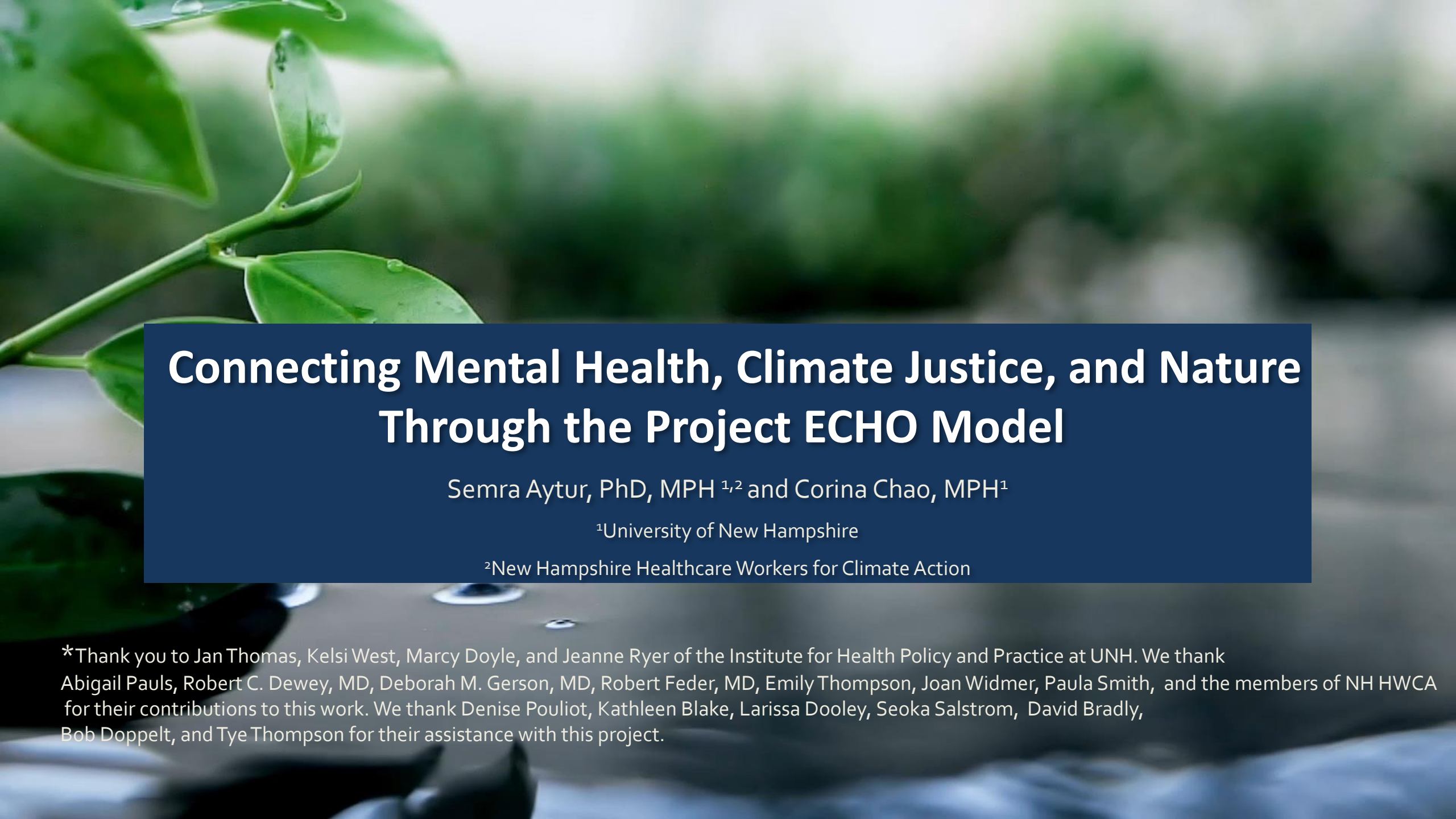

Connecting Mental Health, Climate Justice, and Nature Through the Project ECHO Model

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What is Climate Justice?

A social movement that recognizes that the impacts of climate change fall disproportionately on underprivileged and underserved communities around the world – the people least responsible for creating the problem.

https://centerclimatejustice.universityofcalifornia.edu/what-is-climate-justice/; https://www.apha.org/topics-and-issues/climate-change/climate-justice; https://yaleclimateconnections.org/2020/07/what-is-climate-justice/

UCLA Center for Climate Justice, 2022; Image source: La Gente Newspaper

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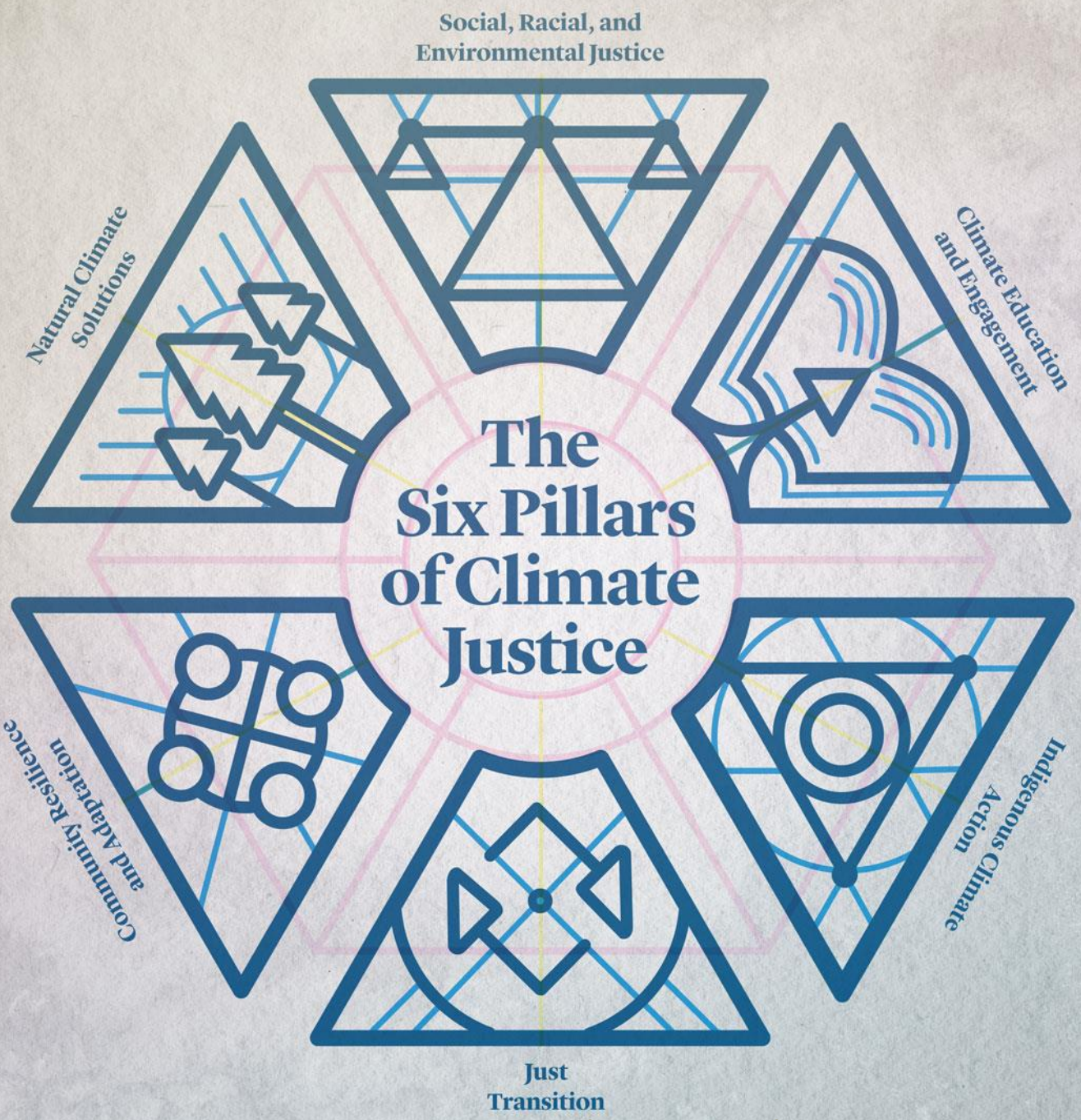

https://centerclimatejustice.universityofcalifornia.edu/what-is-climate-justice/

Pathways by which climate change affects health (Direct and Indirect Impacts)

Sources:
IPCC, 2007

Wake, C., Bucci, J.P. & Aytur, S.A. (2014, October). *Climate Change and Human Health in New Hampshire: An Impact Assessment.* Report to New Hampshire Department of Health and Human Services.

Figure from IPCC 2007).54

https://scholars.unh.edu/cgi/viewcontent.cgi?article=1007&context=sustainability

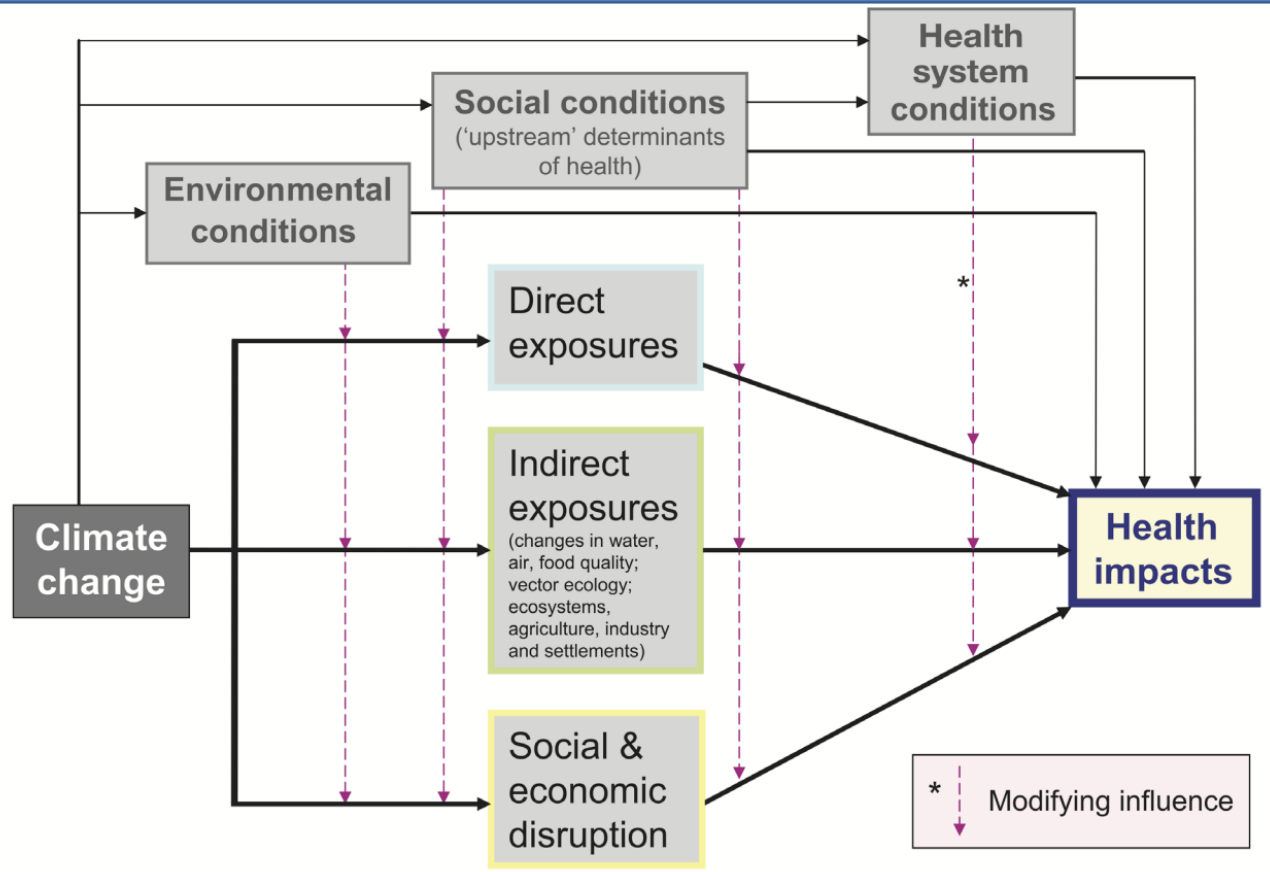

FIGURE 1. Schematic diagram of pathways by which climate change affects health, and concurrent direct-acting and modifying influences (environmental, social and health system fators) (Figure from IPCC 2007).54

Nature Disparities and Equity: The Need for Nature

Communities of color are approximately three times more likely than white communities to live in "nature deprived" areas (those that have little to no access to parks, trails, and green spaces).

75% percent of non-white families with children live in a census tract (neighborhood) with less natural land than the state average.

Access to nature and outdoor experiences are key determinants of physical, emotional and psychosocial wellbeing.

EPA ENVIRO ATLAS RELATIONSHIP BROWSER TOOL:
https://www.epa.gov/enviroatlas/enviroatlas-eco-health-relationship-browser

Sources:

The Nature Gap" https://www.nationalgeographic.com/science/article/how-nature-deprived-neighborhoods-impact-health-people-of-color?loggedin=true

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Climate Justice - Racial Disparities

- African Americans are exposed to 38% more polluted air compared to white Americans
- 13.4% of African American children have asthma compared to 7.3% of white children
  - African American children are burdened by 138,000 asthma attacks and 101,000 lost school days each year
  - Historically and structurally marginalized communities often lack access to greenspace, other health-promoting resources, and clinical care

https://naacp.org/resources/fumes-across-fence-line-health-impacts-air-pollution-oil-gas-facilities-african-american

Syndemics

"Synergistic pandemics" or multiple epidemics that co-occur in in relation to harmful environmental and social conditions that interact to exacerbate risk

1990s Singer – SAVA syndemic (substance misuse, violence, and AIDS)

The "syndemics" lens focuses attention on the need to address multiple intersecting crises, such as COVID-19, poor mental health, climate change, structural racism, loneliness/social isolation, and ongoing chronic disease epidemics (e.g., the opioid epidemic, obesity) .

Syndemics are heightened by health inequities attributable to poverty, structural racism, violence, and stigmatization.

Addressing climate change and environmental factors may also help to prevent future syndemics, as a large proportion of emerging global disease threats are associated with climate-sensitive zoonotic diseases.

Sources:

Singer, M/ (1996). A dose of drugs, a touch of violence, a case of AIDS: conceptualizing the SAVA syndemic. *Free Inq Creat Sociol.* ; 24: 99-110

Caron RM, Adegboye ARA. COVID-19: A Syndemic Requiring an Integrated Approach for Marginalized Populations. Front Public Health. 2021 May 11;9:675280. doi: 10.3389/fpubh.2021.675280. PMID: 34046392; PMCID: PMC8144466.

Richard-Eaglin, A., Muirhead, L., Webb, M., & Randolph, S. D. (2022). A syndemic effect. *Nursing*, *52*(1), 38–43. https://doi.org/10.1097/01.nurse.0000803424.08667.c6

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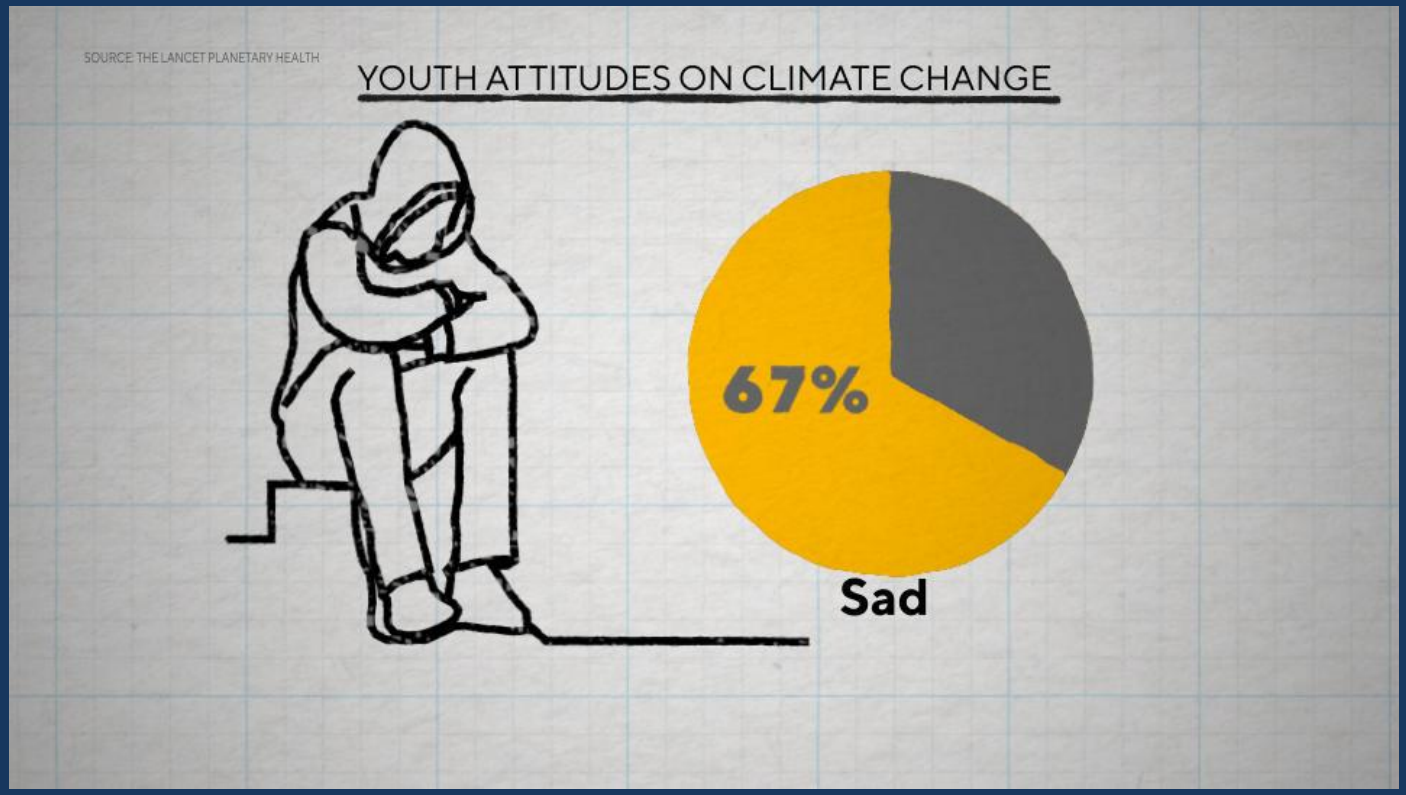
DHHS. (2021). https://www.hhs.gov/blog/2021/05/27/syndemics-commitment-quitting-equitably.html

Mental Health and Climate Change

- Research suggests that 67% of youth report feelings of sadness associated with climate change (Hickman, 2021)
- 59% of youth and young adults said they were very or extremely worried about climate change and more than 45% said their feelings about climate change negatively affected their daily life and functioning.



https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(21)00278-3/fulltext

NH HEALTHCARE WORKERS FOR CLIMATE ACTION

Background: PROJECT ECHO®

- Project ECHO® (Extension for Community Healthcare Outcomes) is a tele-mentoring model originally developed at the University of New Mexico as a collaborative model of medical education and care management that helps to create a culture of health for all people no matter where they live.
- ECHO's bidirectional communication allows participants to improve knowledge, confidence, and collaborative capacity while building a supportive community of practice.
- Project ECHO ® has been shown to improve health outcomes for structurally marginalized groups with limited access to care because of socioeconomic factors or geography.
- However, there is limited research on its effectiveness regarding environmental health concerns at the intersection of climate justice, mental health, and nature in community contexts.

https://projectechoannualreport.unm.edu/wp-content/uploads/2023/04/ECHO_Explainer_Updated3.31.23.pdf
https://hsc.unm.edu/echo/

NH HEALTHCARE WORKERS FOR CLIMATE ACTION

Background: New Hampshire Context

- New Hampshire Healthcare Workers for Climate Action (NH HWCA), a non-profit comprised of transdisciplinary healthcare professionals in both urban and rural communities, partnered with a state University and other stakeholders to launch an innovative Project ECHO® program to educate health professionals about the connections between nature, mental health, and climate justice.
    - Project ECHO ® is an innovative program designed to create knowledge networks bringing together transdisciplinary healthcare professionals, particularly in rural and underserved areas. It utilizes a tele-mentoring approach involving brief lectures and case-based presentations.

- This topic was timely in the aftermath of the COVID-19 pandemic, when many communities continue to face syndemic stressors associated with climate change, systemic racism, poor mental health, and chronic disease.

- Participants learn from both subject-matter experts and from peers.
- Indigenous perspectives were a vital component of this ECHO®.

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Purpose

- To describe the development, implementation, and evaluation of a novel ECHO® designed to introduce transdisciplinary professionals to intersectional issues pertaining to climate justice, mental health, and nature
- To establish a supportive “all teach, all learn” virtual community in a region with little prior history of interdisciplinary discussion forums or social support for climate change, nature, and behavioral health issues.

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Methods

- The ECHO ® was conducted over a 6 week period during the fall of 2022
- 4 modules
- Web-based surveys were sent to all participants before and after the ECHO.
  - Questions pertained to changes in *knowledge*, *confidence*, and *collaborative capacity*
- Over 100 responses were analyzed using descriptive statistics and thematic analysis.

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RESULTS

- Before participating in the ECHO, approximately half of respondents stated that they had received no prior training or information about the mental health impacts of climate change.
- After participating in the ECHO, the majority of respondents reported that the ECHO helped to better prepare them to describe the impacts of climate change on mental health and well-being.

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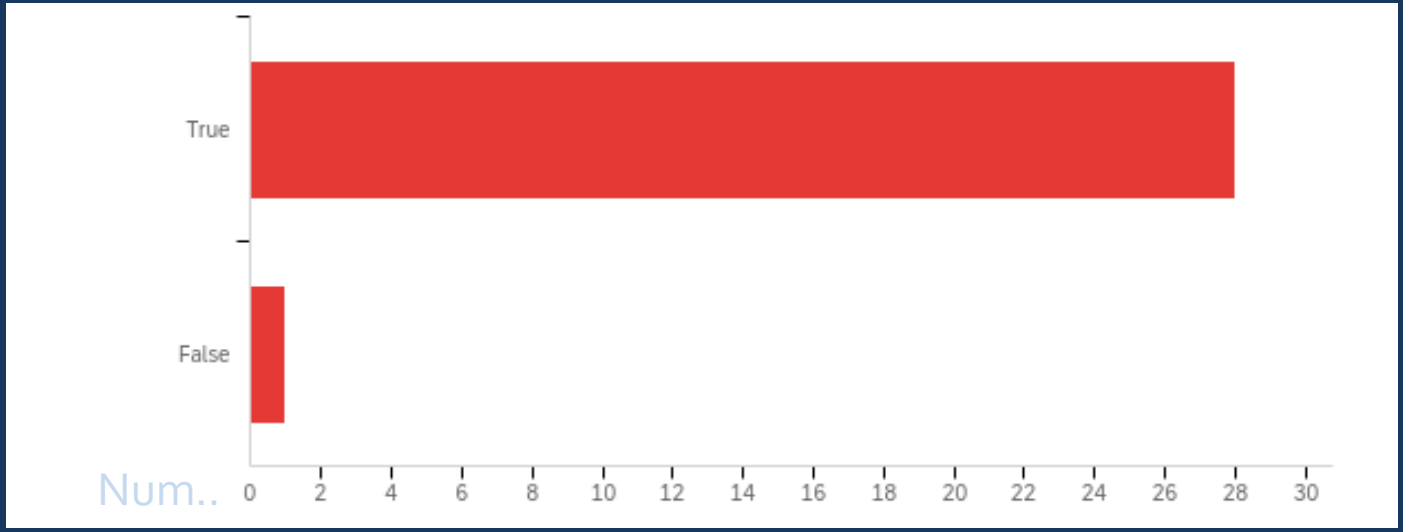
RESULTS

“My level of knowledge about the relationships between climate change, mental health, equity, and nature increased after participating in this ECHO®.”



~95% of respondents reported that the teaching strategies and resources were effective, and that the ECHO enabled them to explain how pre-existing stressors create high risk for mental health impacts.

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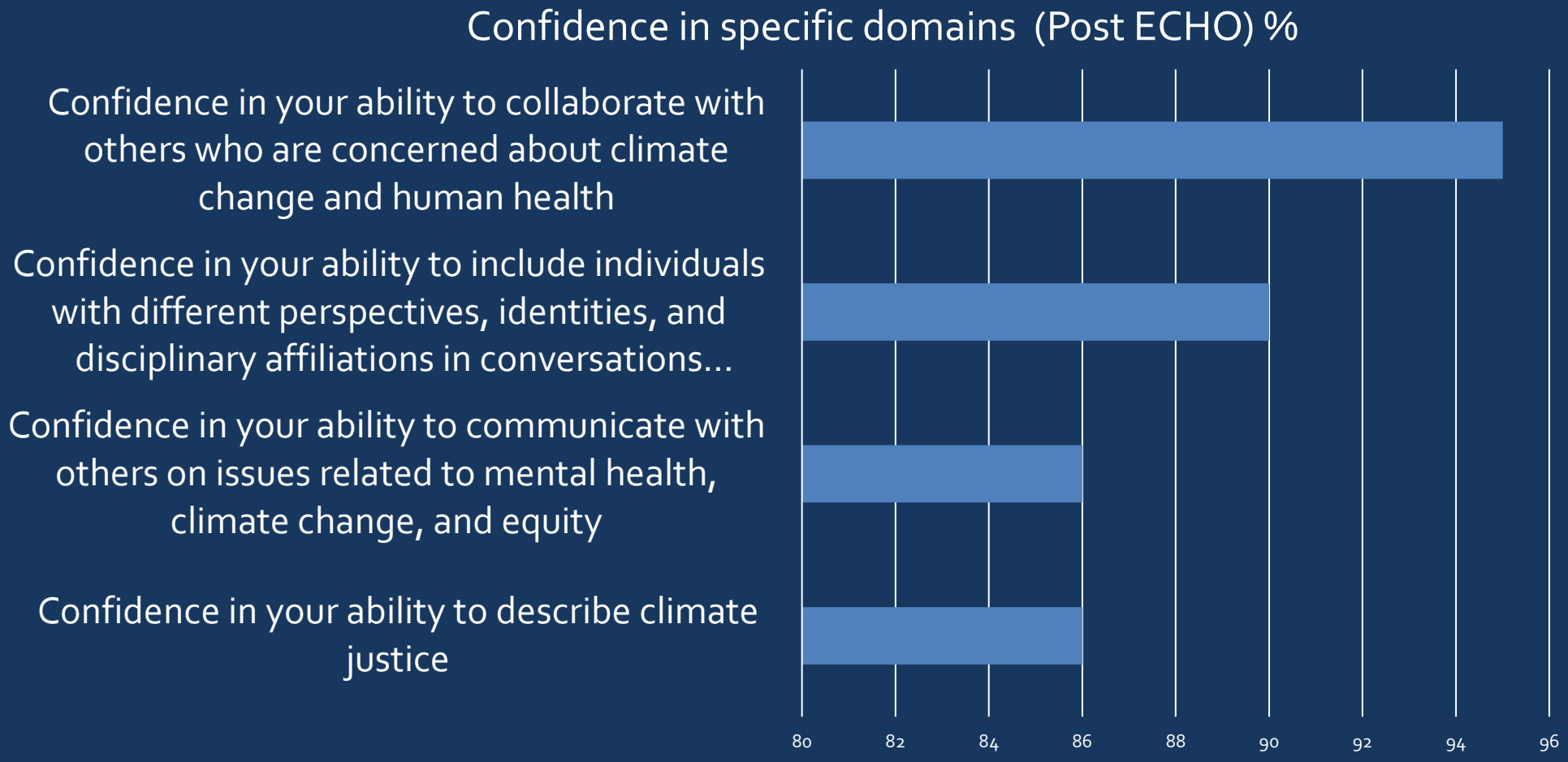
RESULTS



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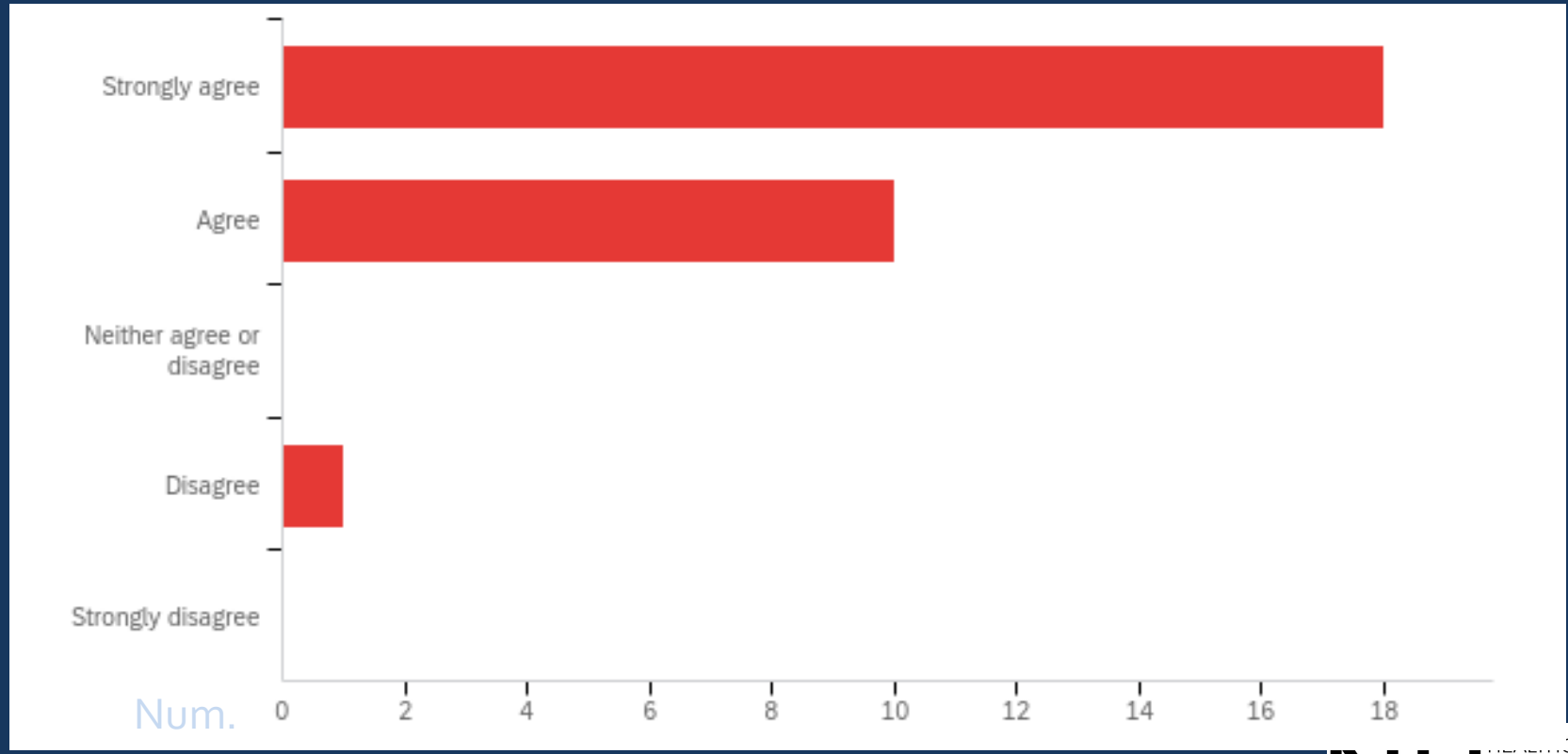
RESULTS

The ECHO® improved my confidence in my ability to communicate with others about relationships between climate change, mental health, equity, and nature.



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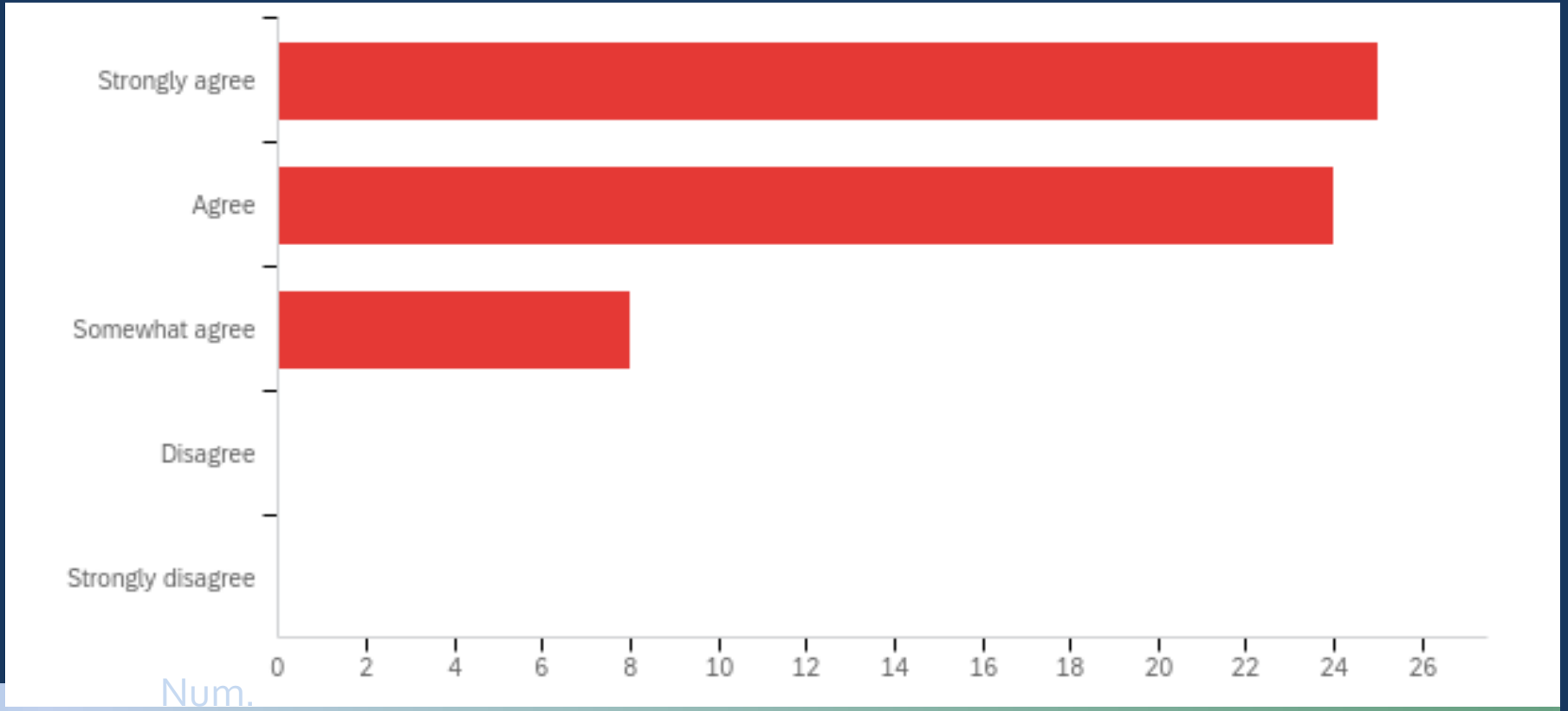
RESULTS

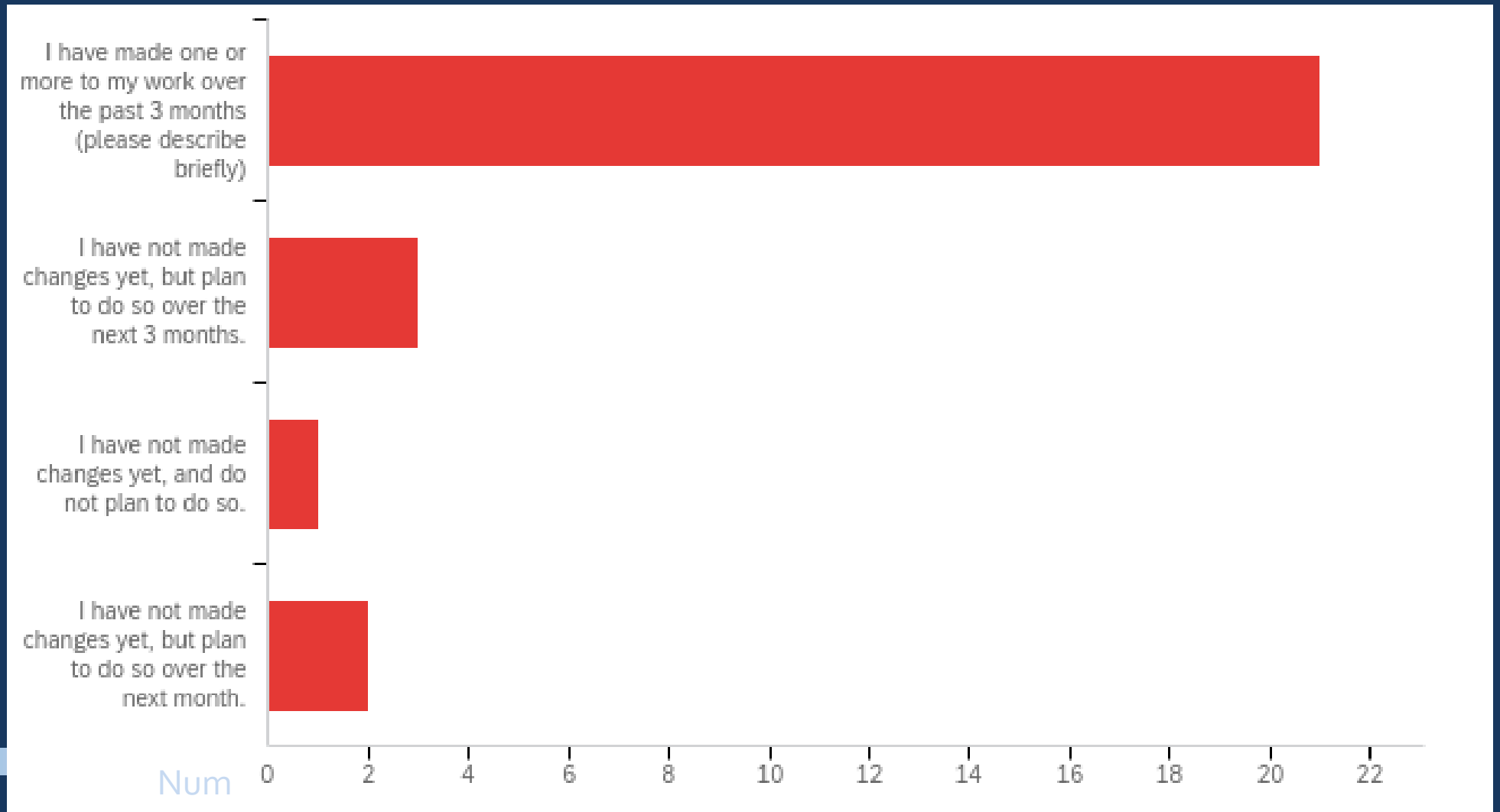
Collaborative Confidence:

This ECHO® increased my level of confidence in seeking out new potential partners/collaborators and opportunities pertaining to conversations about climate change, mental health, and equity.



RESULTS

Have you made any changes in your work over the past 3 months related to the ECHO® sessions?



Survey questions were based on the transtheoretical model of behavior change (TTM). (Prochaska et al. 1997, PMID: 10170434.)

QUOTES

I am integrating nature-based approaches into my workplace wellness initiatives, and I'm beginning to teach environmental health/climate change content in public health courses for college students.
I wrote a grant with public health professionals to increase access to nature-based therapy and mindfulness.
I collaborated with a public health professional to bring "Blue Space" interventions (interventions centered on water resources) into research, teaching, and citizen science initiatives. I also worked on Blue Space initiatives with international collaborators.
I co-led three large grant proposals on nature-based solutions (NbS) to public health challenges. I also sustained meaningful relationships with people I met through the ECHO®. Examples of work resulting from these collaborations includes a presentation on "Climate Change and Mental Health" to over 85 staff members through a workplace wellness program, and a planned follow-up webinar series on transformational resilience with two of the other ECHO® Subject Matter Experts
Started a new collaboration formed between Practice-Based Research Networks (PBRN) and NH-HWCA, new research interest group around climate health in rural New England primary care practices, new potential research idea in climate mindfulness.
Asked about climate anxiety in therapy sessions.
My colleague and I have talked about integrating climate change wellness components into outreach and engagement programs. I've brainstormed wellness activities and coping mechanisms to teach students during climate change education programs.

Conclusions

- Participants discussed ways to improve learning regarding a variety of topics, including equitable nature-based solutions, Indigenous perspectives, blue space, and forest-based interventions.
- Participants reported having increased knowledge, confidence, and collaborative capacity regarding the connections between mental health, climate justice, and nature.
- Project ECHO® can be an effective model for building communities of practice for transdisciplinary stakeholders in planetary health initiatives.

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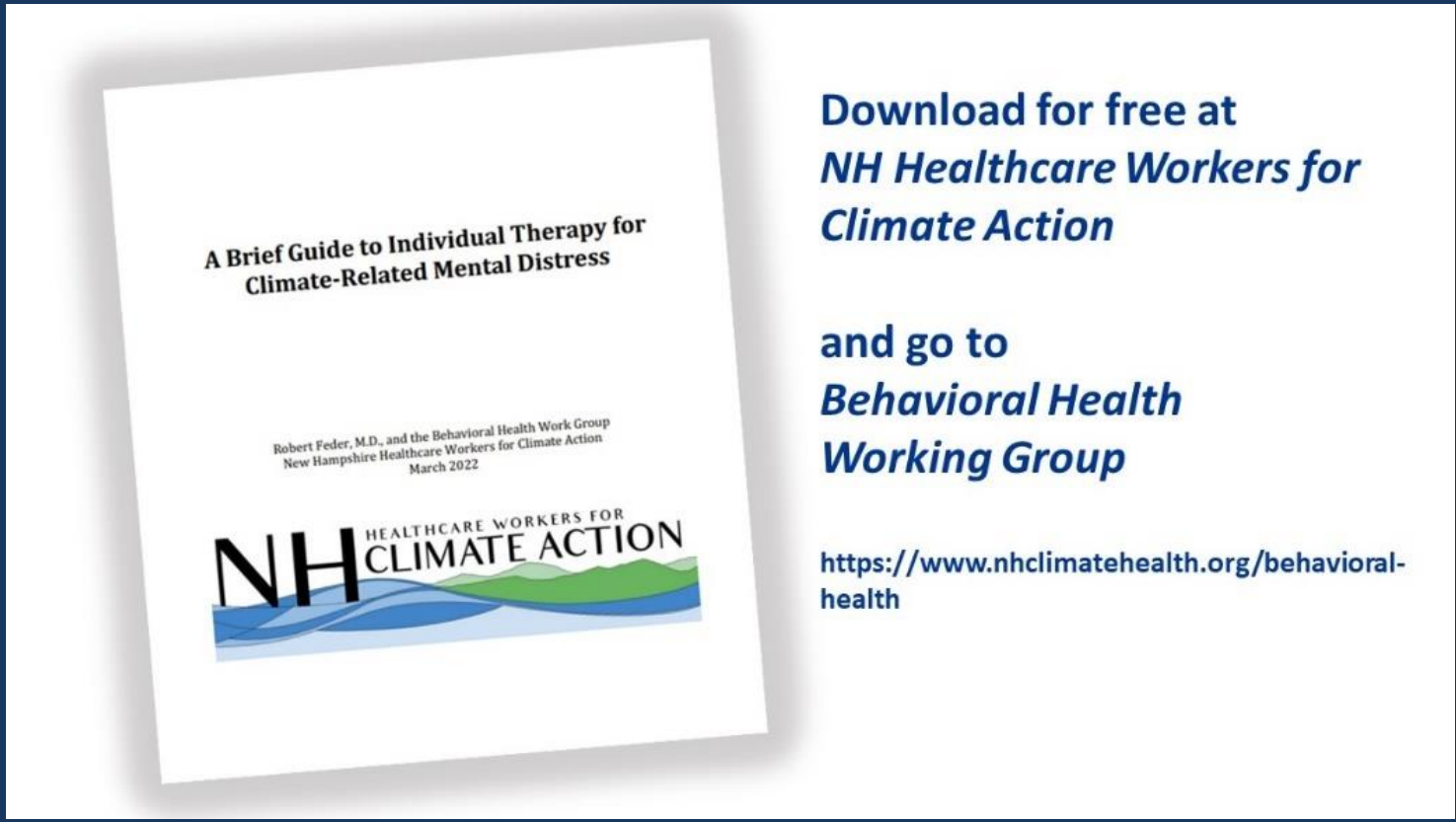
COMMU NITY RESOURCES



Climate Change, Youth and Mental Health Resource Guide:
www.seechangeinstitute.com/health-wellness

Community Resources

Citizen Science: Blue Space and Ocean Health (NH HWCA and Marine Microverse Institute: https://marinemicroverse.com/

SCAN ME

*Student research projects being conducted by UNH students

GIS "Blue Space" Storymap (Coral, Aytur, Bucci, et al., 2022)
https://storymaps.arcgis.com/stories/ba7c636e6da14b0498db986b5e40419e

Ocean Health Day was held at a state beach to engage the public in citizen science and experimental learning around:

- Beach safety
- Water quality monitoring
- Ocean acidification
- Plastic pollution
- Seafood pathogens
- Marine Sanctuaries
- Reef Safe sunscreen while being active in blue spaces

& other One Health topics

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- ***Support/Funding Source*** **–** Support was provided by The Nature Conservancy, Southern NH AHEC, the Union of Concerned Scientists, and NH Healthcare Workers for Climate Action.

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Thank you!

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- https://unh.zoom.us/rec/share/cJZX_bbj1jaPCU7FmyD9TQIgl92Y3B61DY6xsPgQxY_Khg-nvoPxUzXoW_55odLY.lmcUXbkfVNQIF1bL

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