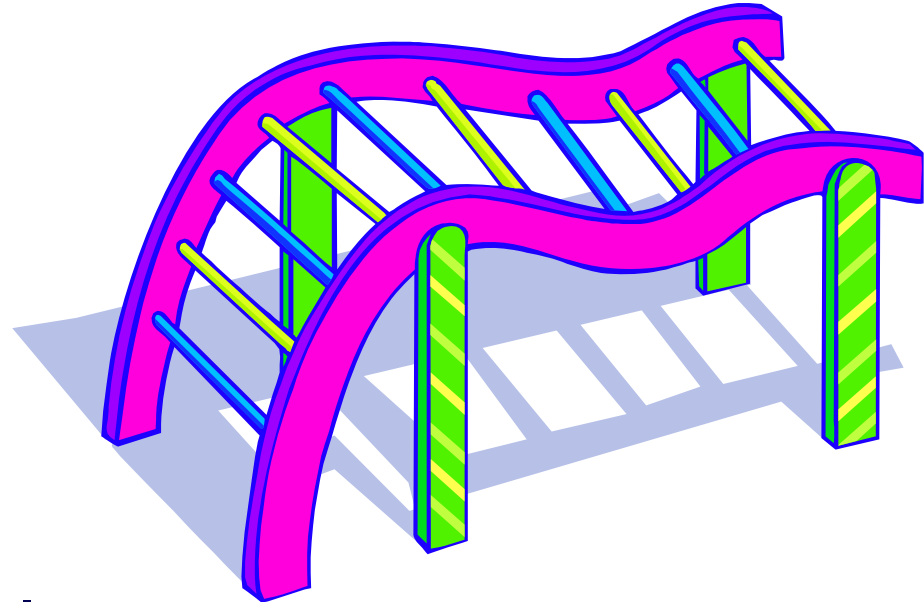


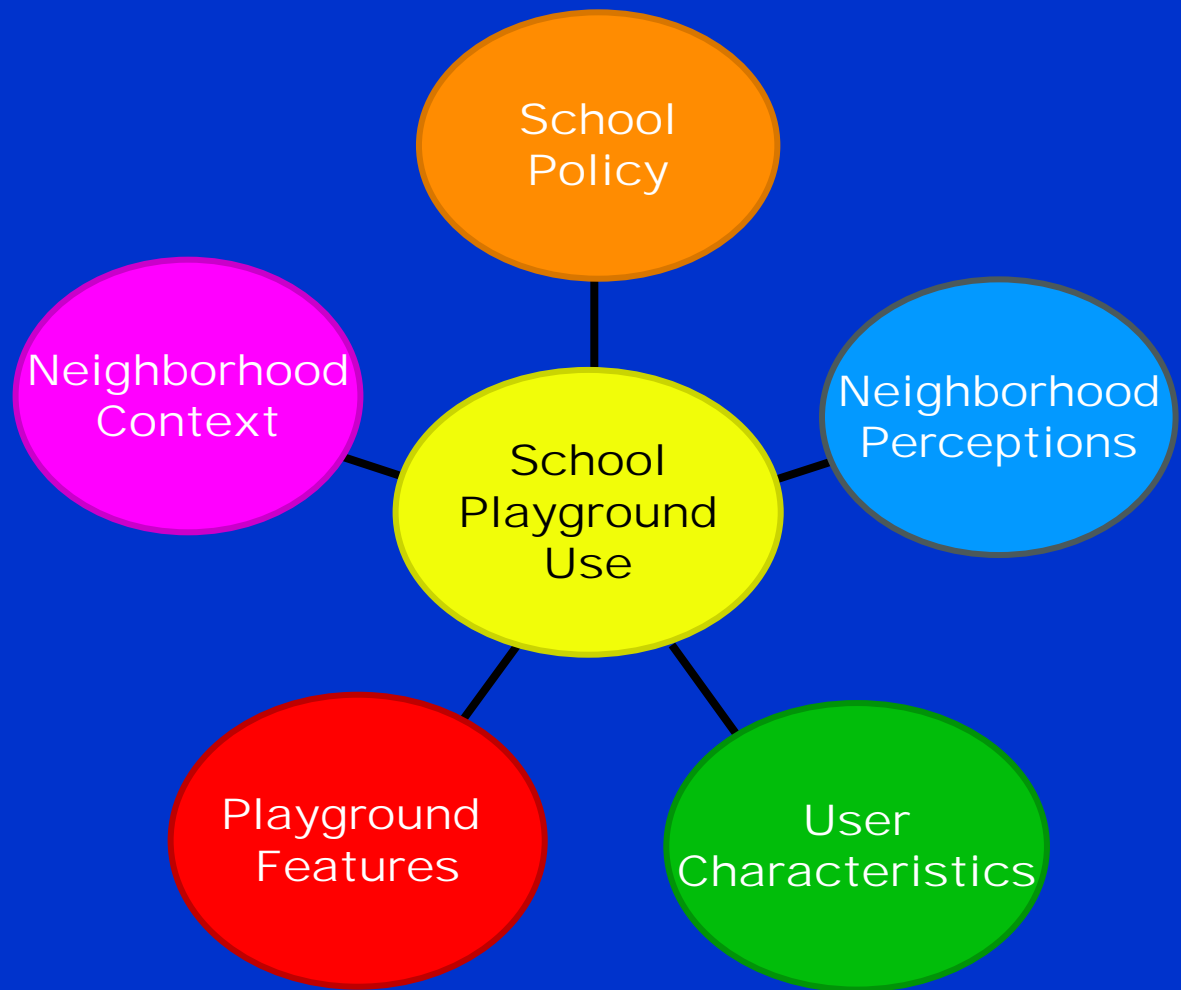
# Dynamics of School Playground Use

**In Low-Income Neighborhoods:  
4 Case Studies from Newark, NJ**



**Researcher:  
Caryn Yaacov, PhD Candidate  
New Jersey Institute of Technology**

# Factors Affecting School Playground Use



# BACKGROUND

## NEWARK'S PARK-POOR NEIGHBORHOODS

- Resurgence of city has led to fierce competition over available land
- A solution to the dearth of outdoor space is the rebuilding of existing school playgrounds: the space is available, designated, and managed
- Public funding for school playground renovation is limited
- Individual schools have turned to private agencies—notably nonprofits—to finance playground redevelopment



# FACTS ABOUT NEWARK

## Largest City in New Jersey Population: 254,217

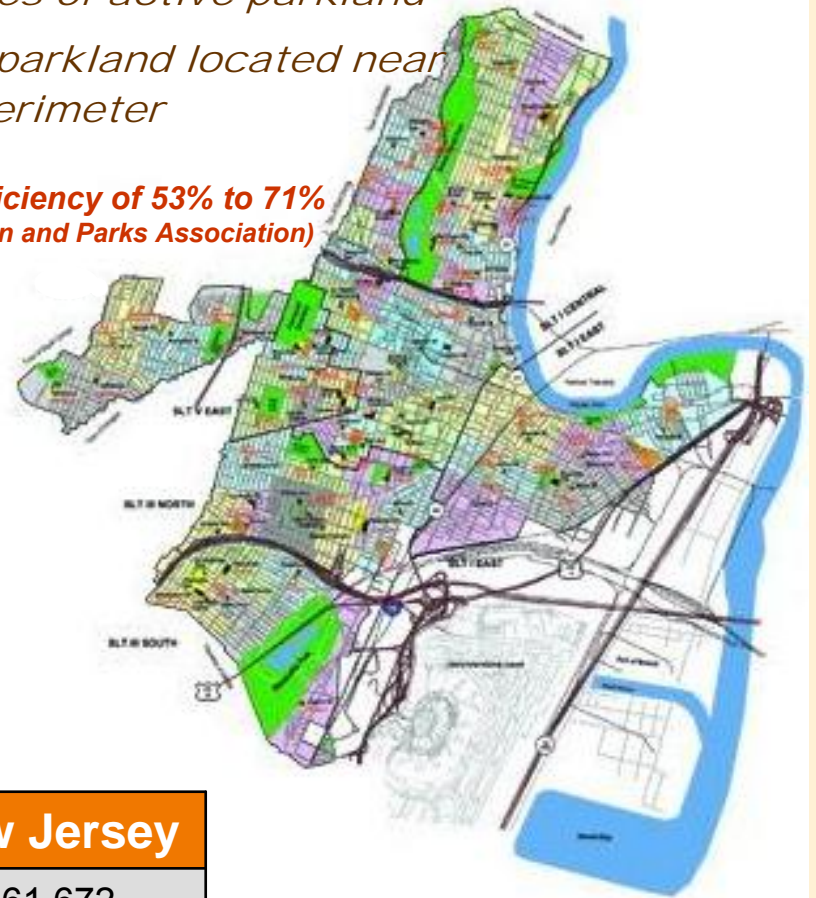
- 30% children under 18 yrs
- 24% married couples/families
- 80% minority groups
- 30% percent foreign born

## Abbott School District

- State mandated funding to schools since 1985
- Schools under state control since 1995

- 795 acres of active parkland
- 96% of parkland located near city's perimeter

**Open space deficiency of 53% to 71%**  
(National Recreation and Parks Association)



\$\$\$	Newark	New Jersey
• Median household income	\$30,665	\$61,672
• Total population living in poverty	24%	8.7%

# DESCRIPTION OF STUDY

**Units of Analysis:** Playgrounds at four elementary schools in Newark, New Jersey

**Study Design:** 3-phase investigation of school playground use by 5th graders

## **Implementation:**

- IRB approval from researcher's university and Newark Public Schools
- Fieldwork carried out from June 2006 to January 2007
- Active guardian consent necessary for child participation and child assent form
- Guardian questionnaires and forms translated into Spanish and Portuguese

**PHASE I  
QUANTITATIVE**

**Questionnaires:  
Child and Guardian**

**PHASE II  
QUALITATIVE**

**Interviews:  
School Personnel**

**PHASE III  
OBSERVATION**

**School Playground:  
Lunch-time Recess**

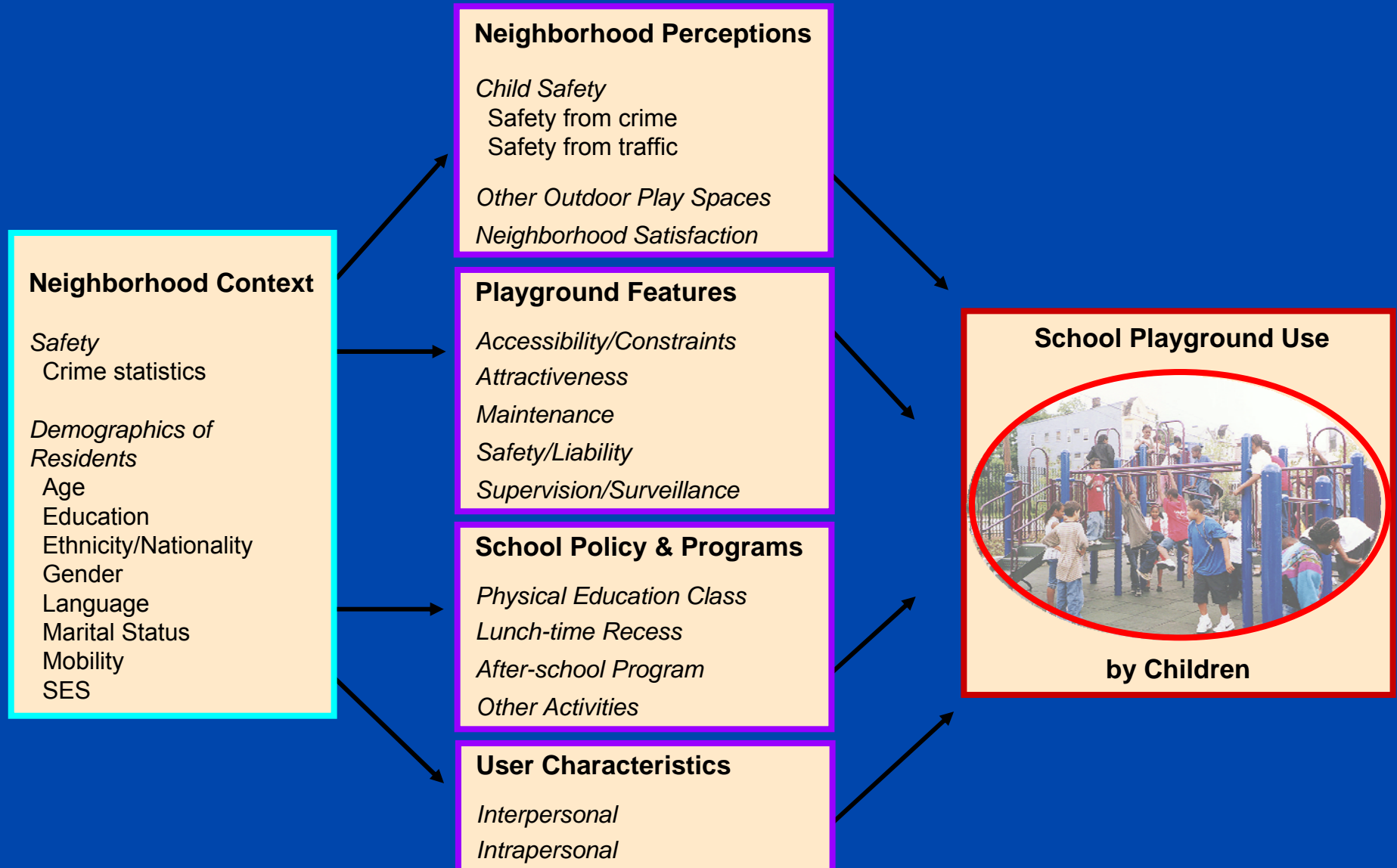
# PLAYGROUND COMPARISON

Playground Characteristics	School			
	Ironbound	Central Ward 1	Central Ward 2	Central Ward 3
Size (acres)	1.7	2.0	0.2	2.0
Play equipment	no	yes	yes	yes
Markings/Painted game area	yes	yes	yes	yes
Serves also as parking lot	yes	no	no	no
Renovated by non-profit organization	no	yes	yes	yes
Open to community after school hours	yes	yes	no	yes
Completion date of present status	2006	2003	1997	2000
Security (all playgrounds closed to community during school hours)	<ul style="list-style-type: none"> <li>• gated</li> <li>• open 24/7</li> </ul>	<ul style="list-style-type: none"> <li>• gated</li> <li>• open 24/7</li> <li>• surveillance cameras</li> </ul>	<ul style="list-style-type: none"> <li>• gated</li> <li>• locked after school</li> </ul>	<ul style="list-style-type: none"> <li>• gated</li> <li>• open 24/7</li> </ul>

# STUDY PARTICIPANTS

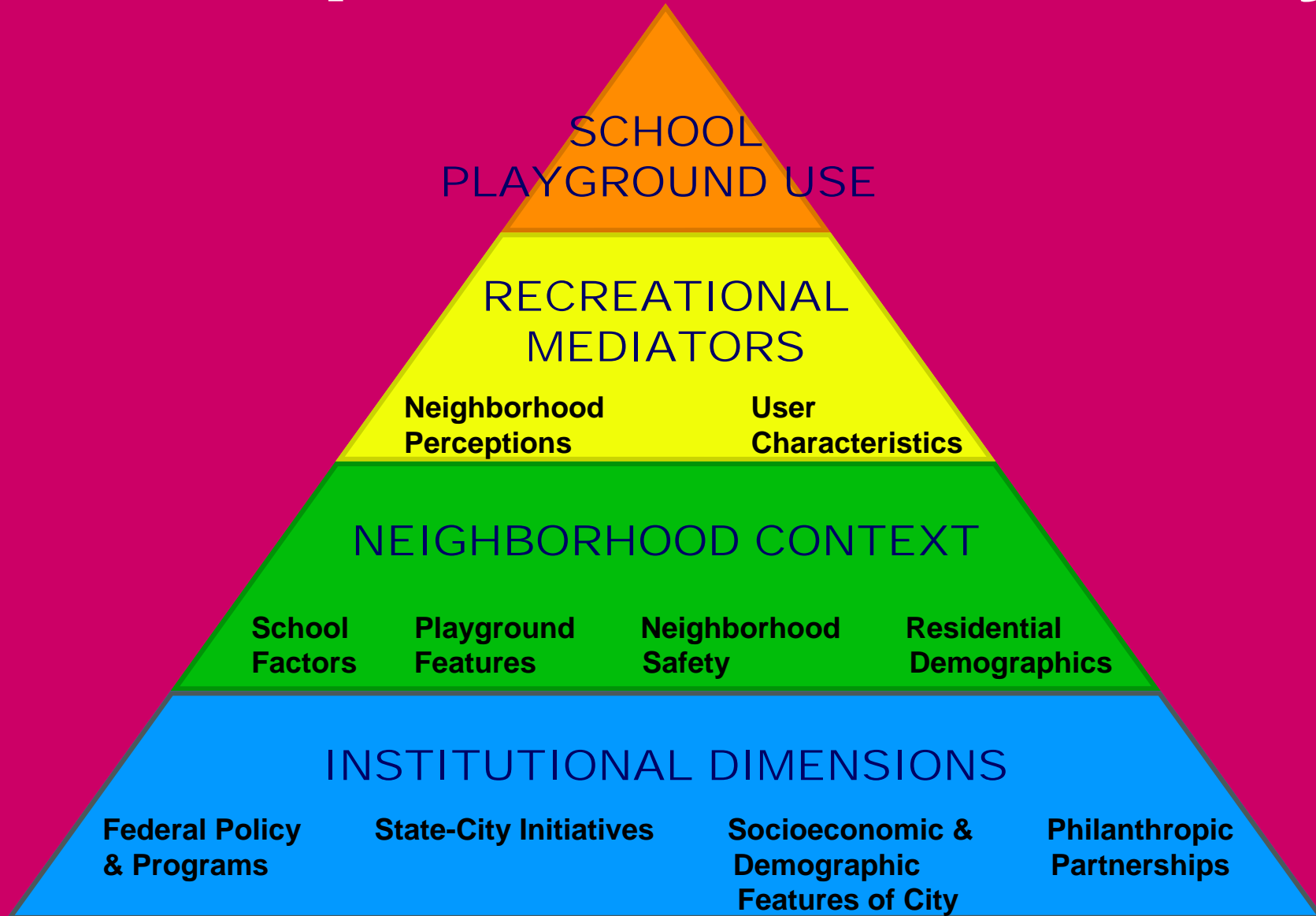
Study Phase	Participant Category	School / Number of Participants			
		Ironbound (non-renovated)	Central Ward 1 (renovated)	Central Ward 2 (renovated)	Central Ward 3 (renovated)
Phase I Quantitative	Adults (parent/guardian)	99 (total n=120)	29 (total n=104)	18 (total n=57)	9 (total n=48)
	5 <sup>th</sup> Graders	102 (total n=122)	44 (total n=104)	23 (total n=59)	10 (total n=48)
Phase II Qualitative (School Personnel)	Administrator	Vice Principal	Principal	Principal	Principal
	5 <sup>th</sup> Grade Teacher	5 (total n=5)	3 (total n=5)	2 (total n=3)	1 (total n=2)
	Phys. Ed. Teacher	2 (total n=2)	1 (total n=3)	1 (total n=2)	1 (total n=1)
	After School Director	1	1	1	1
	School Psychologist	Not applicable	Not applicable	Not applicable	1
Phase III Observation	5 <sup>th</sup> Grade Class	lunch-time recess	lunch-time recess	lunch-time recess	lunch-time recess

# STUDY VARIABLES



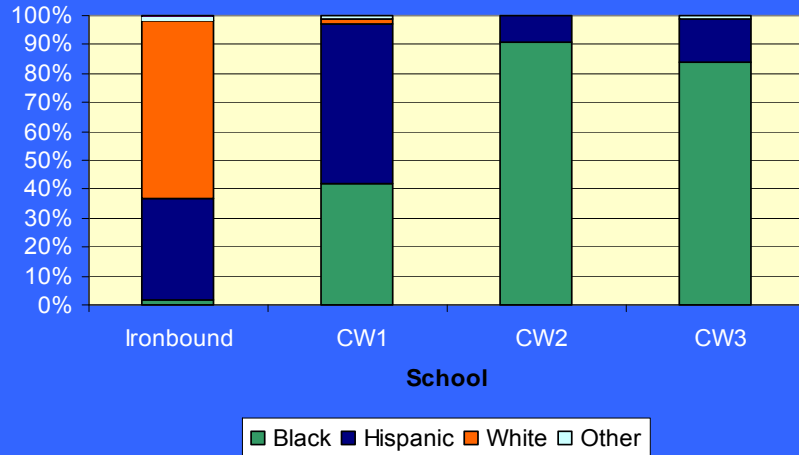


# Conceptual Model of Study



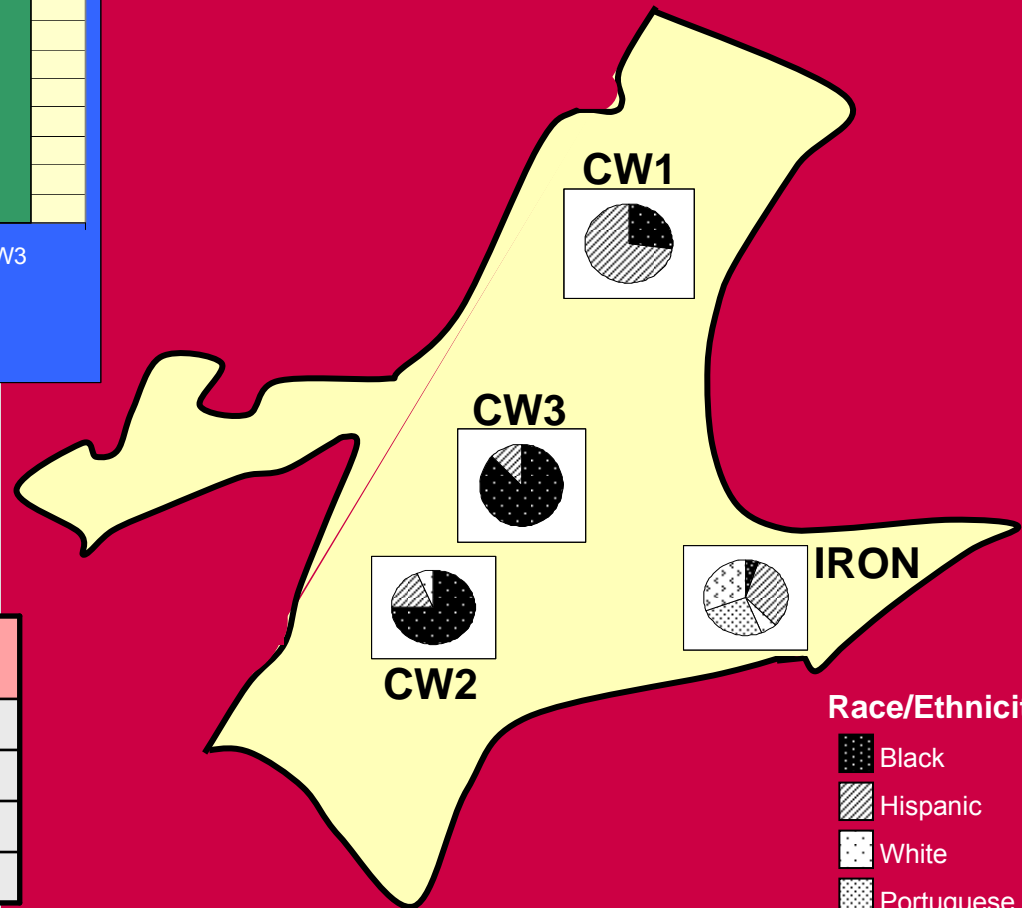
# NEIGHBORHOOD CONTEXT

School Profile: Total Enrollment



Source: New Jersey School Report Card 2005-2006

## Profile of Study Participants



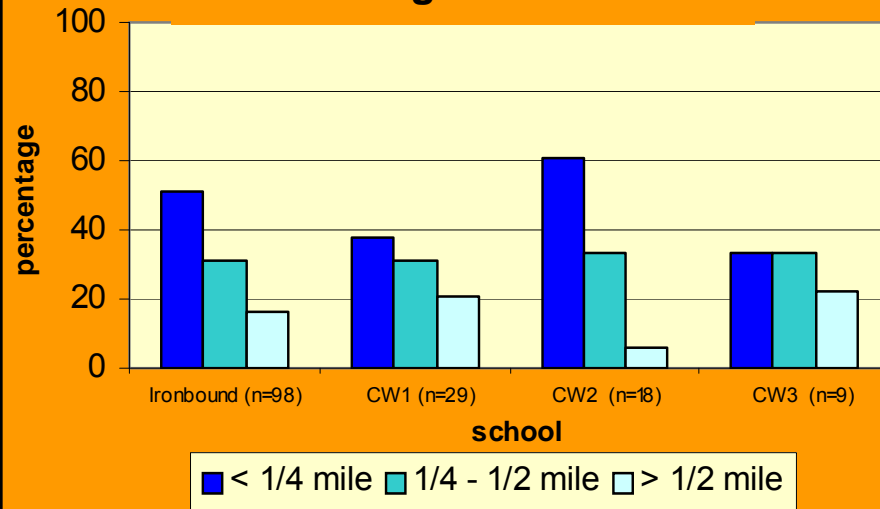
### Race/Ethnicity

- Black
- Hispanic
- White
- Portuguese
- Brazilian

School	Playground Status	Participants (Guardians)
Central Ward 1	Renovated	n=29
Central Ward 2	Renovated	n=18
Central Ward 3	Renovated	n=9
Ironbound	Non-renovated	n=98

# PLAYGROUND: SPATIAL ACCESSIBILITY

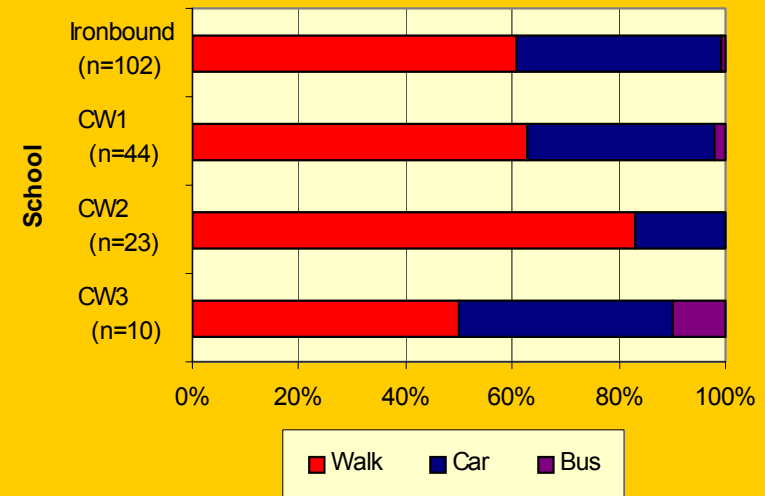
**Distance from Home to School  
According to Guardians**



*Children attending Newark elementary schools typically live within a 2-mile radius of the site*

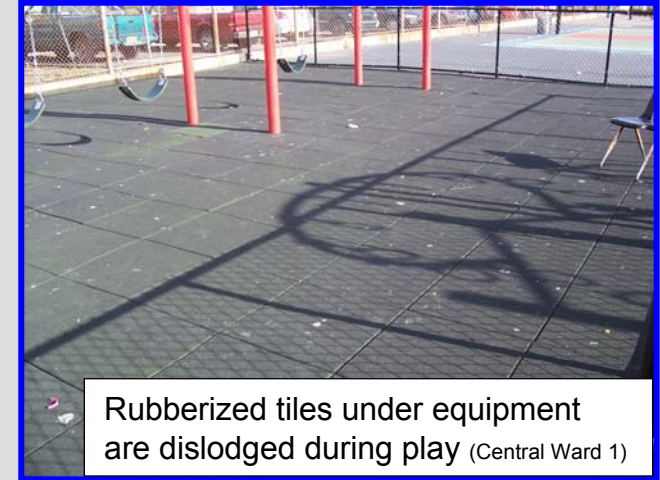
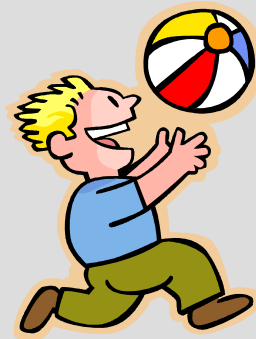
*Travel distances and/or time restraints may partly explain the differences among groups in how they travel to and from school*

**Travel Mode To and From School  
According to Children**



# MAINTENANCE DILEMMA

*The playground has been renovated—who is responsible for maintenance?*



## Interview Responses

Gaping hole where a tree once stood (Central Ward 3)

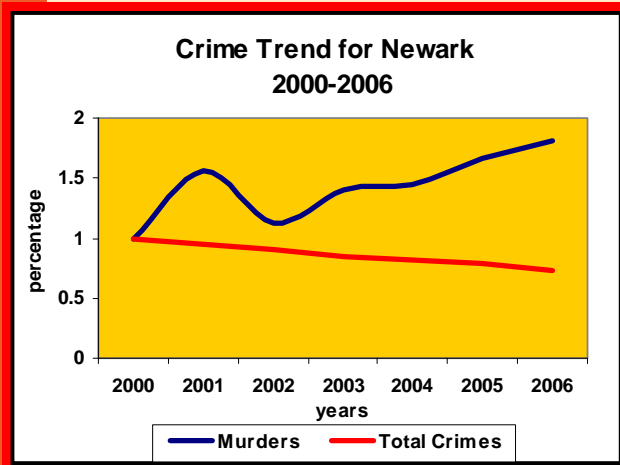


“Of course, there isn’t a perfect playground, but an issue perhaps for all playgrounds is the maintenance issues. We cannot let this playground rot away.” (Central Ward 1, Teacher)

“We’ve been trying to get the sliding board fixed. The school doesn’t have a budget. Since Board of Education don’t put it there they said it’s not their responsibility to get it repaired. We don’t know who is to fix it up. It’s all about the money.” (Central Ward 3, Teacher)

# NEIGHBORHOOD CONTEXT

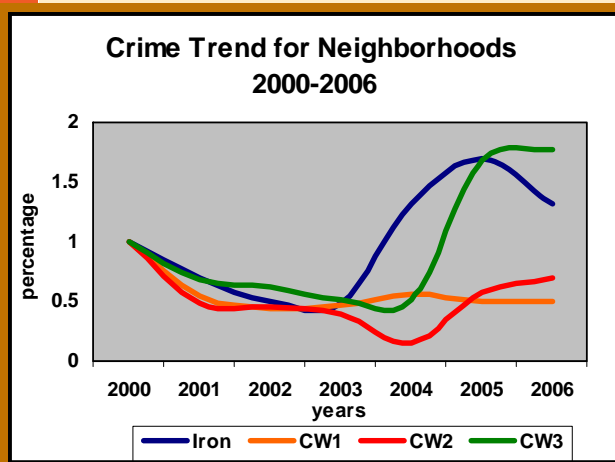
## CRIME IN NEWARK



### Crime Rates for 2005

Location	Total Crimes	Total Crimes per 100,000	Violent Crime per 100,000	Property Crime per 100,000
Newark City	15,541	5,529.4	1,003.7	4,525.7
New Jersey	234,310	2,687.7	354.7	2,333.0
National	11,556,854	3,898.9	469.2	3,429.8

*Violent crimes include murder, rape robbery, and assault  
Property crimes include burglary, larceny, and vehicle theft*



School	Playground
Ironbound	Non-renovated
Central Ward 1	Renovated
Central Ward 2	Renovated
Central Ward 3	Renovated



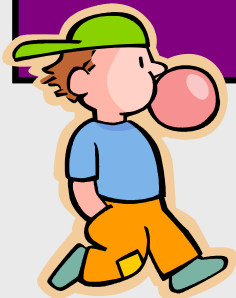
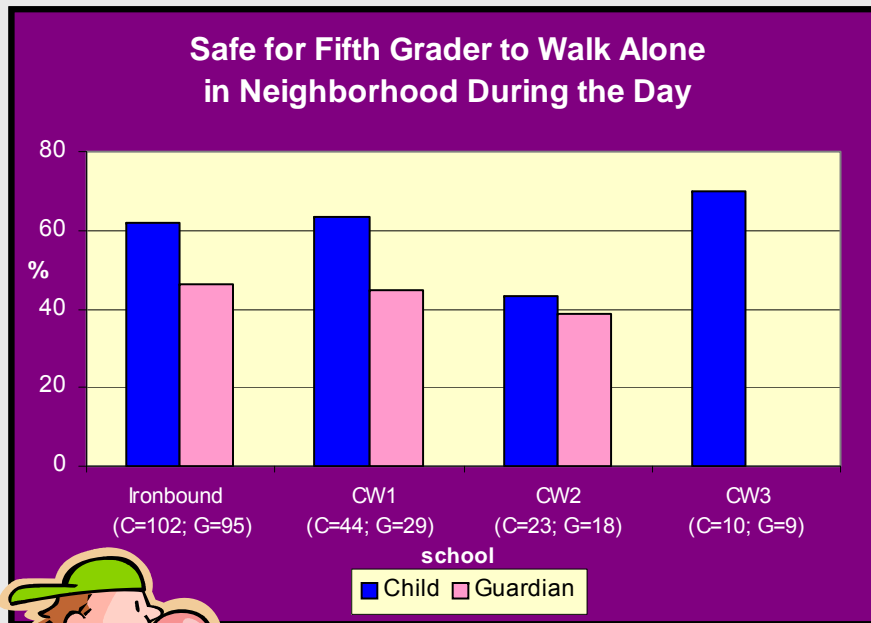
Deserted public housing near school playground CW3

# PERCEPTIONS OF SAFETY: QUESTIONS

<i>QUANTITATIVE DESIGN PHASE: CHILDREN AND GUARDIANS</i>			
Variable	Question	Response Format	Respondent
<i>Neighborhood Safety</i>	<i>Neighborhood Context</i> Neighborhood is messy Neighborhood is great place to live	5-point Likert scale 5-point Likert scale	Child / Guardian Child / Guardian
	<i>Outdoor Play Spaces</i> Guardians preferred outdoor play spaces	Short fill-in	Guardian
<i>Child Safety</i>	<i>Safety from Crime</i> Accompaniment of child to and from school Neighborhood walkability, daytime / after dark	Categorical (Y/N/S) <sup>^</sup> 5-point Likert scale	Child Child / Guardian
	<i>Safety from traffic</i> Motor vehicle traffic Crossing streets alone	Categorical (Y/N/S) <sup>^</sup> Categorical (Y/N/S) <sup>^</sup>	Child / Guardian Child / Guardian
	<i>Adult Supervision and Playground Use</i> Important that adult watches child 5 <sup>th</sup> grader allowed to go to playground alone Play on playground only if supervised Dangerous for child to be alone on playground	Categorical (Y/N/S) <sup>^</sup> Categorical & fill-in <sup>*</sup> Categorical & fill-in <sup>*</sup> 5-point Likert scale	Child Guardian Guardian Guardian
<i>QUALITATIVE DESIGN PHASE: SCHOOL PERSONNEL</i>			
Variable	Question	Response Format	Respondent
<i>Neighborhood Safety</i>	Describe neighborhood crime level	Open-ended	All participants
<i>Child Safety</i>	When the school building is closed, do you feel that the playground is a satisfactory play site?	Open-ended	All participants

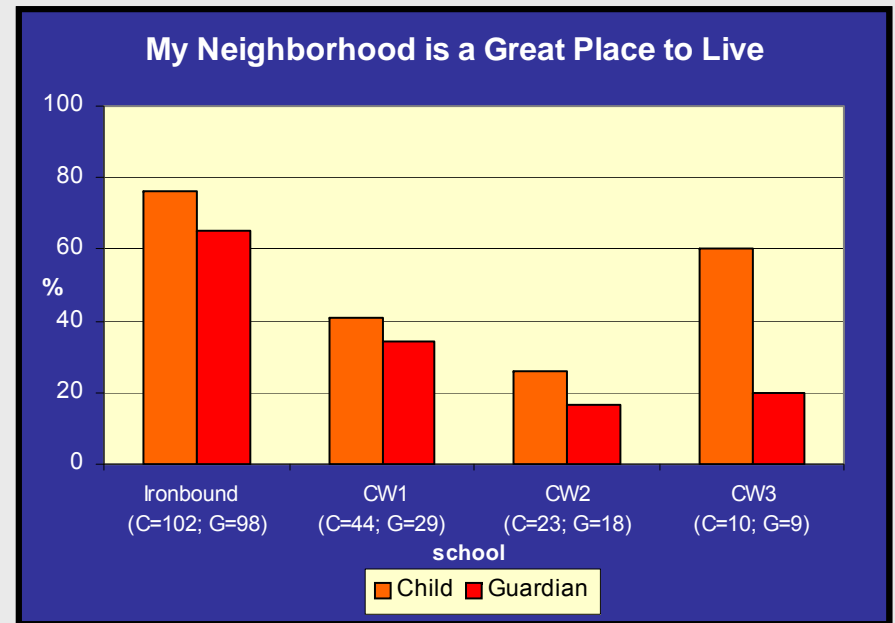
<sup>^</sup>Categorical scale (Yes/No/Sometimes); <sup>\*</sup>Categorical scale (Always/Sometimes /Never), respondents choosing never were asked to explain *why not*

# NEIGHBORHOOD PERCEPTIONS

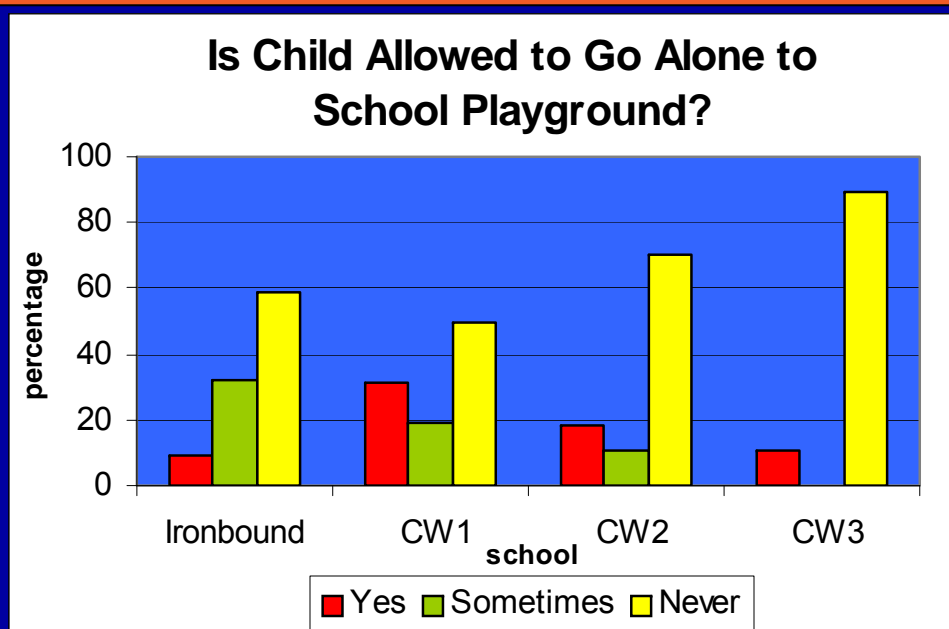


*Regardless of residential neighborhood, a higher proportion of children in comparison to guardians “agree” their neighborhood is a great place to live.*

- *Children, in comparison to guardians, more often perceive their neighborhood as safe to walk alone in during the day.*
- *Guardians from Central Ward 3 display the extreme response—with everyone agreeing that in their neighborhood children cannot walk alone.*



# NEIGHBORHOOD SAFETY: PLAYGROUND



Central Ward 1: Playground after renovation

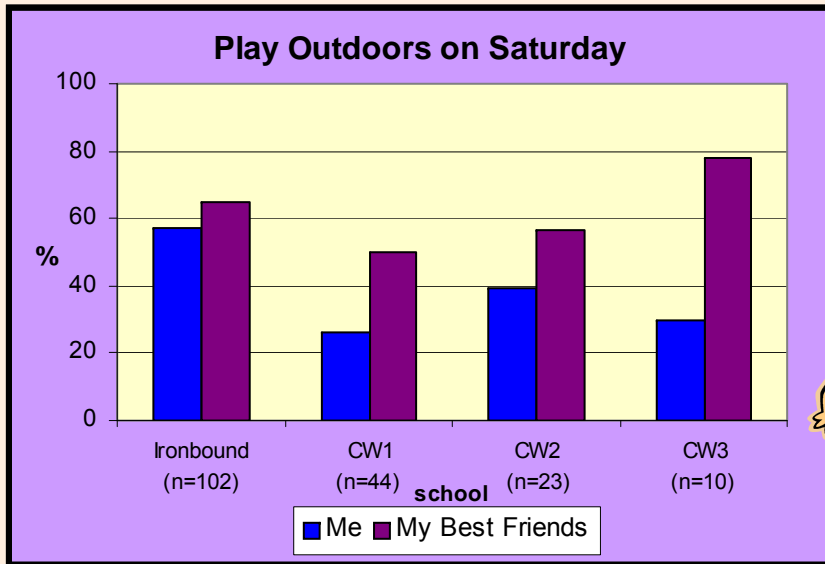
## *Reasons Why Parents Do Not Allow Child to Go Alone to School Playground*

- “Someone might take him”
- “We saw a lot of time teenagers smoking”
- “Because she’s scared playing alone by herself”
- “She’s only allowed if she’s in school”
- “Because I feel children need supervision”
- “It’s dangerous out there”

School	Playground Status	Participants (Guardians)
Central Ward 1	Renovated	n=29
Central Ward 2	Renovated	n=18
Central Ward 3	Renovated	n=9
Ironbound	Non-renovated	n=98



# WHERE CHILDREN PLAY

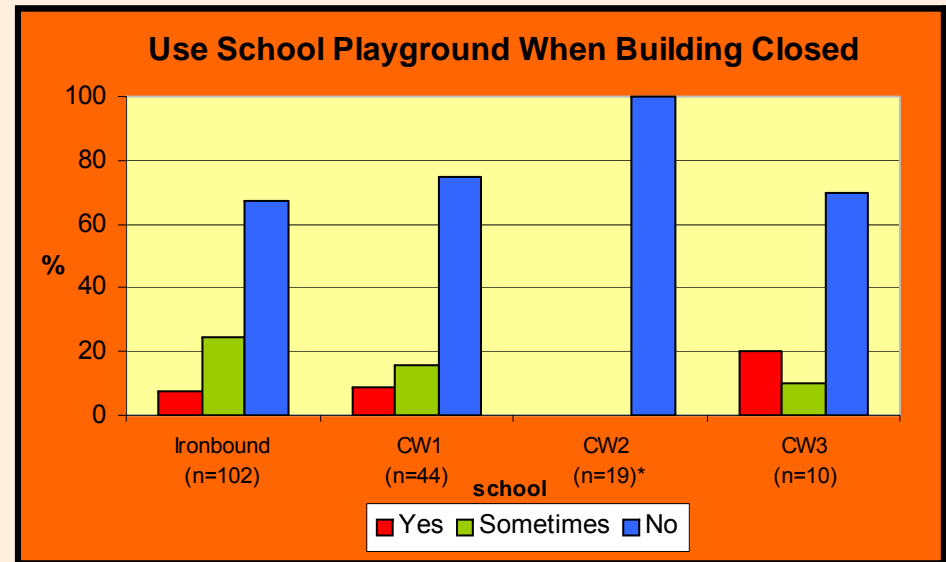


*The majority of children from the Central Ward schools play indoors on Saturday morning. Interestingly, children tend to believe that their best friends play outdoors.*

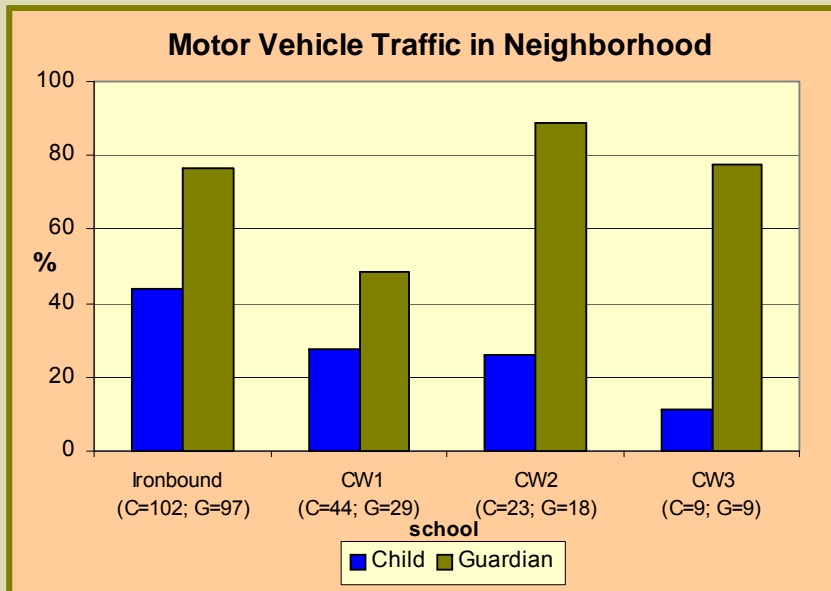


**School playgrounds in Newark are required by law to be open to the community, even so, many children choose not to use this play space.**

Ironbound: non-renovated playground  
 CW1, CW2, CW3: renovated playgrounds  
 CW2 playground usually locked when school building closed



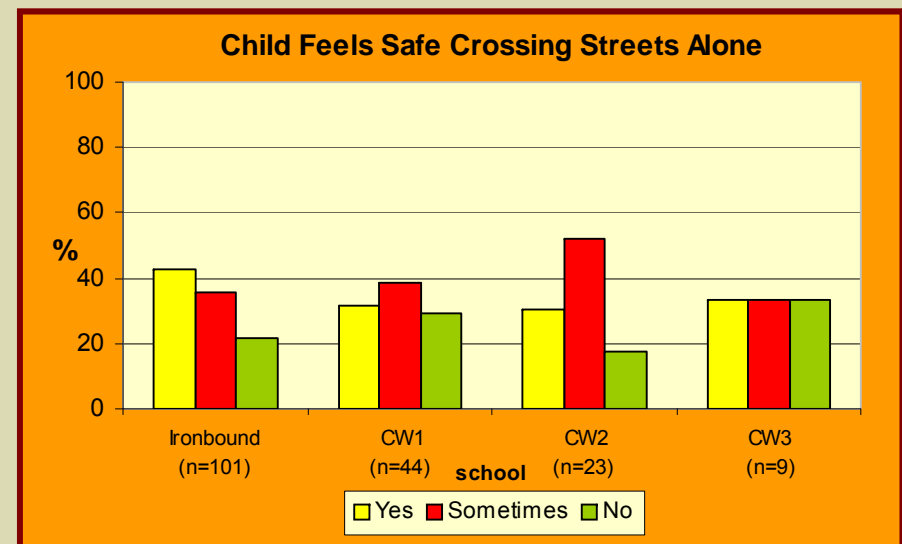
# MOTOR VEHICLE TRAFFIC

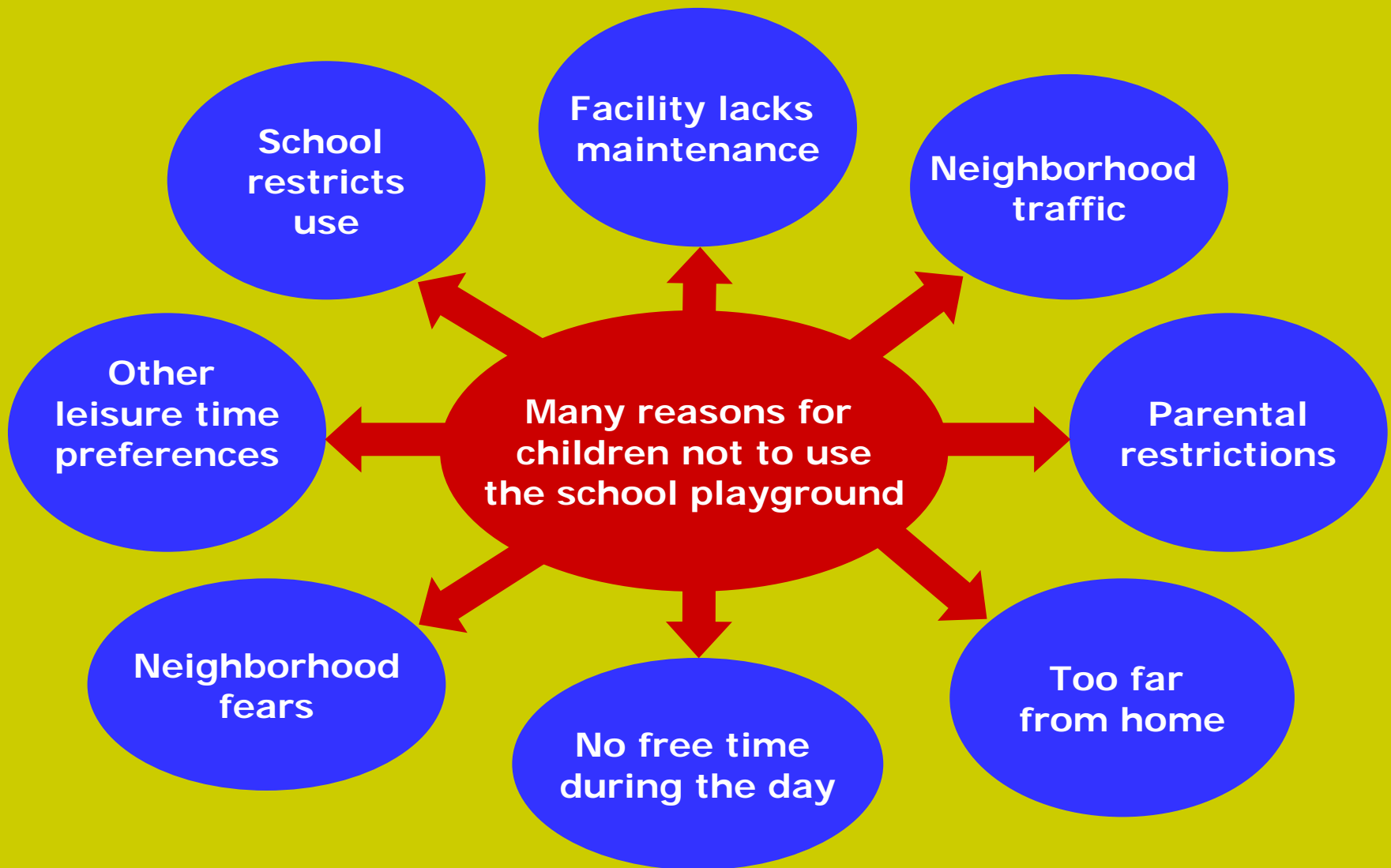


- **Most children do not feel safe crossing neighborhood streets by themselves.**
- **This study found a relationship between guardians that allow children to cross streets alone and children's feelings of safety when crossing.**

- **Children and guardians from the same residential neighborhood perceive the level of motor vehicle traffic differently.**
- **Disparities exist between children's and adult's perception of traffic.**

Chart depicts percent of participants who responded "yes" to traffic





# WILL THEY COME?



## Take-Away Points:

- *Sociopolitical, institutional, and neighborhood dynamics mediate the usage patterns of inner-city elementary school playgrounds.*
- *The strategy of “build it and they will come” does not necessarily predict school playground usage in high-risk, low-income neighborhoods.*
- *Failure to account for the multilevel context in which children reside limits our ability to understand probable mediating factors on children’s use of the school playground.*

## School Playground Use: A Multidimensional Problem

- *“This area right here is like swarmed with just crime. Little by little they’re trying to get it out but it’s still here. These kids they don’t go outside. Their parents can’t send them outside to play...there’s a shooting every 2 minutes. On the outskirts of Newark kids can go out. This is inner city.” (Lead Teacher, After School Program, Central Ward 2)*
- *“I spoke to one boy today who was extremely heavy and he said, “My mom won’t let me come to school afterwards. I’m not allowed to come here unless I’m with her after school hours.” And you know...you can’t blame the mother...and I said “What about outside, what about in the backyard?” The boy replied “All the cars parked in the backyard.” I said, “What about in the front?” The boy replied, “She wants to be outside with me.” And I agree. I understand where he’s coming from.” (Physical Education Teacher, Ironbound)*