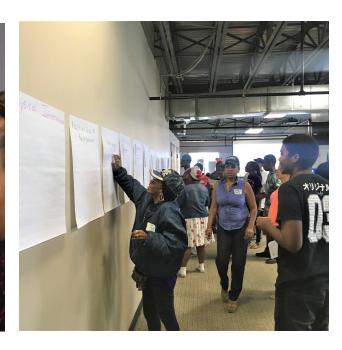
Engaging multiple communities to define the exposome

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Background

- The exposome has been conceptualized as all lifetime exposures including toxicants, diet, lifestyle choices, and socioeconomic factors.¹
- Initial applications of the exposome do not reflect the complex lived experiences of many communities.
- To improve future applications of the exposome, we asked Atlanta-area communities to define their exposome using a popular education approach.





Methods

- We used **Group Concept Mapping**,² which provides a systematic method to collect and visualize community members' knowledge in order to foster a shared understanding and organize for action.
- Visual concept maps of the participants' responses were created using nonmetric multidimensional scaling and hierarchical cluster analysis.³
- The **Group Concept Mapping** process: ²



Preparation

- Select community
- Identify representative participants
- Develop the focus for brainstorming and rating

Generate Statements

Brainstorming

Structure Statements

- Sort statements
- Rate statements on importance

Represent Statements

Create concept maps

Interpret Maps

- Statements and Clusters
- Name clusters
- Point Map
- Cluster & Rating Map

Utilize Maps

Planning and Action



For exposome research to truly capture the totality of lifetime exposures and improve human health, community perspectives and, therefore, interdisciplinary collaborations are needed.

We asked communities:

"What in your environment is affecting your health and your community's health?"

Communities define their exposome holistically, emphasizing the social-ecological influences on individual and community health:



Conventional environmental concerns

Example statements:

Air and water quality

Pollution

Chemicals in the environment



Built environment

Example statements:

Accessing fresh fruits and vegetables

Vacant/abandoned properties

Poor infrastructure



Social relationships

Example statements:

Youth involvement in community

Friends

Family violence

Being a caretaker for a family member



Crime and safety

Example statements:

Gun violence

Crime

Security/safety

Bullying



Individual health and behaviors

Example statements:

Blood pressure

Asthma

The food I eat

Health literacy

Other general external exposures

Example Statements: Poverty, Flaws & practices of racist society, Lack of [government] transparency

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References:

- 1. Wild, C.P. (2012). https://doi.org/10.1093/ije/dyr236
- 2. Trochim, W.M. (1989). https://doi.org/10.1016/0149-7189(89)90016-5
- 3. The Concept System® Global MAX™ software (Concept Systems, Inc., Ithaca, USA, Copyright 2004–2020; all rights reserved)

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Results

118 community members from four distinct communities across metro-Atlanta participated in separate workshops to create a concept map that defined their exposome.

The maps depict clusters of statements that participants sorted together and then named. The number of layers in a cluster represents its average importance rating.

Concept maps, communities A-D:

