

# Beyond Bricks and Mortar: How Built Environments, Crime, and Health Literacy Shape Urban Youth Mental Health

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## INTRODUCTION

Built environments in urban settings significantly impact crime rates and mental health outcomes among youth, with health literacy serving as a critical mediating factor. Despite declining youth violence rates since the mid-1990s, socioeconomic disparities and inadequate living conditions continue to contribute to crime and poor mental health in urban areas.

**Our systematic review examined:**

- 1. How physical environmental factors influence crime patterns and psychological well-being in high-poverty urban areas.
- 2. The role of health literacy in mediating these impacts.
- 3. Strategies health professionals can use to support youth in high-crime, low-resource communities.

This review uses Nutbeam’s model of functional, interactive, and critical health literacy to examine how low health literacy exacerbates crime and trauma in urban environments.

## DESIGN AND METHODS

**Systematic Review Approach:**

- Conducted a comprehensive systematic review examining relationships between built environments, health literacy, crime rates, and mental health outcomes in urban youth
- Databases searched: PubMed, CINAHL, PsycINFO, Web of Science, and Scopus (2015-2025)

**Selection Criteria:**

- Included empirical studies on built environments and crime/mental health, studies examining health literacy in environmental health, and evaluations of urban renewal initiatives
- Included evaluations of technological advancements in predictive policing
- Focused on urban youth and young adult populations (ages 15-30)
- Applied quality assessment using Mixed Methods Appraisal Tool (MMAT)

**Analytical Framework:**

- Applied Nutbeam's health literacy framework (functional, interactive, and critical levels)
- Examined how each level interacts with built environment factors to influence crime & mental health
- Utilized thematic analysis to synthesize findings across studies

## CONNECTION TO IHA’S MISSION (HEALTH LITERACY)

This research directly addresses the 2025 IHA Health Literacy Conference theme of “Building Health Equity Through Innovation and Inclusion” by:

- Highlighting how social determinants—specifically neighborhood and built environments—create health inequities in urban communities
- Demonstrating how limited health literacy disproportionately affects urban youth, creating barriers to recognizing environmental risks and accessing resources
- Identifying innovative approaches that integrate health literacy principles into environmental interventions, including community health worker programs and digital literacy initiatives
- Offering real-world, scalable solutions: CHW programs, digital literacy, plain language, and urban policy advocacy

Our findings support IHA's vision by reconceptualizing health literacy as far more than simply an understanding of medical terms, but as a tool for community empowerment and advocacy. By enhancing health literacy at functional, interactive & critical levels, we can empower urban residents to better navigate their environments, access resources, and advocate for healthier communities.

## RESULTS

Our systematic review revealed significant relationships between built environments, crime rates, mental health outcomes in young people, with health literacy serving as a critical mediating factor.

**Built Environment & Crime:**

- Poorly maintained environments foster crime, supporting the "broken windows" theory
- Crime rates were 22% higher in areas with visible disorder and poor infrastructure
- Urban greening initiatives reduced violent crimes by 29% in surrounding areas
- Well-maintained boundaries decreased property crimes by 20%

**Mental Health Impacts:**

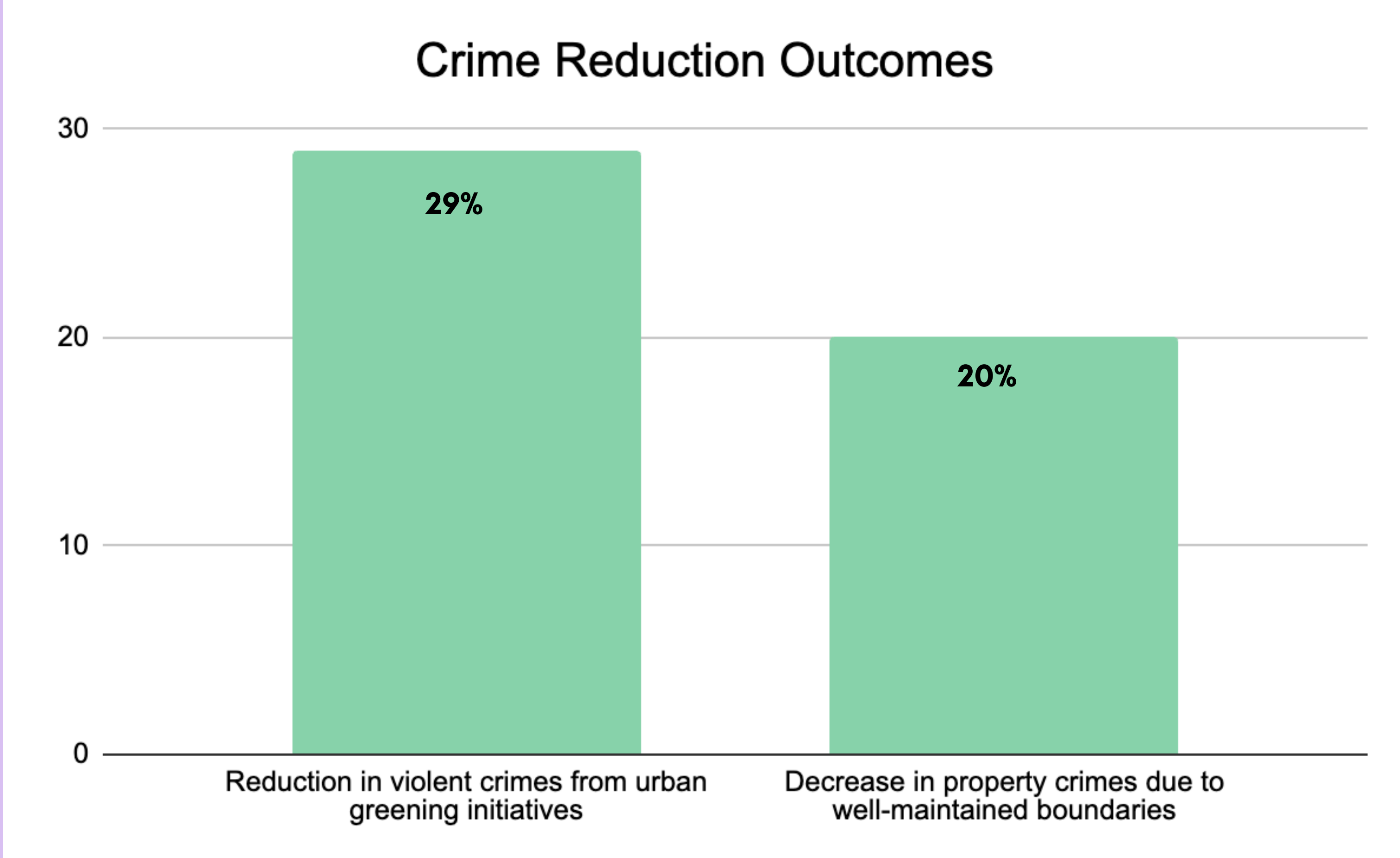
- Youth in high-poverty areas face 2.3× higher rates of chronic stress and trauma
- Limited green space access correlated with 44% increase in depression rates
- Chronic exposure to high-crime environments increased PTSD risk by 85%

**Health Literacy Implications:**

- Estimated 60% of low-socioeconomic youth face limited health literacy
- Community health worker programs improved health literacy scores by 40% and increased resource utilization by 60%
- Digital literacy is increasingly essential for advocacy, despite significant digital divide

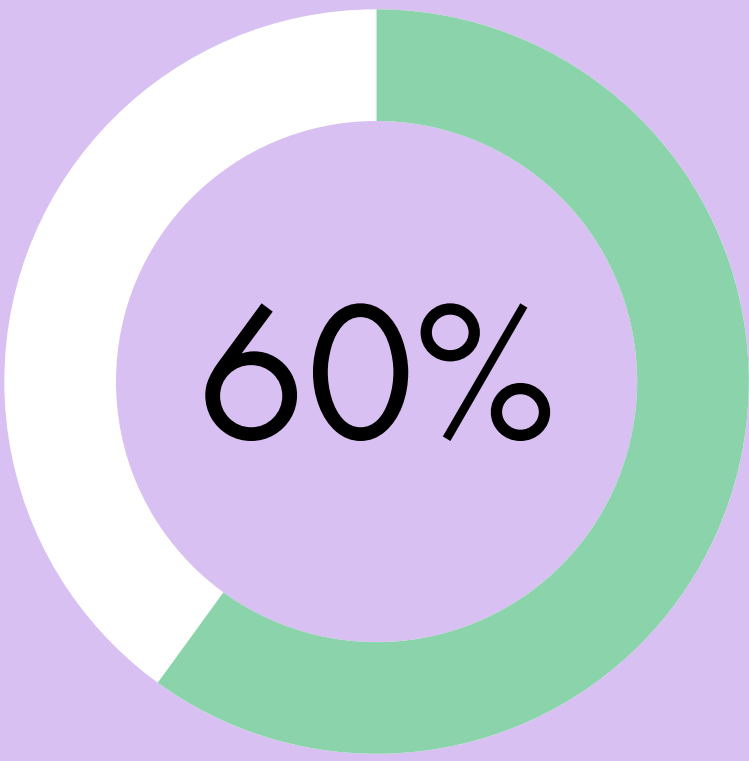
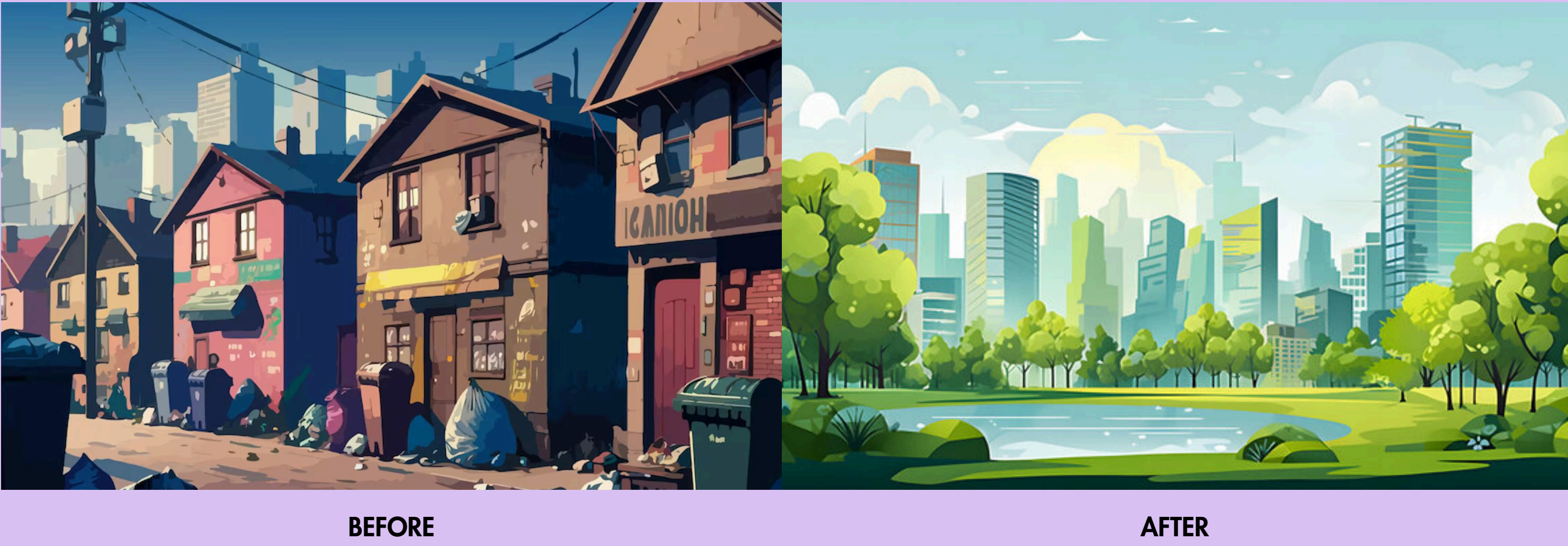
**Technology Applications:**

- Machine learning identified built environment features linked to crime rates
- AI successfully mapped high-risk areas for targeted interventions
- "Wayfinding" design reduced stress and improved environmental navigation



This graph highlights the intersection of crime rates and physical disorder in neighborhoods. By making attempts to clean up these properties, crime rates may decrease.

## 22% HIGHER CRIME RATES IN AREAS WITH VISIBLE DISORDER



## LIMITS IN HEALTH LITERACY

An estimated 60% of youth from low-socioeconomic backgrounds face limited health literacy, a challenge that is further compounded by unsafe built environments. Without adequate literacy skills, many may struggle to recognize hazards, navigate systems, or access essential resources.



This images encapsulates how machine learning can be utilized to identify areas of crime, aiding law enforcement and government agencies in crime prediction, prevention, and detection.

## RECOMMENDATIONS:

- Recognize how place and environment shape mental and physical well-being
- Equip youth and communities with tools to identify, navigate, and improve unsafe environments
- Promote health literacy through trauma-informed, culturally responsive, and equity-centered approaches

## WHAT HEALTH PROFESSIONALS CAN DO:

- ✓ Teach plain-language strategies for environmental risk awareness
- ✓ Support CHW-led programs in high-crime, high-poverty neighborhoods
- ✓ Integrate environmental health literacy into trauma-informed care
- ✓ Partner with urban planners to ensure design supports wayfinding and safety
- ✓ Promote digital tools equitably and train community members to use them
- ✓ Advocate for ethical, bias-free implementation of predictive policing tech

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## CONCLUSION

Built environments are not just physical spaces—they are determinants of safety, trauma, and well-being. Our research demonstrates that these environments significantly impact crime rates and mental health outcomes in urban youth, with health literacy as a critical mediating factor.

- Limited health literacy exacerbates negative impacts of poor built environments by restricting residents' ability to:
  - Recognize environmental risks
  - Access available resources
  - Advocate for community improvements
- Strategic environmental interventions (e.g., improved lighting, green spaces) can substantially reduce crime rates and improve psychological well-being, but these benefits may not be fully realized without addressing health literacy barriers

**Future research priorities:**

- Longitudinal studies on long-term impacts of urban renewal projects
- Development of culturally appropriate health literacy interventions specific to built environment challenges
- Ethical refinement of predictive policing technologies

By addressing both built environment challenges and health literacy barriers, we can work toward creating safer and more equitable urban communities.