THE HEALTH EQUITY FRAMEWORK:
Improving Resilience Through Design

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INTRODUCTION

Resilience is an equity issue, linked directly to the resources a person has to cope with environmental stressors. The lack of these social, physical, and economic resources leads to adverse health outcomes. The places and spaces we inhabit have a significant impact on our health but there is little practical guidance for health facilities on best practices for health equity.

The exposome is the environmental and socioeconomic conditions that impact an individual's well-being and how architecture can contribute to positive health outcomes. Resilience factors related to the exposome impact individuals, buildings, and communities. Through this metric, we aim to make resilience more visible and quantifiable to help inform health equity decisions. We study social determinants to health in conjunction with environmental conditions. This allows us to address resilience comprehensively and supports the development of equitable communities where everyone can thrive. This resulted in a health equity framework that accounts for environmental and socioeconomic factors in the exposome in order to provide resilience at multiple scales.

TERMINOLOGY

Social justice is justice in terms of the distribution of wealth, opportunities, and privileges within a society.

Resilience is the capacity to recover quickly from difficulties

Health equity means everyone has a fair and just opportunity to achieve optimal health. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.

What Makes a Community Healthy Or Sick?

A literature review of health equity disparities combined with interview conducted of researchers, public health scholars and clinicians showed that the quality of the exposome had a large impact on overall health and well-being. Communities that have multiple negative exposome conditions tend to have the worst health outcomes. These can include living with poor air or water quality, air, noise or light pollution or hazardous materials. Socioeconomic factors can include access to healthy food, stable housing, feeling physically safe, having a roust social network and level of education. Based on an assessment of the exposome, the design can address targeted factors that are often overlooked.

ECONOMIC FACTORS
- Education Level
- Economic Wherewithal
- Generational Wealth

ENVIRONMENTAL FACTORS
- Supportive & Safe
- Accessible to Places/Events for Activities
- Neutralize Adverse Climate Events

SOCIAL FACTORS
- Diverse
- Culturally Competent
- Robust Networks
- Health Literate
- Age Sensitive

INTERVIEW RESULTS
Experts we interviewed confirmed that these specific exposome issues are the biggest barriers they see to health equity and community resilience.
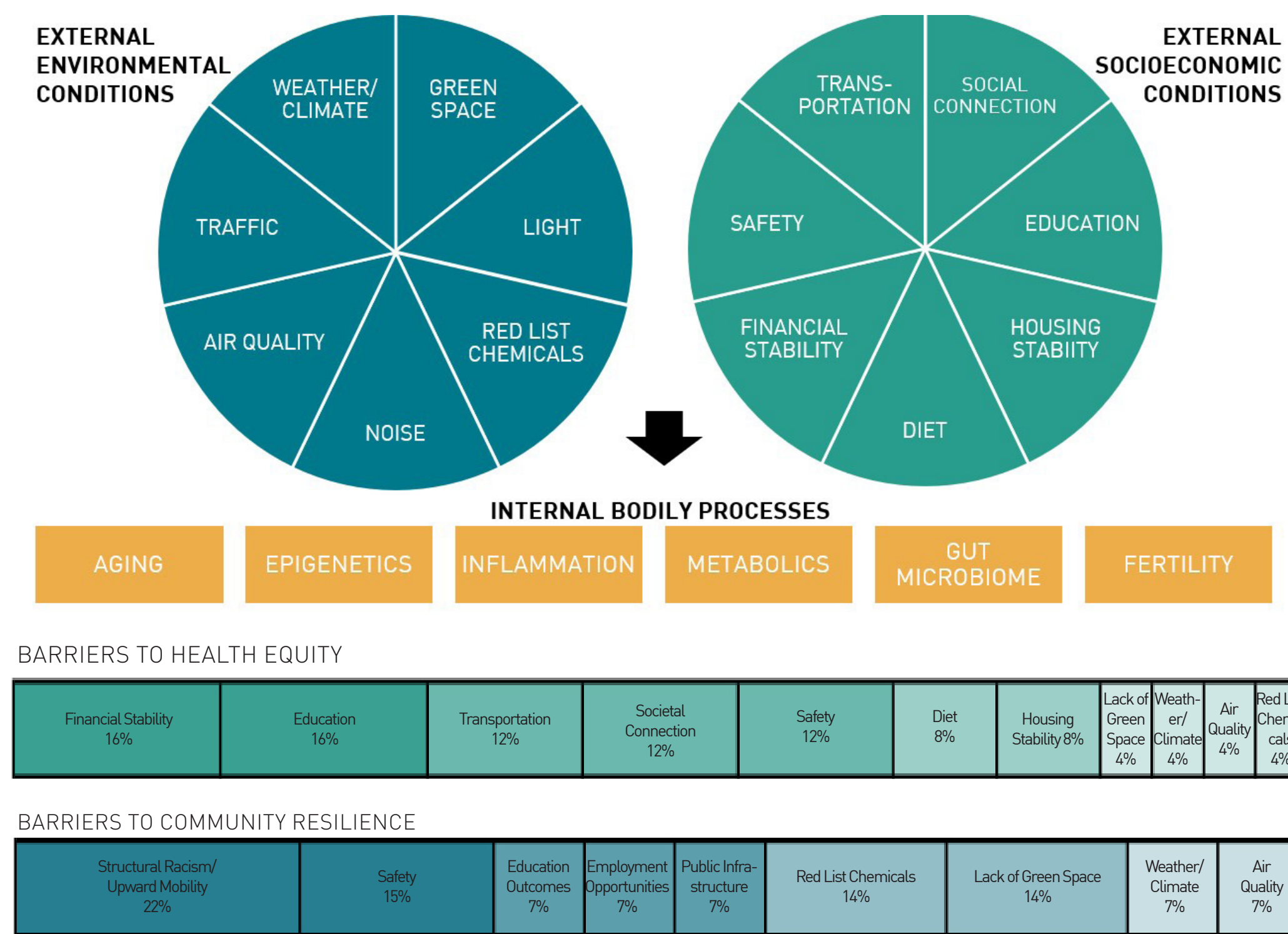
How are Resilience, Sustainability, and Equity Related?

People experience inequity in multiple ways. When someone is living in a deficient exposome, the resources they have are diminished. They experience a higher than typical demand on those resources in order to survive. The fewer resources one has to cope, the less resilience they have. A person who is well resourced can cope with an adverse event like car trouble fairly easily because they can afford to have their vehicle towed and repaired. Someone with few resources is more likely to have an unreliable car as well as to potentially lose their job if they cannot get to work on time and may not be able to afford the repair. This inequitable chain of events causes more stress, which can lead to physical and mental impairment over time. Chronic stress and trauma can impact our genome, turning on disease expressions and even leading to generational trauma.

We can notably see adverse health outcomes in population cohorts based on any combination of the following observable inequities:

- Gender
- Race
- Culture
- Age
- Financial
- Sexual Orientation
- Physical Ability
- Mental Ability
- Educational
- Language

AIR POLLUTION & EQUITY

56% of the population living near toxic waste are people of color.

White people are exposed to approximately **17% less** air pollution than is caused by their consumption.

Black people are exposed to approximately **56% more** air pollution than is caused by their consumption.

Hispanic people are exposed to approximately **63% more** air pollution than is caused by their consumption.

How Can the Built Environment Provide a Wellness Intervention?

Deficient exposomes can be remedied. A salutogenic, or health generating, design approach reregulates and resets the stress response. We can use the built environment to promote health by:

- Remediating toxic conditions
- Making a space more manageable and comprehensible
- Giving users agency to customize spaces according to their needs
- Intuitive wayfinding that allows them to navigate with confidence
- Introducing the natural world and biophilic design
- Promoting social choice and psychological safety
- Creating appropriate visual stimulation
- Developing active environments,

All of these approaches provide resources and increase resilience. Resilience is not just about an individual. We have explored it at the scale of buildings and communities as well. Considering all three scales of resilience helps to better address the inequities faced by a population.

	HUMAN	BUILDING	INFRASTRUCTURE
WHAT	Mental and physical wellbeing of the individual	Buildings and physical spaces for one individual to a community	Connecting transportation, utilities, and public commodities
HOW	Provide for respite and recovery	Flexibility to adapt to potential future stressors	Minimizing impact of future use and growth
	Equitable access to healthcare and resources	Using equitable design to increase accessibility	Providing equitable access to resources for all communities
	Optimizing for safety and security from stressors	Minimizing exposure to external stressors	Maintaining systems for optimal operation

CONCLUSION & RECOMMENDATIONS

The study conclusions led to the proposal of a health equity framework to help prioritize the design measures that will have the greatest impact. The framework helps to ensure that an equity focused lens is applied to the salutogenic strategies to increase the efficacy and relevance of the design to the population served.

HEALTH BEYOND BUILDINGS

Push instead of pull to screening/preventative care
- Wraparound services
- Community net positive impacts
Employment
- Skill building
- Career modeling
- Local vendors
- Strategic partnerships/Health districts
24 Hour Buildings
- What else can it be?
- Increase space utilization

WELCOMING AND INCLUSIVE

Accessible
- Bariatric
- Accessible routes
- Hearing and vision impaired
- Neurodiversity
Safe
- Crime prevention through environmental design (CPTED)
- Psychological Safety
- Non-toxic
Open
- Access to public transportation
- Bike accessible

REGENERATIVE

Energy Efficient
- Reducing energy consumption
- Minimize reliance on central grid
- Building upkeep and system upgrades
- Optimization of systems
Equitable distribution of resources
- Access to daylight
- Access to nature
- Well ventilated
Active design
- Encourage movement and activity
- Space for seclusion and reflection
- Respite space
- Religious accommodations

SALUTOGENIC APPROACH

Focus on alleviating stress and building resilience by providing an abundance of environmental resources for patients, families and staff.

RELAXATION RESPONSE
"I restore"
SELF EFFICACY
"I can"
BIOPHILIA
"I relate"
PROSPECT & REFUGE
"I shelter"
SENSE OF COHERENCE
"I understand"

Find Out More Here