



Break the Cycle of Environmental Health Disparities in Vulnerable Children

A Leadership Development Program of





Disclaimer

- The findings and conclusions in this presentation have not been formally disseminated by the Agency for Toxic Substances and Disease Registry (ATSDR) and should not be construed to represent an agency determination or policy.
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Children at most risk for health disparities

- Living in poverty
- From racial and ethnic minority groups
- Affected by drug and alcohol abuse
- Living with violence
- From homeless families
- Uninsured and/or without access to health, mental health, and dental care

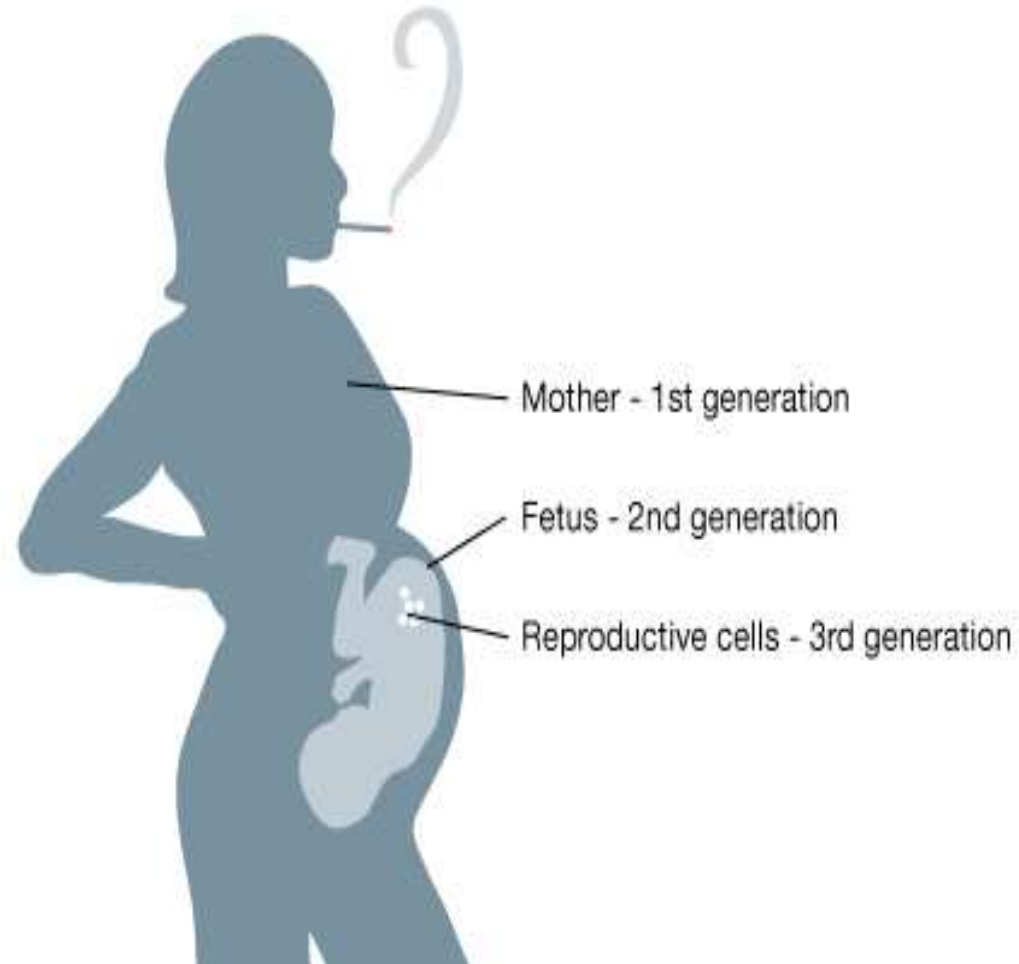


Built Environment in Poor Communities

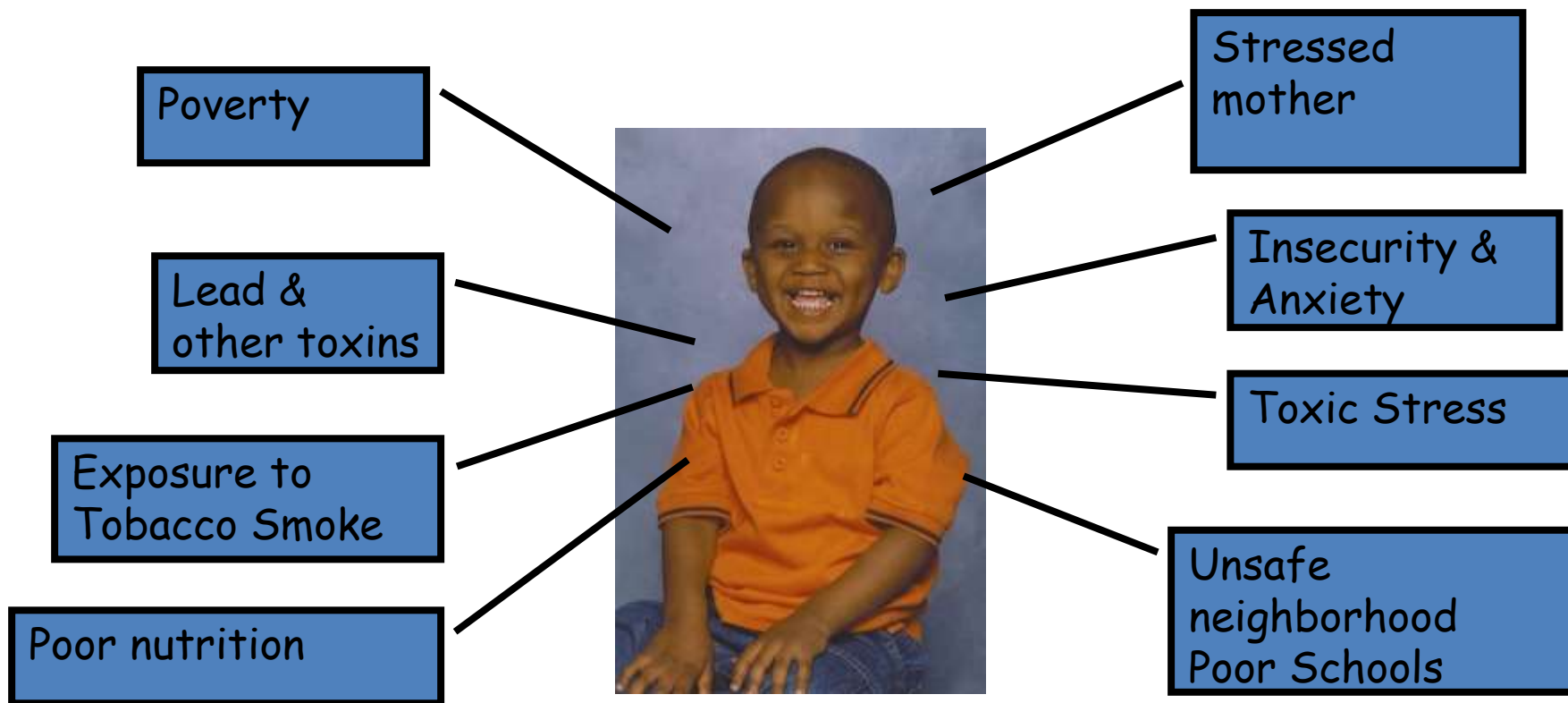
- Unsafe Neighborhoods due to: Traffic, Crime, Litter & Trash, Food Desert, Limited Green Space
 - 61% more likely to be Obese
- Older Houses in Poor Condition
 - 3.5x more likely to have lead toxicity
- Poor Indoor & Outdoor Air Quality
 - 2x more likely to have Asthma and
 - 3x more likely to die from Asthma
- Older Schools in Poor Condition & Poor Education
 - 50% less likely to graduate
 - 2x more likely to be unemployed

Smoking

- The effects of tobacco not only has a direct effect on the smoker and on the fetus,
- With long term health implications for the rest of that child's life
- And for that child's offspring as well



Cumulative risk



Adapted From Lecture by Dr. Howard Frumkin

CYCLE OF ENVIRONMENTAL HEALTH DISPARITIES

SOCIAL & ECONOMIC

- Limited Education
- Limited Employment Options
- Limited Empowerment
- Limited Income

RESIDENTIAL OPTIONS

- Limited Choice
- Limited Infrastructure
- Limited Services

RESIDENTIAL CHARACTERISTICS

- Older Houses
- Adverse Environmental Factors
- Adverse Social Factors

ENVIRONMENTAL IMPACT

- Increased Toxins
- Increased Stress

COMPOUNDING FACTORS

- Limited Educational Services
- Limited Health Care Services
- Limited Social Capital

HEALTH RISK FACTORS

PREGNANCY VULNERABILITY

- Poor Prenatal Care
- Intrauterine Insults
- Low Birth Weight & Prematurity

PHYSICAL HEALTH

- Neurodevelopmental Disorders
- Asthma & Allergies
- Obesity & Hypertension

MENTAL HEALTH

- Toxic Stress & PTSD
- Substance Abuse
- Violence & Crime



BREAK THE CYCLE **10**

BREAK THE CYCLE OF ENVIRONMENTAL HEALTH DISPARITIES IN CHILDREN

A Project of:

Southeast Pediatric Environmental Health Specialty Unit
Innovative Solutions for Disadvantage and Disability
Sustainability Initiatives at Emory University





Goals

- Raise Awareness of Children's Environmental Health
- Raise Awareness of Environmental Health Disparities
- Cultivate Future Leaders



Requirements from Break the Cycle Students

- Project
- Mentor
- Presentation
- Publication

SOCIAL & ECONOMIC

Endocrine Effects and Metal Exposure in Children of Agricultural Working Mothers in Thailand

COMPOUNDING

• Limited Income

Closing Health Disparities Through a Multilevel Approach

Racial and SES Profiles in People Living Near Power Plants

Community Supports Lessen Health Disparities for Premature Infants

Impact of Housing on Body Size and Pubertal Timing

The Family Checkup to Improve Child Behaviors in the Home

Environment, Malnutrition and Teenage Mothers in Lusaka Zambia

• Poor Prenatal Care

Mitigating Effects of Exposure to ETS on Development of Children

• Adverse Environmental Factors

• Neurodevelopmental Disorders

Determinants of Access to Healthcare in Rural Georgia

Environment, Asthma, Poverty with African American Children in Fort Valley, GA

ENVIRONMENTAL

- Toxic Stress & PTSD
- Substance Abuse
- Violence & Crime

• Increased Toxins

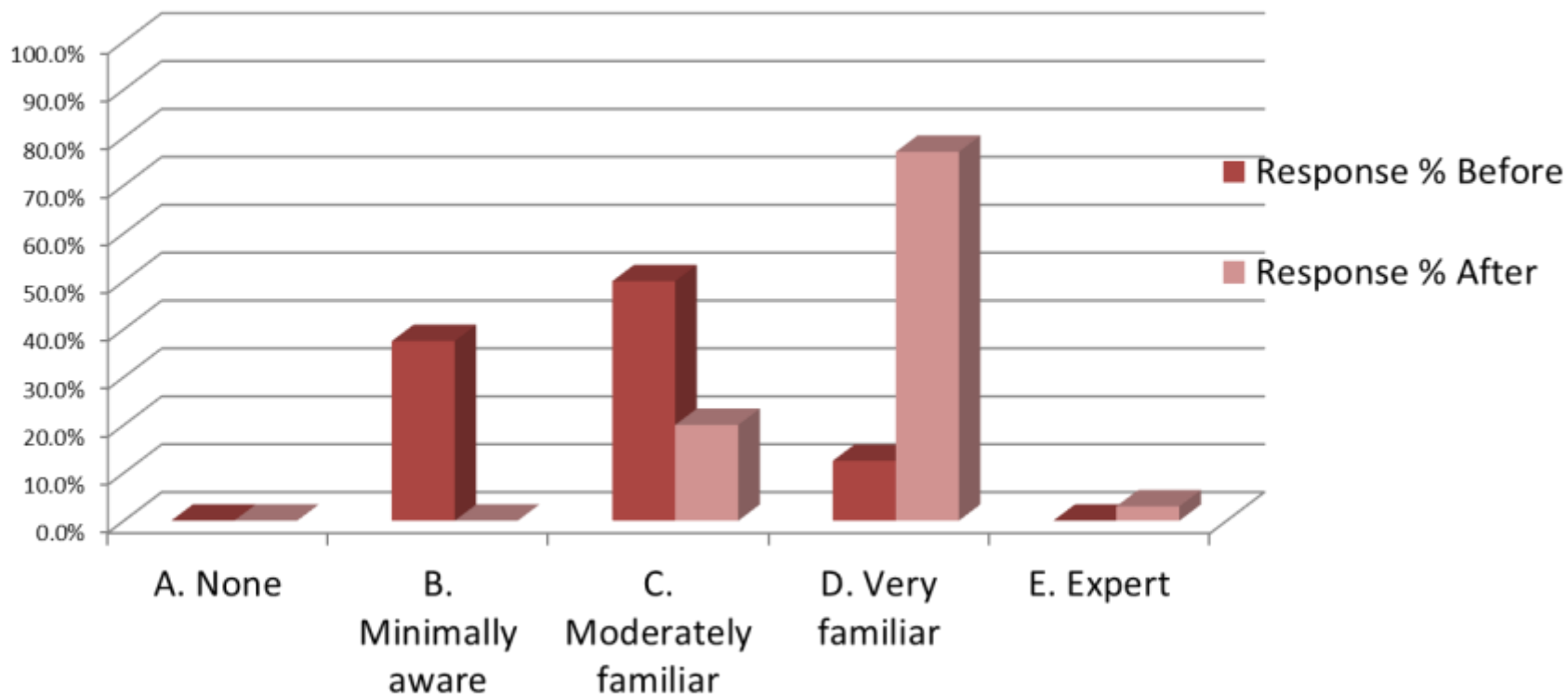
Home Environment, Low Income and the Primary Care Medical Home



Student Survey:

Changes in Knowledge about Children's Environmental Health

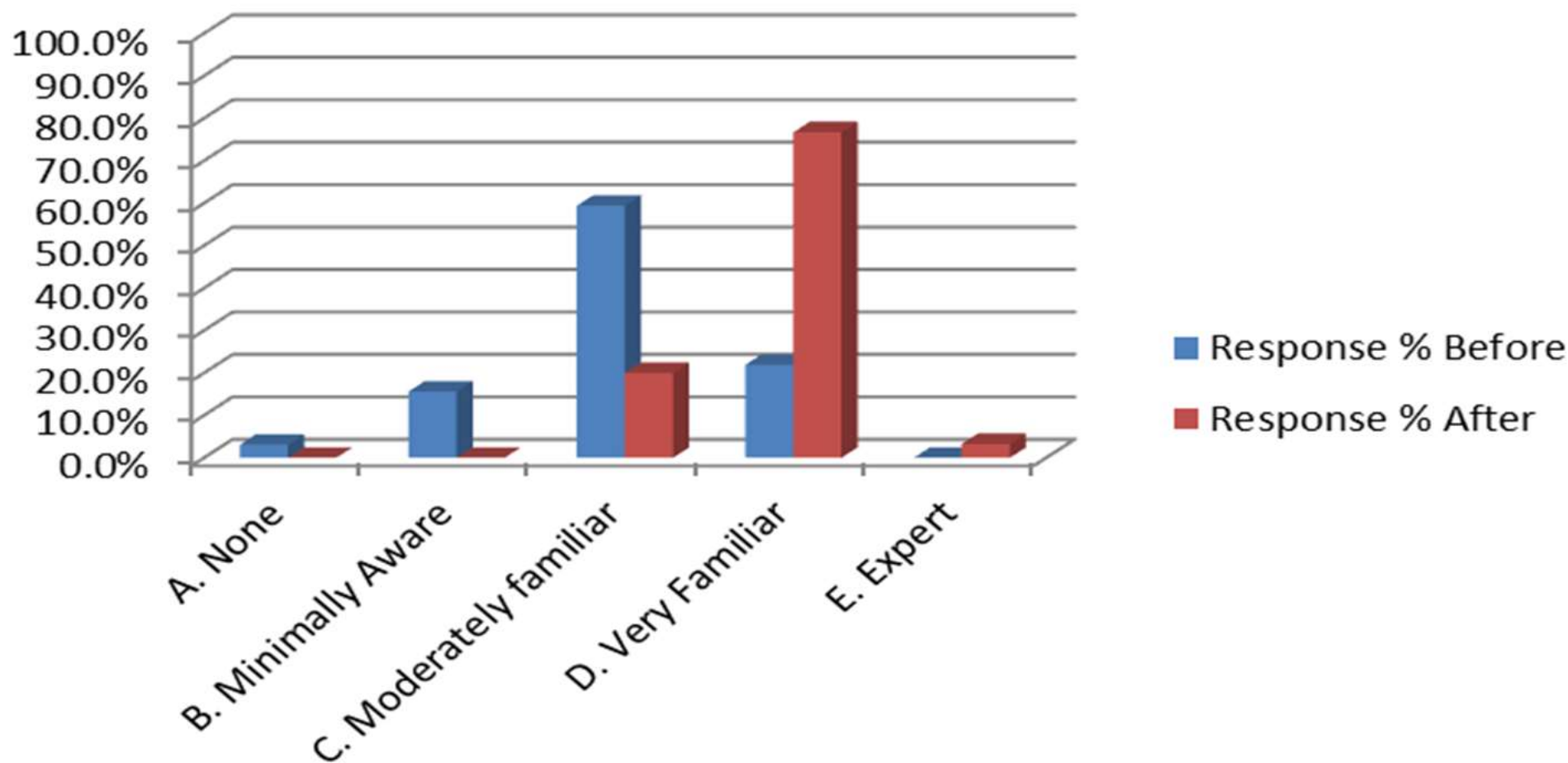
Before and After Participating in The Break the Cycle Program:





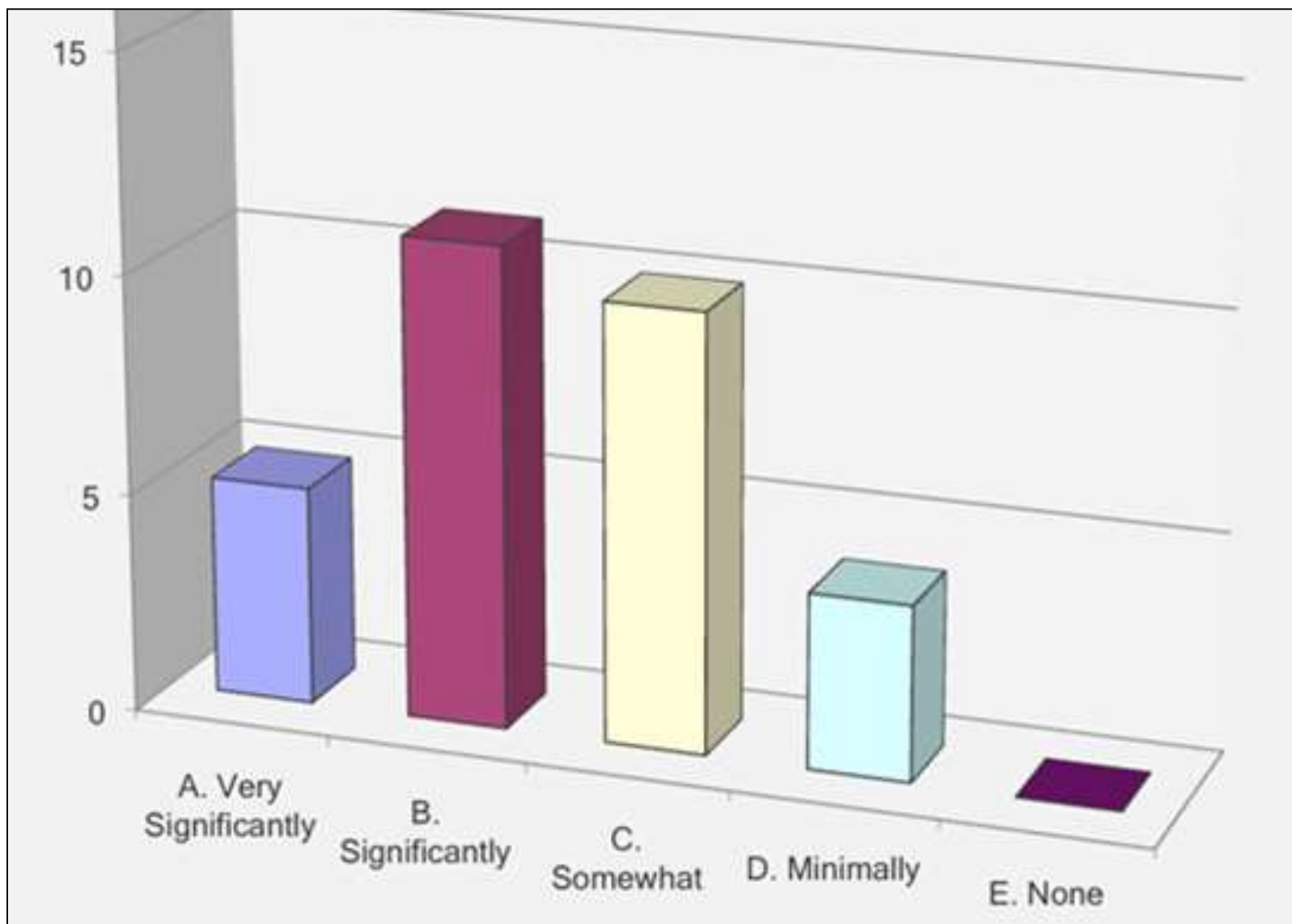
Student Survey:

Changes in Knowledge about Environmental Health Disparities





Student Survey: Influence on Future Career





BREAK THE CYCLE 10

BREAK THE CYCLE OF ENVIRONMENTAL HEALTH DISPARITIES IN CHILDREN

To Date:

- 10 annual programs
- 9 states in USA, Latin America, Europe & Africa
- 93 students
- 27 university departments

Publications

- 8 international journal supplements
- 6 books

