

# The Playground Atmosphere Rating (PAR)

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## Examining the Extent to Which Adult Supervision and Physical Features of the Playground are Associated with First Grade Student Behavior



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# What Happens on the Playground?

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- ❑ Children develop friendships
- ❑ Children develop social skills
  - Sharing, turn taking, empathy, etc.
- ❑ Conversational and vocabulary skills are developed in free-play situations
- ❑ Children engage in physical activity
- ❑ Physical aggression occurs
- ❑ Bullying occurs
  - Bullying often goes unnoticed by adults
  - Children notice bullying, but rarely intervene or report it
- ❑ Most injuries at school occur on the playground

# Outcomes of Frequent Physical Aggression

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- For the aggressors
  - Peer rejection
  - Development of further behavior problems
  - Delinquency and substance abuse
  - School drop out
  
- For victims of aggression
  - Development of behavior problems
  - Depression and anxiety
  - School avoidance

# Reducing Problems on the Playground

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- ❑ Clear rules
- ❑ Precorrection
- ❑ Consistent consequences
- ❑ Consistent positive reinforcement
- ❑ Active monitoring
- ❑ Good visibility

# Assessing the Quality of the Playground Environment

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## The Playground Atmosphere Rating (PAR)

### □ Measures:

- Monitoring
  - Social Management and Engagement
  - Playground Visibility
  - Playground Enrichment
  - Overall Child Problem Behavior
- Can be used by school administrators, counselors, psychologists, or consultants

# Participants in the PAR Study

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- 9 elementary schools in Oregon
  - Enrollment = 325 to 566 students
  - Average class size = 23 students
  - Average percentage of students on free/reduced lunch = 48%
- 75 “at-risk” first-grade students
  - “At-risk” = above 65<sup>th</sup> percentile on a behavioral screener filled out by Kindergarten teachers
  - 25 items- Child and Adolescent Disruptive Behavior Inventory (CADBI Screener; Burns, Taylor, & Rusby, 2001)
  - 63% = boys; 79% Caucasian, 13% Hispanic, 8% other race
- Participants were a subset of the Success Project: a study evaluating the Incredible Years teacher, parent and social skills programs (Webster-Stratton, 2000)

# Measures

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- **Playground Atmosphere Rating**
  - Rated 3 times during the spring
  - 5 point scale: 0 "not true" to 4 "absolutely true"
- **Direct Observations of at-risk students**
  - Observed on 3 different days, 15 minutes
  - Rates per minute: Negative playground behavior (composite of Verbal Aggression, Physical Aggression, Potentially Dangerous Behavior)
  - Percentage of time Non-social.
- **Observer ratings of at-risk students**
  - 11 items of Oppositional Behavior
    - (e.g., argues with adults, refuses to obey, bosses classmates, disrupts activities)
  - 6-point rating scale "never" to "constantly" occurred
  - Alpha = .83

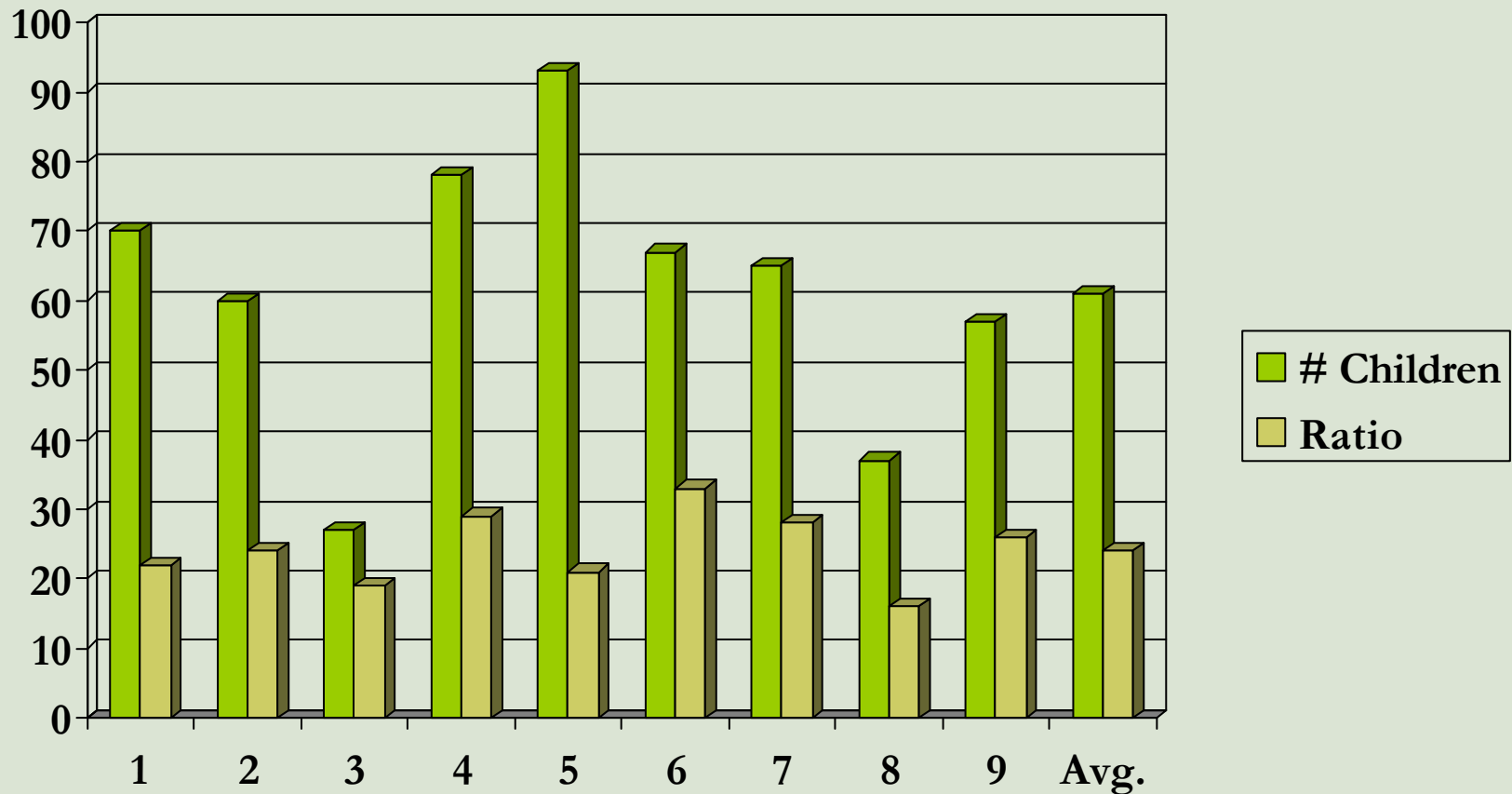
# Efficiency and Inter-Rater Reliability

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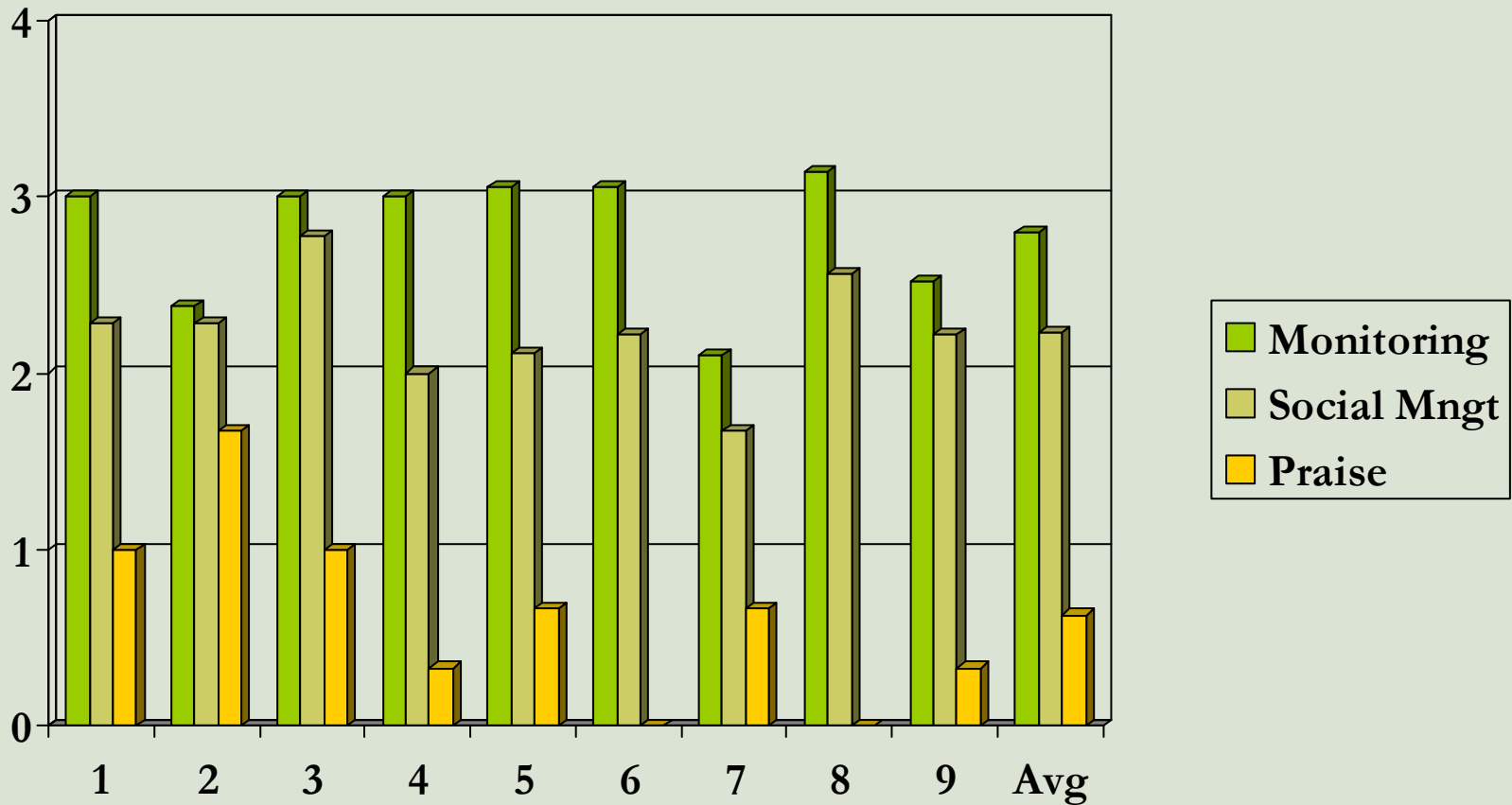
- Training is brief: 2-hour meeting
- Time to complete assessment: 20 minutes
  - 15 minutes observe and take notes, 5 minutes to complete PAR.
  
- Good Inter-Rater Reliability
  - Average weighted proportion agreement:
    - Playground quality scales = .82
    - Child problem behavior scale = .88
  - Average agreement:
    - Child-Adult ratio = .83

# Density and Child Adult Ratio

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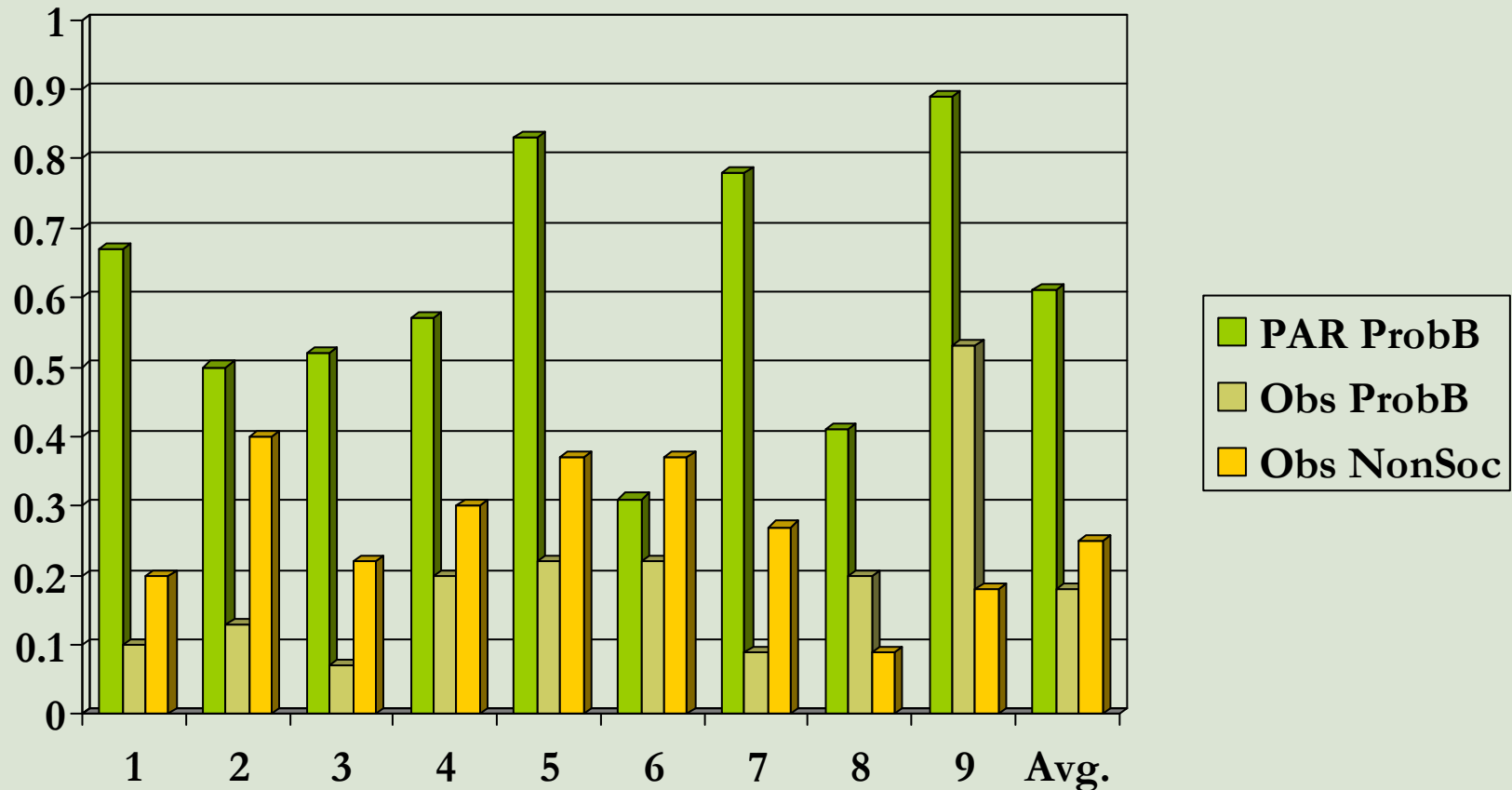
# Quality of Supervision



# Quality of Playground



# Overall Problem Behavior on Playground



## PAR Correlations

### Playground features with problem behavior

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<i>Playground Feature</i>	<i>Problem Behavior</i>
Density (# of children)	.08
Child-Adult Ratio	-.17
Monitoring	-.37*
Specific Praise	.00
Social Management	-.41*
Playground Visibility	-.24
Playground Enrichment	-.58**

## Multiple Regression: Playground Features Predicting Observed Behavior of At-Risk Students (Clustered by School)

Variable	Coefficient	S.E.	z-score
<i>Predicting Aggressive and Dangerous Behavior</i>			
Monitoring	-.25	.15	-1.66*
Specific Praise	-.10	.05	-1.82*
Playground Visibility	.14	.08	1.71*
<i>Predicting Nonsocial Behavior</i>			
Child-Adult Ratio	.02	.00	16.23***
Monitoring	-.17	.10	-1.79*
Specific Praise	.08	.03	2.87**
Playground Visibility	.13	.04	2.93**
Playground Enrichment	.23	.08	2.74**
<i>Predicting Observer Ratings of Oppositional Behavior</i>			
Gender	.08	.06	1.32†
Monitoring	-.46	.27	-1.69*
Specific Praise	-.11	.05	-2.01*
Playground Visibility	.24	.17	1.43†
Playground Enrichment	.41	.14	2.85**

†p < .10, \* p < .05, \*\* p < .01, \*\*\* p < .001

# Summary and Conclusions

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- PAR is an efficient and reliable assessment
  - Feasible to use in school settings
- Quality of Supervision
  - Better quality monitoring was associated with less problem behavior in general, and with at-risk students' aggressive, non-social, and oppositional behavior.
  - Better quality social management was associated with fewer problem behaviors.
  - More praise was associated with fewer aggressive and oppositional behaviors in at-risk students, but also with greater amounts of time in non-social play.
  - Higher Child-Adult ratio was associated with non-social play in at-risk students.
  - Density was not associated with child behavior.

# Summary and Conclusions continued

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- Quality of Playground Physical Environment
  - Better visibility was associated with more problem behavior and non-social behavior in at-risk students.
    - Perhaps on playgrounds with good visibility it is easier to see what at-risk children are doing.
  - Better enrichment was associated with fewer problem behaviors in general, but also with more solitary and oppositional behavior in at-risk students.