Health promotion interweaving: Designing health promotion interventions in context via youth voice and community partnerships

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UTHealth School of Public Health-Austin/ Dell Center for Healthy Living
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Today’s Session

- Place, settings & health: *The need for environmental change theory and practice-based methods*
- Environmental Asset Mapping *and* Health Promotion Interweaving into Environments & Settings
- Youth-led Community Health Learning Initiative: *Co-learning with stakeholders for environmental change*
- Stronger Austin: *Interweaving Fitness Classes into Community Settings*
Place, Settings & Health
PLACE: The Association Between Income and Life Expectancy in the United States, 2001-2014

Key Findings

1) Higher income = more years of life
   Gap: 14.6 years (men) y 10.1 years (women) between top 1% vs. bottom 1% income earners

2) Inequality in life expectancy increased between 2001-2014
   ~2-3 yrs: top 5% income vs..32 (male) .04 female) yrs: bottom 5%

3) Life expectancy varied by geogr. area for low-income individuals
   ◦ Healthy living-related differences (smoking, physical activity, obesity)
   ◦ Geographic characteristics: higher college, immigrants, and gov’t social expenditures.
   ◦ It didn’t have to do with: access to health services, income inequality...

**SETTINGS:** Obesity in 8th grade students by School Economic Disadvantage (n=2682), *Central Texas ’09*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>High Disadv.</th>
<th>Medium Disadv.</th>
<th>Low Disadv.</th>
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<tbody>
<tr>
<td>AA</td>
<td>26.5%</td>
<td>21.3%*</td>
<td>9.0%</td>
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<tr>
<td>Hispanic</td>
<td>24.7%*</td>
<td>22.0%*</td>
<td>17.2%</td>
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<tr>
<td>White</td>
<td>25.8%</td>
<td>13.8%*</td>
<td>8.5%</td>
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* *p<.05*

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SETTINGS: E-cigarette susceptibility (%) by White and Hispanic 6th graders, stratified by low to high school economic disadvantage - Central Texas (n=3,647), CATCH My Breath Study, 2017

White

Hispanic

1st Quartile (low) $p=.978$

2nd Quartile $p=.354$

3rd Quartile $p=.012$

4th Quartile (high Econ Dis) $p=.469$

How do we harness the ‘space outside the individual’ for health promotion?

• Hawe (2015): Limited effects of community risk factor reduction interventions (e.g. Stanford Heart Disease Prevention Project)= a.) failure to address context; b.) application of individual-level beh. change theory to comm. & systems level processes.

• Moore & Evans (2017): Over-reliance on individual-level theorizing & application of ‘off-the-shelf’ theories (e.g., TTM, TPB, SCT)

✓ Safety blanket: just apply and our interventions will be impactful = false assurances that interventions will be more impactful with applying a popular theory

✓ Not always targeting the right mechanisms: some evidence that individuals already have high motivation/attitudes for a given behavior

✓ “Blinkers”: prevent us from fully understanding the context or other mechanisms that shapes health and behavior while guiding us toward individual-level – and short-term- solutions

Focus on Context! Need for environmental & pop. health theory & chge. methods

“Thinking people within systems” who know context better than outsiders: Importance of indigenous knowledge & co-creating interventions

New Conceptualization of Fidelity: Function vs. form

‘There is nothing more practical than a good theory’.

*Phrase attributed to Kurt Lewin, German-American psychologist, known as one of the modern pioneers of social, organizational, and applied psychology.
Environmental Asset Assessment & Health Promotion Interweaving into Environments and Settings
Assessing Environmental Assets for Health Promotion Program Planning: A practical framework for health promotion practitioners

Aims

1.) To explore a basic environmental asset assessment framework guided by a ‘settings and environments framework’ and principles from the field of implementation science

2.) To illustrate the application of an environmental asset approach using examples from the scientific literature & health promotion practice field.

Applying Theory to Asset Assessment

Social-Ecological Theory:
Environments/settings influence health and behavior “…shaped by where we live, study, work, pray and play” (CDC, 2017).

Impl. Science & Systems Science:
a.) understanding context for health improvement b.) coupling/ embedding intervention w/ context (Hawe et al., 2009, ‘16)

Environmental Asset: “Any aspect of the multiple environments that surround individuals (e.g., policy, social, information and physical) that can be harnessed toward promoting the health of individuals and populations.” (*Building from CDC Definition of “Community Asset“)
Environmental Asset Mapping Framework

**Settings**

What are the settings that can be harnessed to reach the priority population?

Example: Promotion of child physical activity among children living in X community.

Key settings for children in X community include:

1. School
2. Out-of-school (OST) programs
3. Church
4. Neighborhood
5. Com. recreational organizations

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**What are envir. assets within settings?**

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<tbody>
<tr>
<td>Example: Child Out-of-School Program</td>
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<tr>
<td>- Frontline staff code of conduct</td>
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<td>- OST program family agreements</td>
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<td>- OST district level policy</td>
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<tr>
<td>- Schedule that includes 30 minutes of recess</td>
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<tr>
<td>Example: Child Out-of-School Program</td>
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<tr>
<td>- In-service staff train</td>
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<tr>
<td>- Student talent</td>
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<td>- Student mentoring</td>
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<td>- Program partners</td>
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<table>
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<th>Information Environment</th>
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<tr>
<td>Example: Child Out-of-School Program</td>
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<tr>
<td>- Parent bulletin board</td>
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<tr>
<td>- Parent flyer/newsletter</td>
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<tr>
<td>- School website</td>
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<tr>
<td>- OST program webpage</td>
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<table>
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<tr>
<th>Physical Environment</th>
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<tbody>
<tr>
<td>Example: Child Out-of-School Program</td>
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<tr>
<td>- Cafeteria</td>
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<tr>
<td>- Gym</td>
</tr>
<tr>
<td>- School garden</td>
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<td>- Playgrounds &amp; field</td>
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**Interactions of Influences!**

Health by Design: Interweaving health promotion into environments and settings

Health promotion interweaving into context:
Designing health promotion interventions (strategies, practices, programs & policies) to fit within, complement, and build from existing settings and environments.

- “Coupling” & “Embedding” (Hawe et al. ‘09; May et al.’16)

✓ Embraces an indigenous health intervention development perspective: Interventions build from site-specific knowledge, practices and values (Miller & Shinn, 2005)

✓ Moves from a conceptualization of context as a backdrop to intervention, to one that recognizes context as integral to the intervention design

Aim: To explore theoretical and practice-based interweaving concepts & methods in relation to:
- the policy environment
- the information environment
- the social/organiz. environment
- the physical environment

Springer, Evans, Ortuño, Salvo, Varela, Frontiers in Public Health, 2017
Interweaving health promotion into the... Policy Environment

(Interweaving concept: “Health In all Policies”)

School Schedules (Texas)

*CATCH Middle School Project* (Springer, Kelder et al.,'13) created an “open gym” policy during school, resulting in increased opportunities for PA.

Campus Improvement Plans (Texas)

*Texas Action for Healthy Kids*: Successfully inserted increased policies and practices for physical activity and healthy eating in CIPs in 10 central TX middle schools. (*PI: Michelle Smith; Kelder et al., 2012*)

*Texas Action for Healthy Kids*
Interweaving health promotion into the... Information Environment ("Environmental Print")

Electric Bills and Physical Activity (Brazil)

- Agita Paulo Program: No funds required; reached 7 million Sao Paulo residents (Matsudo et al., 2002).

Marijuana Use Prev. in M.S. Students (U.S.)

- Intervention students: <use at 2 year follow-up vs. schools with classroom curriculum (n>4,000 middle school students; 16 communities)

("Behavioral Journalism")

PA & Healthy Eating (TX/Mexico Border)

- Tu Salud ¡Sí Cuenta! Role model stories inserted into drive-time and morning radio, TV spots, newspapers
- Increased FV & PA (Reininger et al., 2015)
Interweaving health promotion into...
Social/Organizational Environment

(“Appropriate Org./Common Agenda” & “Mobilizing Social Support”)

Cafeteria workers & children’s fruit and vegetable consumption (Minnesota)

• 5-A-Day Cafeteria Power Plus: Verbal encouragement from cafeteria workers resulted in increased consumption of F/V (Perry et al., 2004).
Interweaving health promotion into the...
Physical (Built) Environment
(“Structural Redesign”)
Reorganizing the cafeteria serving line

• Literature review= increased selection and consumption of healthier foods (Frerichs et al. ‘15)

(“Shared Use”)
Schoolyards & Physical Activity (New Orleans)

• Schoolyards activated for afterschool PA w/adult supervision. Also resulted in increased child PA in neighborhood (Farley et al., 2007).

(“Facilitation”; “Shared Use”)
“Shot for a shot” night in bars in Louisiana (04/21)

“Some are opting to get the COVID-19 shot at bars instead of vaccination sites: ‘Every idea is worth considering’”

Youth-led Community Health Learning Initiative: Co-learning with community stakeholders for environmental change
Youth-led Community Health Learning Initiative

Background
- Health Departments & Federally Funded Hospitals: CHA/CHIPs required for accreditation/ACA
- Austin/Travis County CHA/CHP: Opportunity for Comm.-specific CHA/CHIPs & youth voice

Aims
1.) Identify health needs and assets to inform health planning efforts for Del Valle & Montopolis comms.
2.) Build skills and capacity of young people in implementing comm. health assessment of health issues identified by youth

Core Components
- Comm. Health Indicator Analysis
- Youth-led Community Health Asses.
  - Del Valle High School (n=19) (Spring 2019)
  - SAFE- Montopolis (n=12) (Summer 2019)

Funding: City of Austin/Austin Public Health

Community Health Advisory Committee
- Austin Parks & Rec
- Austin Public Health
- Children’s Optimal Health
- Del Valle High School
- Dell Medical School
- SAFE Expect Respect
- Travis County HHS
- UTHealth SPH

Youth-led Comm. Health Learning Initiative

Methods

- Participatory Learning & Action (PLA) \textit{(in-class)}
- Participatory Mapping
- Data Walks
- Dotmocracy \textit{(topic prioritization)}

Del Valle
- Healthy eating
- Physical activity
- Access to health services
- Mental Health
- PhotoVoice! \textit{(primary method)}

Montopolis
- ACEs
- Sexual Health
- Mental Health

PLA: Exploring Strengths

Participatory Mapping

Data Walks & Dotmocracy

**PhotoVoice**

“Healthy Eating – NOT”

**Framing Questions**

- Why is [health topic] a problem in your community?
- What in your community could prevent [health topic]?
- What are ways we can promote [health topic] in your community?
- What are resources/strengths in your comm. that can help teens make healthy choices for [health topic]?

**Analysis: SHOWeD method**

S - What do you **SEE**? What is the first thing you notice?
H – What is really **HAPPENING**?
O - How does this relate to **OUR** lives? Make it personal.
W – **WHY** does this condition **EXIST**?
     WHERE did this issue come from?
D - What are some things we can **DO** about it?

*Figure 7. “Healthy eating - NOT” (local convenience store). YLCHLI Youth Co-Investigators, Del Valle, Spring 2019*
Healthy Eating
(Social/Org. Environment)

What are resources/strengths in your community that can help teens make healthy choices around healthy eating?

"A way to help them make the choice of healthy eating is by not having much junk foods close to them, and giving them more options of healthy items. Having more fruits & veggies in small containers for them to grab instead of a bag of chips, you can spice up fruits - it's better to have a fruit than a bag of chips.” -Youth Co-Investigator, Del Valle.

Physical Activity
(Physical Environment)

“In Del Valle, there aren’t much resources for us to actually get out and do things that are active. Although we do have a lot of open land, that isn’t always a reason for us to go outside. Most of us don’t have time due to having jobs or not enough time in the day; another reason being that there’s not much we can do with what we have around us.” – YLCHLI Youth Co-Investigators, Del Valle, Spring 2019.

“This picture shows a dog running outside. This picture relates to our life because the majority of us have a pet. I took this picture because I think if we could have a dog park with animal activities, this can promote physical activity by people getting their exercise and moving around with their pet.” – YLCHLI Youth Co-Investigators, Del Valle

Access to Health Services and Reproductive & Sexual Health (Social/Org. Environment)

“...In this picture it shows how obtaining health care is far away from our community (distance). The stethoscope isn't focused due to people as well not focusing on their own health as they should....The open space in the picture also shows how our community does have plenty of space for a healthcare facility to take place, but issue is there's no change being done.” –Youth Co-Investigators, Del Valle

“This picture shows a Planned Parenthood [clinic] that is hidden. The connection is that talking about sex is hidden, and sex is a thing that happens naturally when people are ready. Teens should know the resources if they should choose to have sex. If some of our resources are hidden, how are we going to know what we want to do safely if we don’t have them available to us.” –Youth Co-Investigators, Montopolis

Community Sharing of Findings!

✓ Community Showcase Event - Del Valle High School
✓ Children’s Optimal Health Board of Directors Meeting
✓ Austin/Travis County CHA/CHIP Steering Committee
✓ Community Showcase Event – SAFE Alliance
✓ StoryMap! Thank you COH!

Implications/Impact

• Feasibility: HS & Comm Orgs as venues for youth-led CHA/CHIP
• Locally informed/actionable comm. health improvements
• Del Valle Healthy Adolescent Project (3-year OPA grant)

StoryMap! https://arcg.is/jrmKn

Stronger Austin
Interweaving adult fitness classes into community settings via Stronger Austin’s community partnership model

Background

• Barriers for physical activity among adults experiencing economic disadvantage
  ✓ distance and lack of access to PA facilities
  ✓ perced neighborhood safety
  ✓ lack of social and community supports
  (Dlugoanski et al., 2017; Salvo et al., 2018; Bantham et al., 2021; Parks et al., 2020)

• In Austin, TX, over a quarter (29%) of Austin adults are obese (CAN 2021); half (50.3%) do not meet physical activity recommendations (City of Austin, 2021).
- **Aim:** Increase accessibility of free adult fitness classes in underserved communities in Austin, TX.
- **Partners:** It’s Time Texas (host), PARD, APH, My Brother’s Keeper/UT at Austin, UTSPH, Bloom, Aging is Cool
- **Approach:** *Interweave* Zumba, Bootcamp, Mixxed Fit, Yoga, Sr. Fitness:
  - rec centers
  - city-supported housing
  - clinics
  - libraries
  - parks
  - public schools

*Stronger Austin Adult Fitness Classes (2017-18; ‘18-’19):*
- 11 sites: Year 1; 15 sites Year 2;
- 10 zip codes in Austin/Travis County (Districts 1, 2, 3, 4, 5 & 10)

Springer, Castro, Ruiz , et al. (Under review)
Evaluation of Stronger Austin (2017-18; 2018-19)  
Campus – Community Partnership

Aims

1.) Assess the amount of physical activity delivered via SA’s adult fitness classes when delivered in ‘real world’ community-based settings.

2.) Qualitatively explore highlights, perceived benefits and recommendations for enhancing delivery of SA classes among participants and fitness instructors.

Methods

- **Design:**
  - Mixed methods
  - Process & Outcome Evaluation

- **Measures:**
  - **Participants:** SOFIT (class MVPA), Focus Groups, Open-Ended Survey Questions.
  - **Class Instructors:** Interviews

- **Analysis:** Descriptive statistics (quantitative data) & thematic analysis (qualitative data)

_Funding for Evaluation: Aetna Foundation_
% class time adult participants engaged in moderate, vigorous, & MVPA: Stronger Austin fitness classes (1 hr. class)

- Reach: n=970 Yr.1; n=807 Yr.2 (11 sites Yr1; 15 sites Yr2)
- ~One third (32%): gov’t assistance (e.g., SNAP)
- Average n=18 adults/class (range: 5-42)
- 76.9-86.9% MVPA/class
- 46.1-52.1 minutes of MVPA/class

Summer 2018 (n=5 sites; n= 8 observations; 32 participants observed); Fall 2018 (n=6 sites, 10 observations, n=40 participants observed), Spring 2019 (n=6 sites, 10 observations, n=40 participants observed) and Summer 2019 (n=6 sites, 12 observations, n=48 participants observed).
Key Themes (Focus Groups, Open-Ended Survey, Interviews)

**Highlights & Benefits**

**Sense of Community**
- “I like the community of people and friends I have made and how the class makes me healthier and want to continue working out.”
- “The community of people – how everyone help(s) each other. Even outside of class.”
- “Diversidad de participantes”

**Supportive Instructors**
- “La instructora es una excelente persona. Siempre nos motiva – muy buena.”
- “The instructor is awesome and the friends and friendships that I have discovered. And my overall attitude changes. Not so shy anymore.”

**PA/Health Benefits & Motivation**
- “Good physical activity & motivation!”
- “I love the class itself. It’s a fun way to exercise and keep me motivated to lose weight.”
- “[SA classes] [k]eep us informed of other healthy events such as farmer’s markets throughout the city.”

**High Accessibility & Diversity of Classes**
- **Access:** “Love how accessible this was and I came every week I could once I found out about it- it was so much fun [and] I definitely got a great workout.” “It [is] fun and close to my house”
- **Variety of offerings:** “Everywhere Variety! Can do something different every day.”
- **Diverse schedule:** “good hours”
- **Free:** “I would love to be part of all these gyms that are around, but oh my lord I can’t afford them. I’m so happy that you guys are doing this; it’s so awesome. Thank you for caring”
Key Themes
(continued)

PA Benefits, Diversity of Participants, & Social Relationships (Triangulation from Instructor Input)
“...with my students you can see their overall health and wellness change, and fostering relationships with people that they wouldn’t normally cross everyday paths with. So different races and cultures, backgrounds, etcetera. So it’s like a good relationship building class, and a good workout.”

Opportunities for Improvement & Learning

Class delivery. Team activities and competitions; progressions and graded intensity levels of classes (“...There may be like a basic durance entry-level workout where it then challenges the people that do want to stick with it.”).

Class promotion & communication: “I hadn’t heard anything about this, you know, just friends that invited us. And that’s when we showed up. But I didn’t know that [this class] was part of a bigger project.”

Challenges with Interweaving:
• "...when people come to a place that is dirty or super loud, it just creates a very stressful environment for them and they just won't feel comfortable."
• "[SA has] classes that are at parks, so if the weather is [bad], they have to cancel a class.”
• “For us, it’s a school, so it’s based on the school calendar... If the school is shut down, like for the week of July 4th, then also our classes are cancelled.”
Summary & Discussion

• **Nothing so practical as a good theory**: A settings & environments conceptual framework holds promise to further guide health promotion planning

• **Defining the ‘space outside the individual’: Other environments?**
  - **Economic environment**: e.g. 23% of Latino & 25% of Black households pay half their monthly income in housing vs. 15% of whites in Austin-Roundrock area (Nat’l Low Income Hous. Center, 2021)
  - **Racial/Social Equity Environment**: Inclusivity vs. Exclusionary/Discriminatory environment
  - **Time environment**: Finland (Happiest country in world)=PM exploring introduction of four-day work week (BBC, July 14, 2021)
  - **Arts & Culture Environment**

• **Environ. Asset Assessment & Health Promotion Interweaving**
  - Holds promise for enhancing health needs assessments as well as: planning, effectiveness, and sustainability of community health improvement interventions
  - Opportunity for growing theory-based (Bartholomew et al., 2016) and practice-based env. change methods: facilitation, structural redesign, shared use, env. print, approp. org.

• **Building a science of environmental change for health promotion**
  - Considerations of time (!) of env. change to allow assessment of effects; study designs (other designs needed beyond RCTs to generate knowledge- e.g., case studies); and dose (Pop. Dose Methodology, Kuo et al., 2018)
  - Better understanding the processes for co-creating change with comm. stakeholders
  - Allowing our research and practice to focus specifically on environmental change. TPHA Community Planner: “If A is in place, B will follow...” (e.g., “Communities Putting Prevention To Work” (2010-12): Tackling obesity and tobacco via policy and environmental change)
Ignacio Martín-Baró
Universidad Centroamericana (UCA), El Salvador

“...openly questioned the theoretical models of mainstream psychology” = Inadequate to address the effects of structural violence affecting El Salvador. (Wikepedia)

**Writings for a Liberation Psychology**

“We need to develop a progressive psychology [*public health!*] that helps people find the road to their personal and collective historical fulfillment. In our case more than anyone else’s, the principle holds...the concern of the social scientist should be not so much to explain the world, as to change it.”
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Thank you!

Questions/Comments?

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