

**Youth Substance Abuse Prevention Intervention Research: The Cultural and Neighborhood Contexts of the Southwest**

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**keepin'it** 


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**keepin'it** 

- Context & Rationale
- Conceptual Foundations
- Implementation of the Program
- Methodology and Study Design
- Social Work with Groups
- Results & Follow-up Research

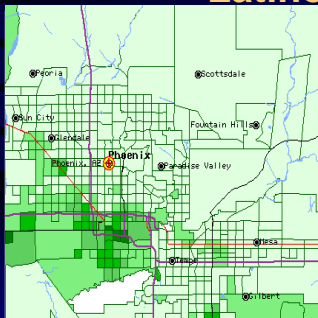
**Context: The State of Arizona**



- Demographic profile
- The borderlands
- Immigration
- Tribal communities (N=21)
- Demographic explosion

**Phoenix, AZ**

**Cultural Context: 30% Latino**



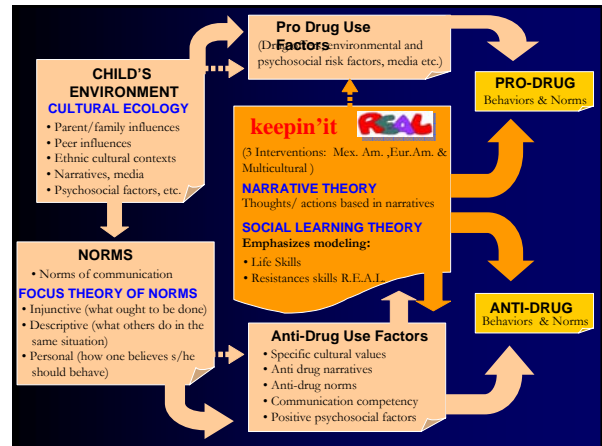
- Immigration
- South-Central Phoenix
- Residential segregation
- Acculturation

**Program Rationale**

- Builds a prevention program around the cultural strengths & communication styles of youth who do not use drugs.
- Importance of culture in youth substance use and prevention models should reflect culture and learning styles of the students
- An alternative to standard prevention messages enforcing dominant cultural values and relying on stereotypical representations of culture and ethnicity
- Integrating group work into the design of the experiment, complementing the prevention effort and serving as a safety net.

## Theoretical Foundation

- Ecological risk and resiliency approach to prevention and intervention (Bogenschneider)
- Beyond medical and socioeconomic conceptions of risk
- Ethnicity and culture as important social contexts that moderate risk behaviors and build resiliency against them
- Communication competency theory. Knowledge+motivation+skills needed to resist social influence
- Narrative theory Narratives as primary means of sense making, frame for moral choices, organizing principle for behavior
- Demonstrated success as basis for youth prevention (Botvin)



## keepin'it REAL

- Drug Resistance Strategies Project, Phoenix middle schools
- Relies on cultural strengths & communication styles of youth
- Videos scripted and filmed by Phoenix high school students
- Three interventions: Latino, Non-Latino, & Multicultural
- Uses narrative and performance framework to teach life skills
- 10 lessons over 10 weeks illustrate drug resistance skills and motives based on specific cultural norms
- Small group component: REAL groups

## Resistance Strategies

**REFUSE**  
**EXPLAIN**  
**AVOID**  
**LEAVE**

**REAL**

## Goals of keepin'it REAL

- Enhance identification with models of drug resistance
- Reduce substance use (alcohol, cigarettes, marijuana)
- Promote more conservative drug norms and attitudes
- Develop effective drug resistance decision making and communication skills

## Sampling Design

- 35 Phoenix middle schools stratified based on size and ethnicity (% Latino); 10 different school districts across the city
- Schools randomly assigned to 4 conditions: Latino, Non-Latino, Multicultural, & Control
- Respondents of all ethnicities from schools in each condition

### keepin' it REAL timetable

	97-98	98-99	99-00	00-01	01-02
Curriculum design	☑	☑	☑		
Videos & PSA prod	☑	☑	☑		
Video ethnography	☑	☑	☑		
Field testing		☑	☑		
Teacher training			☑	☑	☑
School ethnography			☑	☑	☑
Lessons taught			☑		
Psychosocial groups			☑		
Ethnography			☑	☑	☑
Survey evaluation			☑	☑	☑
Booster campaign			☑	☑	☑
Research & disseminat	☑	☑	☑	☑	☑

- ### Respondents Profile at T-1
- 53% Mexican American
  - 18% Non-Hispanic White
  - 8% African American
  - 16% Multi-ethnic or Other Latino
  - 49% female
  - Average age: 12.5
  - SES: 73% received free and
  - 9% reduced price school lunch

### Research Design

	Fall 1998		Spring 1999		Fall 1999		Spring 2000	
Latino	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>	B	O <sub>3</sub>	B	O <sub>4</sub>	
Non-Latino	O <sub>1</sub>	X <sub>2</sub>	O <sub>2</sub>	B	O <sub>3</sub>	B	O <sub>4</sub>	
Multicultural	O <sub>1</sub>	X <sub>3</sub>	O <sub>2</sub>	B	O <sub>3</sub>	B	O <sub>4</sub>	
Control	O <sub>1</sub>		O <sub>2</sub>		O <sub>3</sub>		O <sub>4</sub>	

**Key:** O = Observations; X = Treatment; B = Boosters  
 O<sub>1</sub> = Pretest; O<sub>2,4</sub> = Posttests  
 X<sub>1</sub> = Latino Version; X<sub>2</sub> = Non-Latino Version; X<sub>3</sub> = Multicultural Version

- ### Program Effectiveness: Key Hypotheses
- Compared to control group, students experiencing the drug resistance curriculum will report less current substance use and stronger anti-drug norms and intentions.
  - Program will be most effective for students receiving the drug resistance curriculum specifically developed for their cultural group (cultural matching).

- ### Methodology
- Longitudinal design: students matched in pre-test before curriculum (T1), to post-tests immediately after curriculum(T2), 6 months later (T3), and 12 months (T4)
  - Students participating in 3 versions of the curriculum (Latino, Non-Latino, Multicultural) contrasted with Controls
  - Assessed level of substance use and strength of anti-drug norms at each post-test controlling for level reported at T1. Mixed models adjust for school level effects (SAS Proc Mixed)
  - Missing data estimated through multiple imputation using an EM algorithm (NORM software)
  - Ethnographic component: semi-structured interviews and school-based participant observation

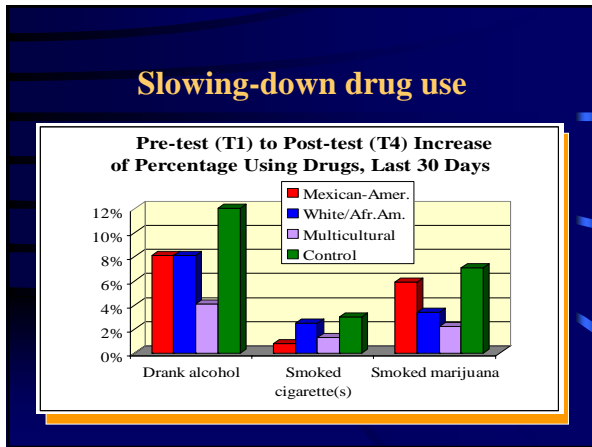
- ### Outcomes: Substance Use and Anti-Drug Norms
- Recent substance use (alcohol, cigarettes, marijuana) last month
  - Use of REAL strategies
  - Injunctive norms (parents angry at / friends reject R's drug use)
  - Personal norms: disapproval of substance use
  - Descriptive norms: perceived extent of classmates / friends using drugs
  - Self-efficacy: confidence in ability to refuse drugs
  - Personal intentions: intent to resist using drugs in future
  - Positive drug expectancies (e.g., alcohol enlivens parties)


### Contrasts between Intervention and Control Group, Accounting for Pre-intervention Differences


[ Estimate / SE ]	WAVE 2 (timed after curriculum)	WAVE 3 (6 mos. later)	WAVE 4 (12 mos. Later)
Recent Alcohol Use	-.148/.045**	-.144/.061*	-.232/.064***
Recent Cigarette Use	-.039/.035	-.091/.042*	-.070/.057
Recent Marijuana Use	-.062/.040	-.175/.048***	.007/.039
Use of R.E.A.L. Strategies...			
to Resist Alcohol	.133/.055*	.071/.054	.100/.064
to Resist Cigarettes	.227/.062**	.128/.060*	.098/.066
to Resist Marijuana	.158/.066*	.006/.066	.098/.077
Personal Anti-drug Norms	-.095/.030**	-.088/.034*	-.071/.038

### Summary Results: (significant effects)

	Latino	Non-Latino	Multi-Cultural
	Versus Control	Versus Control	Versus Control
	T2 T3 T4	T2 T3 T4	T2 T3 T4
<b>PRO-DRUG USE:</b>			
•Recent Alcohol Use	↓ ↓ ↓	↓ ↓ ↓	↓ ↓ ↓
•Recent Cigarette Use	↓ ↓ ↓		↓ ↓ ↓
•Recent Marijuana Use	↓ ↓ ↓	↓ ↓ ↓	↓ ↓ ↓
•Descriptive Norms	↓ ↓ ↓	↓ ↓ ↓	↓ ↓ ↓
•Positive Drug Expectancy	↓ ↓ ↓	↓ ↓ ↓	↓ ↓ ↓
<b>ANTI-DRUG:</b>			
•Use of R.E.A.L. Strat.	↑ ↑ ↑	↑ ↓ ↑	↑ ↑ ↑
•Injunctive Norms: Parents	↑ ↑ ↑	↑	↑ ↑ ↑
•Injunctive Norms: Friends	↑ ↑ ↑	↑	↑ ↑ ↑
•Personal Norms	↑ ↑ ↑	↑	↑ ↑ ↑
•Self Efficacy	↑ ↑ ↑		↑ ↑ ↑
•Personal Intentions	↑ ↑ ↑		↑ ↑ ↑




- ### Program Effectiveness: Summary (I)
- Over time, both the Latino and the Multicultural versions had similar desired impacts
  - Latino version had largest initial impact:
    - lower alcohol use;
    - stronger anti-drug norms;
    - more frequent use of  strategies;
    - most effects persisted after 6 and 12 months

- ### Program Effectiveness: Summary (II)
- Multicultural version particularly effective 12 months after implementation:
- lower alcohol and marijuana use;
  - more use of  strategies to resist alcohol;
  - stronger anti-drug norms;
  - lowered positive substance use expectancies.

- ### Conclusions
- Desirable program effects of magnitude similar to other prevention programs (i.e., Life Skills)
  - Significant program effects on drug norms, and use of alcohol, marijuana and tobacco
  - Prevention messages that are grounded on the culture of the client are more likely to have a positive impact
  - SAMSHA assessed it as effective and named it a Model Program

### Follow-up Research



- Focus on acculturation.
- Developmental issues: earlier implementation (5th grade)
- Sequencing 5th v. 7th grade
- Transnational replicability (Mexico)
- **Environmental/ecological contexts of substance use and program effectiveness**

### Neighborhood Influences on Adolescent Substance Use

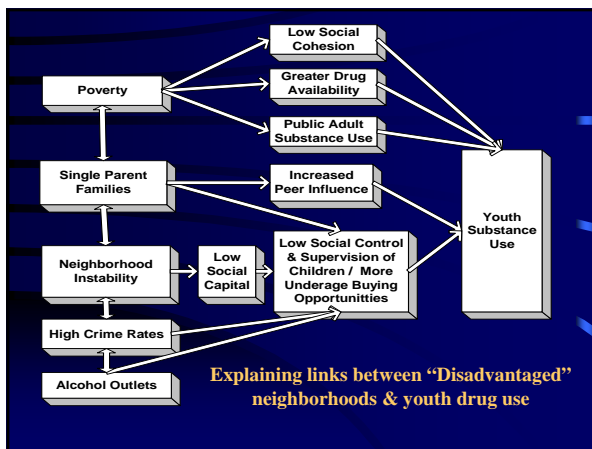
- Risk factors in prior research:
  - Neighborhood instability
  - Extreme residential segregation by race/ethnicity
  - Social and economic isolation
  - Predominance of single mother headed households
- Existing research heavily oriented toward large Midwest & Northeast cities
- Prior research focuses on “disadvantaged” neighborhoods where African Americans are the predominant ethnic minority group

### Neighborhoods of the urban Southwest

- Different from the Midwest & Northeast?
- Ethnic composition: Latinos as predominant ethnic minority group
- Strong cultural presence of recent Latino immigrants
- Different land development, population density, historical settlement patterns
- Relatively low unemployment & high poverty rates
- Low proportions of single mother headed families
- Different forms of social integration in ethnically diverse neighborhoods of the Southwest?

### Our focus: neighborhood effects on youth alcohol use in Phoenix

- Ethnic & immigrant composition
- Poverty
- Violent crime
- Alcohol outlets
- Family composition
- Residential instability



### Neighborhood effects on drug use: Theoretical & empirical issues

- A global constellation of neighborhood risk factors? Co-occurrence of concentrated poverty, single parent HHs, high crime rates
- Murky causal connections, the result of
  - Low social cohesion or social integration?
  - Reduced social control? Inadequate social capital?
  - Greater availability and normative acceptance of drugs?
- Past findings specific to neighborhoods with particular ethnic composition
- Applicability of past research to cities outside Northeast and Midwest?

### How might neighborhood factors operate differently in Phoenix?

- Less hyper-segregation of poor by race/ethnicity
- Less severe residential segregation of Mexican Americans (v. Puerto Ricans & African Americans)
- Low prevalence of single-mother households
- Strong Mexican and immigrant cultural influences
  - More tolerance of drinking by men; less by women
  - Wide variations by social class and level of acculturation
- Acculturation stress linked to more substance use
  - Especially for children of immigrants who acculturate faster than parents
- Acculturation processes may lead to “downward assimilation” and “oppositional culture”

### Phoenix settlement patterns

- New “Sunbelt” development model: low density
- Explosive population growth
- High residential instability, but impacts wealthier neighborhoods on expanding fringe most acutely
- Unlike LA, a single central urban core
- Siting of alcohol outlets on car-based suburban model: not necessarily concentrated in poor areas
- Violent crime: #33 most dangerous SMSA; rates consistently higher than average since 1975
- Crime uneven across neighborhoods: high homicide and gang-violence rates in central city

### Methodology

- Data from randomized trial of *keepin' it REAL* --- pretest (pre-intervention) data
- 35 Phoenix middle schools, ~4,000 7<sup>th</sup> graders
- ¾ of schools had Latino majorities (range: 21% to 99% Latino, overwhelmingly Mexican origins)
- Most schools serve lower income, central city neighborhoods, but some in majority White areas
- Results restricted to Latino and non-Hispanic White respondents (small Ns for other ethnic groups)

### Neighborhood level variables

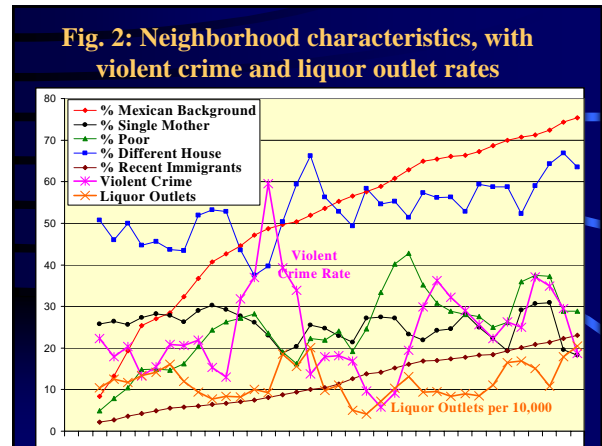
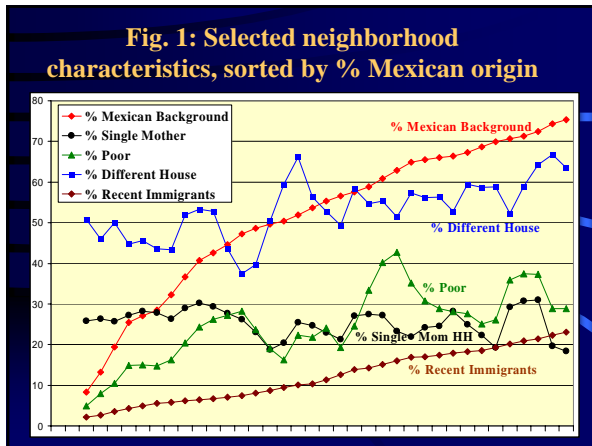
- Neighborhood defined by school enrollment boundaries (usually 2-4 census tracts)
- Used GIS to map 2000 census tract data on school “catchment” areas: % of residents who were...
  - (a) of Mexican ancestry;
  - (b) immigrants to the U.S. within the last 5 years,
  - (c) in families with incomes below poverty line;
  - (d) living in a different residence 5 years ago;
  - (e) in families headed by a single mother.
- Two more variables from local government reports:
  - Violent crime rate (Phoenix Police)
  - # of alcohol outlets per 1,000 people (AZ State Govt.)

### Individual level variables

- Lifetime and current (last 30 day) alcohol use (10 point Likert scale from none to over 100 drinks)
- Alcohol use outcomes skewed; use natural log.
- Individual level control variables:
  - SES (dummy: participation in Federal lunch progr.)
  - Gender & Age
  - Academic performance (self reported “usual grades,” from mostly F’s [0] to mostly As [9])
  - Ethnicity/Acculturation status (language proxy):
    - Spanish dominant Latinos
    - English dominant Latinos
    - Non-Hispanic Whites

### Correlations among neighborhood variables

	% Mexican Background	% Recent Immigrants	% Poor	Violent Crime Rate	Liquor Outlets	% Different Residence 5 Yrs. Ago	% Single Mother Families
% Mexican Background	....	0.588 ***	0.694 ***	0.147	0.068	-0.277	-0.138
% Recent Immigrants	0.588 ***	....	0.657 ***	0.135	0.090	0.463 ***	-0.203
% Officially Poor	0.694 ***	0.657 ***	....	-0.020	0.030	0.091	0.307 *
Violent Crime Rate	0.147	0.135	-0.020	....	-0.124	-0.029	-0.057
Liquor Outlets	0.068	0.090	0.030	-0.124	....	-0.038	-0.140
% Different Residence	-0.277	0.463 ***	0.091	-0.029	-0.038	....	0.006
% Single Mother Families	-0.138	-0.203	0.307 *	-0.057	-0.140	0.006	....
Unemployment Rate	0.589 ***	0.291 *	0.764 ***	-0.042	0.038	-0.165	0.517 ***
% Spanish Speaking	0.960 ***	0.579 ***	0.770 ***	0.134	0.013	-0.245	0.001
% Foreign Born	0.845 ***	0.903 ***	0.758 ***	0.119	0.043	0.170	-0.171
% Mexican born	0.901 ***	0.852 ***	0.772 ***	0.125	0.049	0.041	-0.159
% Without H.S. Degree	0.956 ***	0.616 ***	0.789 ***	0.117	0.079	-0.273	-0.053



- ### Alcohol use
- Phoenix sample: 37% reported lifetime alcohol use; 17% recently
  - Among drinkers: mode of 2-3 drinks in last 30 days
  - A bit less use than a national sample (Monitoring the Future) of 8<sup>th</sup> graders (1 year older):
    - 47% reporting lifetime, 20% recent alcohol use

- ### Statistical analysis strategy
- Tests of neighborhood effects on alcohol use using multivariate mixed (hierarchical linear) models
  - Addresses nesting of individual student data within schools, and equating school with neighborhood
  - Used SAS Proc Mixed to estimate fixed and random effects, while controlling for important individual level variables
  - Interpretable results only for subgroups separated by gender and ethnicity/acclturation

**Statistically significant neighborhood predictors of alcohol use**

	Lifetime				Recent					
	Girls	Boys	Latinos Acc.	Latinos Unacc.	Whites	Girls	Boys	Latinos Acc.	Latinos Unacc.	Whites
<b>Neighborhood Effects:</b>										
% Mexican Background									+	
% Recent Immigrants										
% Officially Poor										
Violent Crime Rate	+									
Liquor Outlets		+								
% Different Residence										+
% Single Mother Fam.										
<b>Individual Level Controls:</b>										
Less Acculturated Latino	-									
More Acculturated Latino		+								
Other controls for SES, gender, age, & grades not presented										
N	1912	1990	2702	517	683	1920	1991	2709	519	683

- ### Discussion
- Small but appreciable neighborhood level effects, as in other studies
  - Models include only structural factors, not direct measures of social processes: “collective efficacy,” social capital, perceptions of neighborhood dangers
  - Some effects conform to theoretical expectations: violent crime

### Discussion

- Higher alcohol use for more acculturated Latinos...
- & violent crime a risk factor for them but not for the less acculturated Latinos or Whites
  - Greater adherence to oppositional norms? Greater "minority stress"?
- Why do less acculturated Latinos use *more* alcohol in neighborhoods with more Mexican American residents, fewer immigrants, more instability and less poverty?
  - Acculturation stress?
  - Poorer Phoenix neighborhoods more stable?
  - Less acculturated more socially isolated in wealthier neighborhoods?
  - Greater demand to assimilate?

### Discussion

- Paradox of higher female alcohol use in neighborhoods with more alcohol outlets
- Notable absence of neighborhood effects due to household composition (prevalence of single mother households)
- No neighborhood effects for non-Hispanic White students

### Conclusions

- Though small, neighborhood impacts on youth alcohol use in Phoenix reflect somewhat different dynamics than those reported in other cities
- May be due to local patterns of immigration and ethnic composition, residential settlement and economic development, as well as cultural history.
- Just as the experiences of different immigrant and ethnic groups vary enormously, regional and community level variations play a role in how neighborhood factors impact youth substance use.



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**Thank You!**