Preliminary Report*: Climate Change and Youth Mental Health in Oregon:

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Report Presented to Oregon Health Authority
By the University of Oregon's Suicide Prevention Lab

^{*}Final Report: https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le4212.pdf

Report on Climate Change and Youth Mental Health in Oregon

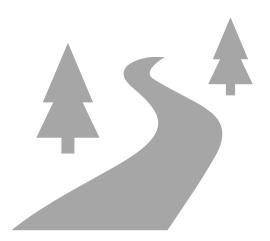
This report was developed per an Inter-Governmental Agreement between the Oregon Health Authority and the University of Oregon Suicide Prevention Lab.

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Executive Summary

This executive summary provides an overview of findings from youth focus groups and key informant interviews that investigated the impact of climate change on youth mental health, specifically within the context of Black, Indigenous, Person of Color (BIPOC) communities in the state of Oregon. Climate change continues to impact communities across the globe and within the state of Oregon. Further, climate change



continues to disproportionately impact BIPOC communities and other vulnerable populations (youth, individuals with disabilities). To better understand the current impact of climate change on Oregon communities, Oregon Health Authority (OHA) was directed through Governor Kate Brown's Executive Order 20-04 to study the impacts of climate change on youth depression and mental health in Oregon. The following summarizes key findings from five focus groups (36 youth) and nine key informant interviews.

- 1. There is a common articulation of hopelessness, despair, anxiety, and frustration expressed by youth due to:
 - a. Inaction from individuals in power to address the climate crisis
 - b. The lack of action towards dismantling systems of oppressions that continue and escalate the climate crisis
 - c. The burden of responsibility that older generations have placed on youth to "fix" the climate problem
- 2. Finding and nurturing communities while integrating collective knowledge into action has helped build some resilience within participants:

- a. There is a need to create spaces for youth to support one another around climate distress
- b. Efforts must be made to strengthen intergenerational relationships in families and in communities
- c. Find ways to shift individualistic thinking toward collectivistic decisionmaking that values youth voice
- 3. Addressing the mental health impacts of the climate crisis must be met with systemic change and action in public and private sectors:

a. Education:

- i. Increased trauma-informed care and resilience education in schools
- ii. Increased attention on climate change in educational curricula
- iii. Increased mental health services in schools

b. Mental health:

- i. Expanded mental health services that include providers that are trauma-informed and trained on the impact that climate change has on individual and community wellbeing
- ii. Increased services that are culturally responsive and sustaining to address the needs of BIPOC communities disproportionately impacted by climate change

c. Environment:

- Build capacity and presence of youth-led and youth-focused organizations
- ii. Center climate change advocacy and action on youth of color, tribal youth, and youth with disabilities
- iii. Support youth-driven policymaking

d. Business:

 i. Capitalism is seen as a driver of climate change; meaning, consumerism and a drive for increased profits prohibits climate change action

- ii. Investments should be made with companies that are environmentally sustainable and not companies that "greenwash" or hide their anti-environmental policies
- 4. The climate crisis must be addressed through an intersectional systems approach where sectors (e.g., education, mental health, business, government) commit to fostering resilience in communities, transform ineffective and damaging practices, and authentically listen to the collective knowledge of youth from *all* communities.

Introduction

The science of climate change and consumption of research on the matter has increased in breadth recently. Much of that research continues to explore the physical effects that climate change will have on earth (e.g., sea-level changes, atmospheric alterations, or humanitarian crises that will persist due to lack of water or food). This research is critical for human survival and provides guidance on what can be done to combat the effects of a changing climate.



Climate change and humankind's impact on climate is an exceptional issue in that it affects everyone. The monumental challenges faced due to climate change need innovative, effective, and efficient solutions that benefit all of society. For many, climate change activism and taking action to address climate change are something to consider in the future. For others, the effects of climate change are currently impacting communities across the globe. In fact, climate change disproportionately impacts minoritized populations including Black, Indigenous, People of Color (BIPOC) communities.

Increasingly, there is a need to address the impact of climate change on an individual's physical and mental livelihood (Cianconi et al., 2020). The latter provides insights into how humans function, acknowledging the monumental tasks that are needed to be accomplished to reduce the risks that climate change presents. The psychological impact of climate change on individuals can be daunting. For example, associations have been found between experiences of extreme climate-related events and distress symptoms, suicide rates, and clinical disorders (Cianconi et al., 2020). Further evidence suggests that those who experienced mental health concerns prior to an environmental disaster may experience additional

psychopathology and/or distress and exacerbations of pre-existing psychopathology (Lowe et al., 2020, North & Pfefferbaum, 2013).

These effects can be found across different subsets of the population. For instance, there is growing concern regarding the effects of climate change on youth mental health. Burke and colleagues (2018) report that there are direct and indirect effects of climate change on youth mental health, including experiences of post-traumatic stress disorder, depression, anxiety disorders, sleep disorders, attachment disorders, and substance abuse. Not only does climate change have an impact on youth mental health, but associations suggest climate change can also impact other ecological determinants of health in general (Gislason et al., 2021). Furthermore, the term "eco-anxiety" has been coined to capture youth's feeling of fear at the prospect of environmental doom. This "eco-anxiety" is only exacerbated when youth feel the 'adult world' is failing to act (Hickman, 2020). While climate change impacts all, the younger generation continues to be the face of activism, driving forward to correct the mistakes of the past and older generations.

In addition to climate change impacting youth, Whitmore-Willams and colleagues (2017) noted in their report to the American Psychological Association that communities in which people's livelihoods are connected to the natural environment and communities that lack resources are at greater risk of mental illness due to climate change. Effects of climate change are disproportionately affecting BIPOC communities more than other communities (Bowles, 2015; Cianconi et al., 2020; Ford, 2012; Whitmore-Williams et al., 2017). Climate change also impacts quality of life. Middleton and colleagues (2020) conducted a systematic scoping review to examine how global Indigenous mental health is impacted by meteorological, seasonal, and climate changes. Impacts of climate change events on Indigenous communities included strong emotional responses, suicide, depression, and anxiety. In addition, as reported by Chavan and colleagues (2013), Alaskan Natives also reported disruptions in transportation, damage to buildings and infrastructure (water and sanitation), which also contributed to increased danger in hunting due to decreased sea ice. Similar effects on livelihood have also been experienced by Indigenous families within the continental United States, including

lack of availability of forest food due to non-native regulations and environmentally degrading management practices, as well as access to food such as salmon in rivers (Willette & Norgaard, 2016). As exemplified by Chavan and colleagues (2013) and Willette and Norgaard (2016), climate change impacts much of the community. Ford (2012) recognized that addressing the concerns due to climate change was difficult due to already oppressive policies placed upon Indigenous communities (i.e., increased poverty, land dispossession). To begin to build resilience, Norton-Smith and colleagues (2016) reported a need for more programming, policies, and initiatives that are inclusive of the tribal perspective.

In recent years, Oregon residents have become familiar with climate disasters such as wildfires and drought. Oregon community members continue to be vulnerable to and experience mental health challenges such as trauma on an individual and group level due to past wildfires and the persistent fear of future wildfires (Bulkeley 2020, Garrett & Le Chevallier, 2021). In addition, Indigenous communities north of Oregon also have similar experiences. Dodd and colleagues (2018) conducted 30 semi-structured interviews in four communities (i.e., Yellowknife, N'Dilo, Detah, and Kakisa) in the Northwest Territories, Canada. Findings from these interviews suggested feelings of fear, stress, and uncertainty all contributed to negative impacts on members' mental health after experiencing the worst wildfire season on record. Furthermore, community members' mental health was particularly impacted by a sense of disconnection and dislocation from the land.

Charge for the Report

Given the disproportionate burden placed on youth, there needs to be a better understanding of how climate change impacts youth's mental health. For that reason, the Oregon Health Authority (OHA) was directed through Governor Kate Brown's Executive Order 20-04 to study the impacts of climate change on youth depression and mental health in Oregon. OHA's Climate and Health Program led the study and partnered with the University of Oregon to develop this report for the Governor's office.

The Governor's report on climate change and mental health was developed because the OHA Climate and Health Program identified mental health as a health effect of climate change in the 2014 Oregon Climate and Health Profile report and the 2020 Climate and Health in Oregon report. Furthermore, public health professionals in Oregon have expressed increasing concern about how climate change may exacerbate existing and ongoing rates of depression and anxiety, particularly among youth in Oregon.

Report Description

The findings presented in this report centered the voices of youth, especially tribal youth and youth of color in Oregon. The findings present larger population level mental health effects and solutions rather than individual mental health impact and services. The project team aimed to lead the study through a trauma-informed approach, with recognition of the intersectionality of the issues with other long-standing human crises caused by colonization, racism, and other forms of systemic oppression.

To accomplish the charge from the Governor's order and present findings from a population perspective, an Inter-Governmental Agreement (IGA) was granted between OHA and the University of Oregon's Suicide Prevention Lab (UO research team). This IGA established that the UO research team would conduct the following:

- 1. A comprehensive literature with an annotated bibliography and drafted conceptual model
- 2. A report that synthesizes:
 - a. Data from youth focus groups
 - b. Data from key informant interviews

Report Development

The research team conducted semistructured interviews and focus groups to gather information from a variety of stakeholders with expertise or experience working at the intersection of climate change, mental health, and youth wellbeing. Stakeholders for interviews and focus groups were identified in partnership with the Oregon Health Authority (OHA). Of those who were identified by OHA, eight of the nine key informants were available for



interviewing, and five of the six organizations approached to organize and cofacilitate a youth focus group participated in the study. Identified key informants were adults who worked with Native, Black, or youth of color, and/or identifies as BIPOC, and/or worked with youth who experienced mental health concerns (e.g., depression, anxiety). Focus groups were conducted with five different youth organizations with members who represent diverse communities in Oregon. Two of the five focus groups were youth organizations that focused on climate. One focus group was with high school students with disabilities. Another focus group was with the Klamath Tribes Youth. The final focus group was with a community-based organization focused on youth advocacy. In total, 36 youth participated in focus groups. Participants were identified through existing community partnerships with tribal and community-based organizations. Twenty-three of the 36 youth selfreported their age (mean = 17.69, range = 14-24). Eleven youth self-identified as female, two youth self-identified as male, three youth self-identified as non-binary, and 19 youth did not self-report their gender. Lastly, youth self-identified their race and ethnicity including 10 White, Non-Hispanic; five American Indian/Alaska Native; three White, Hispanic; three Asian; two Hispanic/Latinx; one American Indian/Alaska

Native, Hispanic; one Black, Hispanic/Latinx; and nine youth who did not self-report. For their participation, all key informants and focus group participants were compensated for their time and energy supporting this project. Focus groups and key informant interviews were conducted between June and September of 2021. Each focus group or interview lasted between 60-90 minutes in length.

Interview Protocol and Procedures

The key informant and focus group interview protocols were developed through collaboration with Oregon Health Authority (OHA) and with input from expert advisors. To begin, OHA guided the literature review and collaborated with the University of Oregon (UO) research team to develop a theoretical framework to design the protocol. Second, interview questions were developed utilizing a codesign process with researchers from the University of Oregon and OHA. The OHA sought input from expert advisors to inform the conceptual model, study design, and focus group and interview protocol. This collaboration work was grounded in the core elements of design-based implementation research (Penuel et al., 2011, p. 331), which includes:

- (1) A focus on persistent problems of practice from multiple stakeholder perspectives
- (2) A commitment to iterative, collaborative design
- (3) A concern with developing theory related to both classroom learning and implementation through systematic inquiry, and
- (4) A concern with developing capacities for sustainable change in systems

The research team viewed key stakeholders as contributors with valuable knowledge that would enrich the research procedures and interview protocols. Strategic partnerships between researchers and practitioners can be highly valuable for both parties, helping researchers to understand the practical context around their subject matter in considerably greater detail and helping practitioners to develop, test, and refine innovations to address persistent problems of practice. The research and design team, which included public health professionals, para-educators, tribal

youth prevention service providers, teachers, principals, and community-based mental health service providers, met weekly for three months to research and develop an interview protocol. The team received input on the interview protocol from project advisors, including several mental health service providers.

The protocol was designed to capture information on the mental health effects of climate change on youth in Oregon. Special consideration and specific questions were included to understand the impact of climate change on tribal youth, and youth of color. Prior to interviewing key informants and focus group participants, each received informational packets containing (a) interview questions, (b) information on the pillars of wellbeing (a theoretical framework that helped inform the interview protocol), and (c) an OHA informational graphic for building social resilience. See Appendix A for the materials provided in the informational packet given to key informant interviewees and focus groups.

Key informant interviews asked specific questions regarding the impact of climate change on mental health and the pillars of wellbeing (e.g., How do you see climate change affecting emotional health and wellbeing of persons and communities in your professional work?, The 6-Pillars of Wellbeing identifies core stabilizing forces for emotional and mental wellbeing. How do you think this framework can inform our understanding of how climate change might destabilize and negatively impact the wellbeing of youth?). Focus group interviews asked specific questions regarding the impact of climate change on mental health and how youth build and maintain resiliency and supports within their communities (e.g., Do you think climate change affects the mental health of people in your age group? If so, how?, We are interested in how we can increase our collective ability to adapt and address the impacts of climate change. What do you think would help promote resilience against climate change and mental health effects?).

Research Team Positionality

The research team included three doctoral students, and two master's students who had association with the principal investigator through graduate

programs (i.e., Prevention Science, Special Education, and Marriage and Family Therapy) at the University of Oregon. Two doctoral students were recipients of a Project NEXT GEN training grant for their studies at the University of Oregon. Project NEXT GEN develops university faculty members in Special Education with research and training focusing on the needs of Al/AN children and youth with disabilities. In addition, three research staff associated with the Center on Human Development at the University of Oregon (including the Principal Investigator) were part of the research team. The research team who helped collect focus group and key informant data were represented by different races, ethnicities, gender, and sexual orientations. The team members that analyzed data were a subset of this group, which slightly reduced representation, which may have affected the interpretation of the data. In order to reduce the potential effect, members of the broader team reviewed and provided input into the findings.

Data Analysis

All focus groups and key informant interviews were transcribed using the automated transcription software Otter.ai. The key informant and focus group transcriptions were used as a primary source for data analysis. Our analysis was guided using individual memoing, consensus meetings, dyadic consensus memoing, and group consensus procedures. Due to time constraints, more rigorous and thorough coding was unable to occur. The approach navigated by the research team did, however, provide an opportunity for a two-stage analytic process. First, all transcripts were reviewed by two randomly assigned reviewers. In this first stage, each reviewer independently read and/or listened to a transcript and wrote individual memos reflecting on their perspectives of the key informant interview or focus group. Each reviewer responded to a standardized memoing protocol to help facilitate the consensus procedure. Once each reviewer independently reviewed and completed memoing, the dyad assigned to the key informant interview or focus group met to discuss findings. In this discussion, each dyad answered each item to the standardized memoing protocol so that answers would reflect both reviewers'

perspectives and positionality. This process was done to reduce bias in reporting of findings. The second stage included a group consensus process where all members of the team who reviewed key informant interviews or focus groups discussed what themes were present across key informants, focus groups, and both. Themes identified during this process were informed by the previously conducted dyadic consensus procedures. Findings presented in the following section are a product of this two-stage consensus procedure. Findings should be read with caution regarding generalization to larger populations but can be used to inform practice within the local community and context.

Findings

Findings from the key informant and focus groups are presented below. First, findings from the key informant interviews are provided. Second, findings from youth focus groups are provided. Lastly, findings that were found across both key informants and focus groups are presented. Findings include both summary statements and direct quotes from interview and focus group participants.



Key Informant Interviews

Note. The key informants identified for this project represented diverse backgrounds and areas of expertise with experience working with families, youth, and individuals in clinical, community, and education settings. It should be noted that the unique perspectives of the informants helped create a deeper understanding of the role that working professionals bring to the topic of climate change and mental health.

All (N = 8) key informants identified that climate change did have an impact on the emotional health and wellbeing of their communities and places of work. When noting climate change's effects on their communities, informants responded using words such as feelings of "energized activism" but also "hopelessness" and "despair". The effect of climate change was also felt within the community at large. Three participants discussed how the effects of climate change altered their community space. For example, an informant stated, "but there are entire business that are gone and you know, places that have been around and then a big part of the community for a long time" referring to businesses that were burnt down. Other topics included direct environmental issues community members continue to face

(i.e., smoke from forest fires). A key informant from the education sector discussed how students begin to experience greater isolation, displacement, and limited access to their community due to climate change. They state:

"and so when you think about the fact that 30% of our students lost their homes and lost their community, lost the ability to be here in their community and be connected with them, that that that has just has a huge impact on our entire school, and our entire community. And so of course, that's climate change. But the fact that the land was so dry, that the fire could spread so quickly. I would definitely connect that to climate change."

The need for greater mental health support and services, was another unanimous sentiment from key informants as they processed the effect of climate change on youth mental health. One informant stated, "we need to prepare youths for being able to face a real problem that is facing their future." Participants stressed that youth are heavily invested in the outcome of climate change. One participant from the education sector mentioned, "...I see an equal number, if not more youth, who are spending a lot of [time with feelings of] hopelessness and despair that there will not be a planet for them to grow older." Youth having feelings of despair and fear about their futures was expressed across several key informants, as expressed by these quotes: "... [youth] don't feel like they're in control of their destiny that has very poignant mental health implications.", "the uncertainty is created over the future... what are things going to look like? What can we sustain with climate change?", "... but if you think about the future and pretend that there isn't this massive climate crisis bearing down on you, what does that mean?"

The theme of negative impacts of increased social isolation also arose among informant responses when asked: What lessons does the COVID-19 pandemic and its impact on youth teach us about the potential impacts of climate change on youth emotional health and wellbeing? Several informants pointed out the long-term effects of COVID-19, one informant mentioned: "this is a historical traumatic event, generations for now are going to be impacted by our response or lack of

answers to the pandemic." One participant who works in the field of prevention science stated, "And the pandemic, and climate change both have had really huge impact on that [mental health] with people. It's led to people being isolated, it's led to people losing their social support network." Another participant who works in suicide prevention stated, "If it's too hot outside, people can't go see one another, they can't recreate. If it's if the air is unsafe to breathe, they will be locked inside." To counter these negative impacts, it was suggested that a deeper connection to community and the physical land would lead to an improvement in mental health and community wellbeing. One informant from the public health sector expressed "And then you can have a stronger sense of belonging to your community into your land, there's a sense of safety that happens when you're grounded into the land in the state and the community."

Key informants were also asked about the "six pillars of wellbeing", a defining framework for the purpose of the present study. Across all informant interviews (N = 8) there was consensus that climate change is *disruptive* to all aspects of the pillars of wellbeing (i.e., hope/aspiration, belonging/connectedness, control of destiny, agency, safety, and trust). In reference to the specific experience of youth, informants identified that youth are experiencing high levels of anxiety. In addition, informants reiterated that youth experienced hopelessness about their futures with one informant reporting "But also that that sense of hopelessness, that I cannot imagine is very escapable for many of these kids". Informants also discussed youth's experience of trauma and general lack of emotional support to confront these mental health concerns. An informant stated, "there probably is a looming mental health crisis that could occur as a result of this, as a result of climate change. And recognizing that there would be a larger, you know, that there's going to be this increased demand..."

Regarding BIPOC and migrant seasonal farmworker communities, many informants highlighted that these communities have little-to-no reason to trust those in positions of power and adults creating policy because of generational oppression, historic inequities, and continued lack of support. For example, most participants (N = 5) specifically pointed out that Native, Black, and migrant seasonal

farmworker communities are limited to residing on land that is unhealthy and has a negative impact on physical and mental health. Noting, that marginalized and minoritized communities continue to be oppressed by people in power, without change on the horizon.

When asked, what future steps could be taken to prepare for the mental health effects of climate change, themes of (a) stressing the need for increased education on climate change topics and (b) increased mental health support for youth, arose. One informant posited "we must learn to genuinely respect youth voices and input", while another posed the question "how much of the climate crisis is being left for future generations to deal with?" Most participants (N = 5) suggested that youth and communities would benefit from an intentional effort to prepare for supporting mental health prior to being in a state of crisis.

Obstacles to supporting community-wide emotional health and wellbeing due to the effects of climate change that were pointed out by participants included a general lack of funding and workforce, and the "American culture." The last theme targeted large systems that intertwine to make addressing climate change harder, while making preventative care difficult as well including (a) a hyper-focus on capitalism, (b) attitudes on mental health, and (c) the perpetuation of individualism and the lack of community centered or collectivistic thinking.

In direct contrast to these obstacles, all participants (N = 8) proposed that supporting community resilience to address climate change and mental health stressors would be valuable. Informants identified the need for increased inclusion of youth voices in policymaking, promoting family resiliency, "normalizing collective vulnerability," and "recognizing the impacts of climate change." One informant stated that "we must learn how to support future generations and create a deeper connection to the land. The climate crisis is removing people's sense of destiny."

Focus Groups

Youth across all focus groups (Rogue Climate, Our Climate, Klamath Tribes Youth, Youth and Young Adult Engagement Advisory [YYEA], and Sisters [i.e., a

group of students with disabilities] expressed their mental health was impacted by climate change. Youth reported having profound emotional responses about climate change. For instance, a Rogue Climate participant said, "I think it can be very overwhelming, just thinking about this, like our future. And it's kind of up to us. And then sometimes that can be very stressful, when you don't really know how to help." Participants from both Our Climate and Rogue Climate reported, "it's just really scary and frustrating...I wish I could be ignorant and not care" and that they feel "extremely anxious about climate change...things keep on coming faster than I can process them." A participant from Our Climate shared that they felt a sense of "frustration that people didn't do anything when there was still a chance." Another participant reported feeling, "hopelessness and despair, and then total apathy." They expanded on their response; "I'm rapidly going between, like, apathy and like hopelessness, helplessness... the climate doomism." Lastly, a YYEA participant shared "it's gonna just keep getting worse, and just it's really frustrating and is that exasperating... so honestly, I'm like pissed off."

Across all focus groups, participants noted their experience with climate change. Participants discussed the impact of extreme weather events, predominantly experiences with wildfires, severe drought, and problems with water quality. Klamath Tribes Youth and Sisters focus groups discussed the loss of important community places and food due to climate change. A Rogue Climate participant reported, "this isn't the normal way of life. Like having to worry about fire season every single year, and rising heat every single year isn't the normal way, and we can change it." An Our Climate participant expressed, "it's not surprising anymore. Also, it's just like, it's so normalized...there's fires in Oregon... the heat continues to rise. It's just, it's not even new news." A YYEA participant shared, "Climate change in my eyes, I would say is, I mean, in short context, the earth is dying, and quite literally disintegrating... things are changing in the earth. From there, there's a domino effect."

When asked about how adults view youth's concerns about climate change, participants across groups commented on perceived generational differences. For example, a Rogue Climate participant reported, "we think about it more than previous generations." Another participant added, "our family members suppress our

emotions and like, don't allow us to talk about the traumas we went through, because there's a lot of not wanting to take accountability for that." An Our Climate participant discussed, "pressure that comes up when I think of just the word climate change and how past generations were like, 'we messed this up, but you can fix it'." Youth participants even identified concern for the younger generation and immediate family members (i.e., siblings) that were younger than them. Youth participants were frustrated with the older generations lack of action, responsibility, and accountability for climate change and its impact on mental health.

Through the focus groups there was a clear desire for prevention, advocacy, and activism. Participants from Roque Climate, Our Climate, and YYEA focus groups reported that environmental justice requires an intersectional lens. Youth brought forward the need to address climate change and supporting youth mental health by addressing (a) practices that have for generations and continue to minoritize and oppress BIPOC communities, (b) systems that perpetuate consumerism and waste (i.e., capitalism), and (c) practices that destroy and scar the earth. An Our Climate participant emphasized the need to consider, "how intersectional all these issues are... and how climate change is a race issue... a lower-class issue, a higher middleclass issue, a sexist issue, a colonial issue." Klamath Tribes youth and Sisters focus groups reported their communities experienced harm due to the intersectionality of white settler colonialism, white supremacy, and climate change. Another example of continued harm and white-washing (i.e., the systemic prioritization of white voices and stories and the exclusion of BIPOC voices and stories within climate activism and advocacy) of climate change action was presented by Rogue Climate and Our Climate groups. Youth in these groups noted that climate activism is typically centered on white-identified individuals and what their climate change needs are, while disregarding, ignoring, and excluding the fact that climate change is disproportionately impacting BIPOC communities, who are currently experiencing climate change's effects. Furthermore, Klamath Tribes youth reported climate change issues unique to native communities which include environmental racism, hunting, fishing, gathering resources, treaty rights, and struggles to access adequate healthcare. Regarding Latinx and migrant families, participants from Rogue Climate

reflected on the impact of the fires on farmworkers, including the death of a member of their community.

The Rogue Climate focus group participants emphasized that equity is a critically important factor when implementing change. One participant stated,

"you got to have love to be able to genuinely want to fight for these things...it doesn't matter what race, what color, what gender you are. Love is love and support is always needed in every single space. And I think it's equity within our movement. A long time, I think the environmental movement was pretty white dominated, and also a lot of greenwashing versus within climate justice. I think it is about equity across the board. It's about really recognizing these frontline communities and recognizing that climate is intersectional. And it affects everybody, and it affects so many different parts of our life."

In addition, participant from Our Climate commented on the importance of Indigenous sovereignty and land back movements. All focus groups reported a need to include climate change related topics in both family and school settings, as well as promoting education through technology and social media. Klamath Tribes Youth and Sisters focus group participants reported school environments have limited access to resources regarding science and climate change. These points highlight the importance of integrating an equity lens across systems.

Summary of Focus Groups and Informant Interviews

General themes across both focus groups and key informant interviews included (a) the need for systemic change, (b) the role of trauma, (c) policies that center the needs of BIPOC communities because they are disproportionately impacted by climate change, and (d) the role of resilience.

Need for systemic change. First, participants reflected on the role capitalism and politics have in relation to climate change. Participants emphasized the role of larger corporations continuing to maximize profit while harming the environment. A

YYEA participant said, "We've been seeing this coming; it's been happening slowly. And the people in power, that have like huge corporations and have billions and billions of dollars. The effect that they're going to have on climate change is far greater than like one of us not using straws." Another YYEA participant continued, "obviously, we're limited to what we can do with the resources that we have, but like, certain companies will avoid being up to date, and that's where we're putting our money, because we live in a capitalist society."

In addition to capitalism, participants indicated that they associate climate justice with the need for legal advocacy and influence within the justice system. Klamath Tribes youth and Sisters focus group participants reported that federal and state government agencies do not appear interested, nor were they helpful, in promoting significant change to combat climate change. More specifically, Klamath Tribes youth and Sisters focus group participants described experiences with policies and bureaucracies that failed to protect their communities, honor treaty rights, and respect traditional ecological knowledge. A public health researcher and clinical social worker reported, "there is not a lot of hope, or dignity, when you're living in an environment that's toxic....You don't feel like the United States values you...this continued perpetuation of colonial legacies including genocide and assimilation...it's always tied to the land."

The role of trauma. Second, there was a consensus among participants that youth are experiencing a perpetual re-traumatization of climate disasters. The experience of trauma is typically used to describe experiences that are emotionally painful and distressing, and that overwhelm an individual's ability to cope, leaving them feeling powerless, and an inability to function and connect to the world around them (Herman, 1992). In the context of climate change, climate trauma describes the pervasive and cumulative impact the climate change has on individuals, with some noting that climate change embodies a trauma response on the grandest scale (White, 2015).

A Rogue Climate participant shared, "we have sort of had to go through these traumatic experiences, especially from young ages, like smoke so bad, you can't go outside isn't normal." Another participant added, "sometimes I feel like the world is trying to tear me down...the things that have hurt me define who I am...how should I be maneuvering in this world... I feel like I never got the chance to be a child." Participants report there is a lack of time to adequately process and heal between traumatic events caused by climate change.

Participants reported personal examples which captured the effects of wildfires, smoke, and air quality. A key informant, who is currently a teacher, reported how youth mental health was impacted due to extreme weather events, including youth experiencing re-traumatization, anxiety, depression, and compounded isolation from COVID-19 and smoke from fires. Another aspect of the constant exposure to the climate crisis is youth's increased access to technology and social media. Youth are now exposed to all aspects of the climate crises through online media, which has led to feelings of being overwhelmed.

Another factor that has contributed to youth's experience of feeling burdened and overwhelmed is the narrative that it is up to youth to "fix" climate change. This narrative continues to relieve responsibility of the climate crisis on adults in power while placing an onus on youth when they already have other responsibilities to contend with. A key informant psychologist noted that youth have new challenges compared to adults regarding climate change which brings a sense of "helplessness and hopelessness." An Our Climate participant shared, "I remember growing up hearing like, well, you can fix the world, you know, and your generation is going to be the one to fix it...and somehow they saw it as empowering like, you guys, you got this, you can do this. But like, I just grew up with that pressure and yeah we have to do it but it's not really a decision that we got to make."

The narrative that youth will "fix" the climate crisis also perpetuates generational differences to approaching climate change. The disregard for climate change action from older generation continues to add to the pressures that youth feel. While generational differences was a strong theme, all key informant and focus group participants agreed that climate change and the voices of youth on the topic need to be taken seriously. One example of difference in priorities amongst older and younger generations as it relates to addressing climate change was shared by an Our Climate participant, "I'd rather have a stable climate than like nice

clothes...it's just like, it's a very hard thing for them to understand...I think the priorities just don't line up in the same way." Another YYEA participant reported, "my parents or other adults close to me are like, 'why are you depressed about this? It's just the way it is.' And it's just like, 'well, that's not a way to live. Like, you know, there's still things we can do.' And they're like, 'well, you're just taking it too personally.' This is the world we live in, how can you not take it personally?...it's just frustrating to have that conversation because I feel like at this point, we should just be on the same page."

Policies that center the needs of BIPOC communities. Third, participants argue the need for systemic and institutional change through an intersectional lens. For Indigenous, Black, and Latinx and migrant communities, there is reported mistrust towards those in power due to history of harm and oppression, including government and mental health providers. Specifically, the Latinx and migrant communities report collective grief due to the lack of safety and stability (e.g., financial, geographic displacement), acculturative stress, and intergenerational impacts for migrant workers and their families. A key informant public health researcher and clinical social worker discussed the impacts of, "resource scarcity and trauma are a real thing for tribal communities and that is related to the land...there is becoming more awareness of the impact of climate change on our tribal communities." Participants emphasized the importance of climate justice for minority communities who experience a greater impact from climate change. Participants reported on the role of false messaging among social media and corporations. Participants reflected on the contrast of individualism and collectivism.

The role of resilience. Regarding the role of resiliency, both key informants and focus groups stressed the importance of open dialogue and conversation surrounding climate change in effort to build community and perseverance. A YYEA participant reported, "things that get us all connected to each other and open up space for us to have conversations...holding space for the heaviness of what it can feel like to talk about it." Participants reported the need to establish a safe and honest space that normalizes connections between climate change and mental health in an effort to reduce stigma. A key informant, who is a psychologist,

reported, "I like to think about mental health beyond pathology... it's also health and wellness...mental illness is a part of the work we do, but so is mental wellness and emotional balance." Participants reported overarching barriers including lack of access to mental health services and resources. Further, participants suggested incorporating conversations about mental health in elementary school settings. Klamath Tribes youth and Sisters focus group participants reported a desire for increased mental health screenings and follow-ups in tribal clinics and local youth residential services. Regarding the concept of hope, participants report being connected to other people who are passionate and care about the environment gives them hope. Additionally, participants agreed that they find hope from younger generations advocating for environmental justice. A key informant policy manager and clinical social worker reported youth as, "being frontline climate change warrior[s]."

Moving Forward

Data from the key informant and focus group interviews provide insights on the impact of climate change on the lives of youth within the state of Oregon. While caution should be used when generalizing youth experiences due to the limited number of participants and regional focus of inquiry, it should not invalidate the strong emotive responses that were given by youth and key informants. Everyone interviewed had been impacted by climate change,



whether locally, globally, from immediate experience, or through an extended network. That said, it is important to reiterate some findings for future consideration in decision making, policy making, and advocacy at the state level.

First

First, one of the most commonly expressed themes was the identification of the intergenerational gap between youth and adult thoughts about climate change and mental health. Participants from all the focus groups and key informant interviews expressed a need to bridge the gap and address the disconnect in ideology across different generations. To begin, it is essential that policy makers, advocates, and activists listen and learn from those impacted by climate change, and those whom society has left to "fix" climate change, the youth. Moving forward we must consider answering questions such as "how do we begin to tackle the climate crisis together [i.e., younger and older generations working together]?" In doing so, how do we build working relationships with authenticity where individuals in power listen, learn, advocate, and implement policies that strengthen communities and

prevents further inequitable damage that climate change will have for BIPOC communities?

Second

Second, youth and adults stressed the importance of community for building and maintaining relationships in times of crisis. Given the historical distrust felt by many communities and specifically BIPOC communities towards governmental agencies, communities tend to find solace in themselves. Participants expressed the need for engagement within the community to help find belongingness and reduce social isolation. The need for engagement tapped onto another common sentiment that social isolation, in part caused by climate change, had a negative impact on wellbeing and mental health. In so much that it was a trend across focus groups that the experience of depression due to the state of the world was expected rather than an exception of the rule. Youth did however indicate finding a sense of connection among other youth members of focus groups and climate action groups. Finding connection and participation in civic activism provided a limited sense of relief noting that they did not feel as alone.

Third

Third, there was a theme woven through focus groups and key informant interviews that suggested a need for increased connection to and honor for the land, and a reorientation away from isolating activities that monopolize time (e.g., use of technology) toward community programming that expands individual relationship with nature. Additionally, increased time and connection with nature provides space for experiences that facilitate better mental health. Bratman and colleagues (2019), through a review of research, identified that contact with nature was associated with multiple benefits including positive affect and wellbeing, increased happiness, and decreases in mental distress.

Fourth

Fourth, there is a need for systemic institutional change to address the needs of BIPOC communities and increase positive youth outcomes. Youth tend to view their world through an intersectional lens. It is clearly understood, by the youth participants, that change within one system does not happen within a silo, but to address climate change we must also address many systemic structures that continue to oppress minoritized populations including capitalism, classism, racism and white supremacy, ableism, colonialism, and individualism. We must address societal issues through trauma-informed practices, and integrate preventative mental health services in communities, and support resiliency through education. There must be a collective approach to shift the paradigm in advocating and creating change. This collective approach also means we must use collective knowledge and share power in decision making.

There is a need to press forward with reorienting priorities to those that address the needs of our communities including access to mental health services and trauma informed environments, access to equitable education that teaches climate change and integrates trauma informed practices into school curricula. There is also an exceptional need for agencies to work together to support communities impacted by climate change. As youth see the world through an intersectional lens, sectors such as the government, environment, public health, and education must intersect to overcome the barriers that prohibit climate change action.

Moving Forward and Integrating BIPOC Frameworks to Address Climate Change

Although the critical needs identified in this report seem daunting and overwhelming, inaction would only increase the likelihood that the fear and despair young people in Oregon are experiencing would persist. Throughout the focus groups and key informant interviews, a glimmer of hope can be found when youth discuss community action and listening and lifting voices of BIPOC individuals and communities. Resilience can be developed through the growth of individual and

community strengths including building community coalitions and implementing trauma informed care in school settings (Everett et al., 2020). Galappaththi and colleagues (2021) described how local Indigenous fishing communities-built resilience through adaptive capacity (i.e., utilizing diverse kinds of knowledge, improving human agency, cultural attributions that keep up with adaptations) and community adaption (i.e., continuous learning through knowledge co-production, collective action, and flexibility). Future programming should continue to integrate frameworks created and implemented by BIPOC scholars and communities to support youth resilience. For example, *Indigenized BRACE* (Building Resilience Against Climate Effects), based on the Center for Disease Control's *BRACE* framework, articulates the Swinomish tribe's own framework that draws upon their cultural commitments and native communities' unique perspective and approach to climate change. Within the indigenized framework, changes highlight the importance of culturally specific modes of resilience to address strengths and vulnerabilities among marginalized communities.

Another step forward is to increase connection within communities by building social support networks. Felix and Afifi (2015) report that individuals with higher social support have moderated effects of stress in the time of a current climate disaster. One way to increase social support and social capital is through OHA's approach to climate action, *Bonding-Bridging-Linking*. As seen from focus groups and key informants intra-group connections (Bonding) is critical to combat isolation and construct relationships across generational and other differences (Bridging) between those calling for action and those in positions to act. There is a necessity for organizations and institutions with power to act and to share resources to support marginalized and minoritized communities in developing climate resilience (Linking).

Further, we must not ignore the sentiment of despair, depression, or hopelessness that youth in our community feel due to climate change and inaction by those who hold power and the systems that allow for inaction to persist. These stand in stark contrast with the Pillars of Wellbeing (Prevention Institute, 2017), which are considered "core stabilizing forces" for emotional health and wellness: (a)

Hope/Aspiration, (b) Safety, (c) Trust, (d) Dignity, (e) Control of Destiny, and (f) Belongingness/Connectedness. Rather than (a) *hope,* youth feel *despair,* rather than (b) *safety,* there is *uncertainty* for the future; rather than (c) *trust,* youth experience a sense of *betrayal* from older generations; rather than (d) *dignity,* youth feel *disregarded,* rather than (e) *control of destiny,* youth feel overwhelmed with responsibility; and rather than (f) *belongingness,* there is *isolation* and *withdrawal.* For educators, parents, mental health service providers, governmental officials, and community-based organizations working to address the impacts to youth mental health and address the climate crisis, it is critical to be reinforcing these core stabilizing factors in our youth and in our communities overall.

Efforts toward resilience building must be global yet meet the needs of local communities. Ultimately, to build resilience we must include all into the conversation, listen to all perspectives, and integrate collective knowledge into action (e.g., Norton-Smith et al., 2016). Lastly, the positive impact on mental health that is associated with a sense of connection to the land should not be ignored but fostered.



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Key Informant Informational Packet Introduction

We are conducting a study that investigates how climate change affects mental health. We are particularly interested in how youth and marginalized communities are affected by climate change, and how they build resilience in light of those effects. If you would like to know more about our research, there's a recording of our informational webinar available on our project webpage. You may watch the recording and/or view the abbreviated slide-deck now available online.

To study this, we are seeking key informants for semi-structured, 1:1 interview. We've invited you to be an informant because we are gathering diverse perspectives across cultures, personal and professional experience, geographic location, and areas of expertise. The selection criteria for informants includes some, but not necessarily all of the following:

- Have diverse experiences with youth mental health and depression
- Represent a range of sectors and areas of expertise
- Work with Native, Black or youth of color
- Identify as BIPOC themselves
- Are geographically based in different parts of the State

Below, we have listed the questions you may be asked during your interview. You are able to skip any questions that you like. If you agree to participate, the researchers will be in touch via email/phone/other to confirm your participation and schedule the interview. You will also be invited to review the findings and draft report before it is finalized and can serve as an Expert Advisor for the remainder of the project, if you desire.

Key Informant Interview Questions

- 1. What is your experience working with youth or families?
 - a. **Probe**. Do you have specific experience working with Native, Black, or youth of color?
 - b. *Probe*. What is your experience working with youth with disabilities and/or mental illness?
- 2. How do you see climate change affecting emotional health and wellbeing of persons and communities in your professional work?
- 3. How do you see climate change affecting youth and mental health?
 - a. **Probe**: Do you have examples of climate change affecting mental stress?
 - b. *Probe*: Do you have examples of climate change affecting emotional wellbeing?
- 4. In considering the "Six Pillars of Wellbeing," how do these behavioral health goals better inform us on how climate change will negatively impact the wellbeing of youth?
 - a. *Probe*: What might be some mental health challenges that are particular to youth?
 - b. *Probe*: What might be some challenges that are specific to Native communities?
 - c. **Probe**: What might be some challenges for children of migrant farmworker communities?
 - d. *Probe*: What might be some challenges that are specific to Black communities or communities of color?

- 5. What have you observed in terms of how people are affected by extreme weather events?
 - a. *Probe*: How do you think increased frequency and severity of extreme weather events could affect emotional health in your community?
- 6. What lessons does the global COVID-19 pandemic and its impact on youth teach us about the potential impacts of climate change on emotional health and wellbeing?
- 7. What can your sector do to better support the emotional health of youth and their concerns about climate change?
- 8. What do you think leaders and institutions (e.g., federal government, schools) can do to address and prepare for the mental health effects of climate change?
 - a. *Probe*: What programs, initiatives, or efforts underway could be leveraged?
- 9. What do you think are some of the obstacles to supporting community-wide emotional health and wellbeing as we continue to experience more climate-related disasters and stressors?
- 10. Are you aware of any projects/efforts underway in the communities you serve that are building climate resilience?
- 11. In your experiences, how can leaders and institutions promote and support community resilience, both resilience to climate change and resilience to mental health stressors??
 - a. Probe: What can families and caregivers do?
 - b. *Probe:* What can school communities do?

- 12. Reflecting on our study's conceptual model based on the "Pillars of Wellbeing", what helps to create a sense of *hope* in the communities you serve in light of climate change and uncertainty (or climate stressors?)?
 - a. *Probe*: What helps create a sense of *safety*?
 - b. *Probe*: What helps create a sense of *trust or belonging*?
 - c. *Probe*: What helps create a sense of *control of destiny*?
 - d. *Probe*: What helps create a sense of *dignity*?

Focus Group Informational Packet Introduction

Principles for Communication: Climate Change and Mental Health Conversations

We Welcome Multiple Perspectives. Every person in our conversations is smart and has valuable contributions. So, let's listen well and stay curious. When we speak let's speak from our own experience by using "I statements."

We Share the Conversation. Notice how much you are speaking (or withdrawing) from group conversations. Let's all try and speak after others who have not spoken. If you often remain quiet in conversation, look for ways to share your insights and experience.

We Will Seek to Actively Listen to One Another. The key to storytelling and good dialogue is listening. Let's all use our energy to listen to what is said before thinking about how to respond. Defensiveness and denial can arise in any of us. When it does, be curious about what is happening within you before speaking.

We Will Share the Message, Not the Messenger. People may disclose intimate parts of their experience during our time together. We need to keep their identity and particulars of their sharing confidential while carrying forward the message, values, and insights they impart.

General Guidelines for Conversation

- Raise your hand to be recognized. One person speaks at a time.
- Speak from your own experience.
- Listen to understand, not to respond.
- Treat each other with respect; be culturally sensitive and respectful.
- Ask questions to clarify confusing points.

- Respectfully disagree; understanding is required but agreement is not.
- Step up/step back: balance participation; make sure everyone has an opportunity to speak.
- Take care of yourself and take breaks if necessary.
- No put downs of self or others.
- No interruptions.

Additional Resources: If any part of the conversation today causes you to struggle, please know that you can reach out 24/7 for free, confidential, and anonymous help to Youthline (run by Lines for Life).

Call 877-968-8491 | Text teen2teen to 839863 | Chat at www.oregonyouthline.org Teens available to help daily from 4-10pm Pacific Time (off-hour calls answered by Lines for Life). Interpreters available

Focus Group Interview Questions

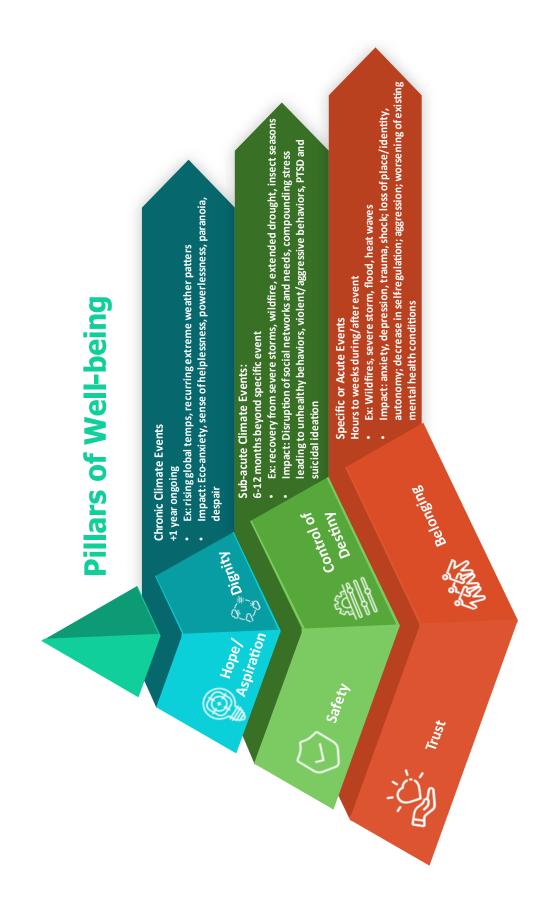
- 1. What comes to mind when you hear the term "mental health"?
- 2. How do you feel when you think about big problems like climate change?
- 3. Do you think climate change affects the mental health of people in your age group? If so, how?
- 4. Have you been directly affected by any extreme weather events (wildfires, smoke. flooding, drought, etc.)?
- 5. Do you find that others/adults take stress, anxiety, depression, or hopelessness in relationship to climate change seriously?
- 6. How do you engage in any climate change activism or advocacy?
- 7. What do you think about when you hear the phrase "climate justice" or "environmental justice" what does it mean to you?
- 8. We are interested in how we can increase our collective ability to adapt and address the impacts of climate change. What do you think would help promote resilience against climate change and mental health effects?
- 9. What community organizations do you think of when you think about climate change activism?
- 10. Do you feel that people and communities around you (e.g., schools, government) support climate change activism?

11. What gives you hope?

Pillars of Wellbeing Handout

In addition to the questions for the interview, as given above, we have information to share on the concepts and frameworks we are employing for our research. Below are a couple of infographics you can review to see some of the background to this research project.

The graphic below identifies ways in which climate change is known to affect mental health. The pyramid lists the Pillars of Wellbeing. The block arrows identify types of climate change events and how they affect wellbeing, leading away from the Pillars of Wellbeing.



Pillars of Wellbeing Handout

The next infographic draws on research completed by the OHA about social resilience and climate change. Their listening sessions identified three key components to social resilience (Bonding, Bridging, and Linking), which address intragroup relationships, intergroup relationships, and institutional/organizational resources that can be shared to build resilience.

Building Social Resilience BRIDGING LINKING Connections among People and organizations groups with different social with power and backgrounds resources* Social resilience helps communities weather the storms Relationships among people with a common social background ENGAGEMENT **BONDING**

* Due to inequities, people and organizations with power and resources have the greatest responsibility to engage and build trust with communities.