

Longer Term Outcomes of Two Universal, First-Grade Preventive Intervention Trials

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Intervention Types:

- Universal
- Selected
- Indicated
- Treatment / Services

JHU PIRC Interventions

Integrate 4 Perspectives:

- Public Health
- Epidemiology
- Life Course Development
- Sociology

Preventive Intervention Trials Serve a Dual Purpose:

- Test for intervention efficacy / effectiveness
- Test developmental theory

Immediate objectives of the interventions:

- Promote first graders':
 - Academic achievement
 - Self-esteem and psychological well-being
- Reduce first graders':
 - Attention problems
 - Aggressive and shy behaviors

Long-term objectives of the interventions:

- Promote:
 - Educational, social, and occupational success
- Prevent:
 - Antisocial behavior
 - Substance abuse
 - Depression

Two first-grade interventions

- Family-School Partnership (FSP) Intervention targeting:
 - Parent-school communication
 - Parent “teaching” and discipline practices
- Classroom-Centered (CC) Intervention targeting:
 - Teacher classroom behavior management practices
 - Teacher instructional practices

→ *Both delivered over course of first-grade year*

Family-School Partnership: Parent Components / Tools

- Parent workshops (led by teacher and school mental health professional) aimed at:
 - Establishing effective parent-school partnerships
 - Strategies to enhance their child's learning
 - Effective ways to discipline their child
- Learning tools available to parents:
 - Parent lending library
 - A "Fun Math" kit
 - Voice mail system to communicate with teachers

Family-School Partnership: Teacher Components / Tools

- In-service training for teachers to assist them in:
 - Creating an environment that invites parent involvement
 - Communicating more appropriately with culturally diverse families
 - Identifying classroom factors and teaching practices that hinder or promote parent involvement
 - Planning and executing a successful parent-teacher conference

Classroom-Centered (CC) Intervention Components

- Curriculum to promote math and reading achievement - “Mastery Learning”
- Classroom behavioral components:
 - Good Behavior Game - to promote positive behavior using peer supports
 - Weekly class meeting – teachers guide students in a 6-step problem solving protocol to resolve conflicts and develop social competencies

Hypothesized Mechanisms: Antisocial Behavior & Substance Abuse

- Improved parent and teacher behavior management practices
- Reductions in early coercive / aggressive behavior
- Reduced likelihood of peer, teacher, and parent rejection
- Increased likelihood of acquiring “social survival skills”
- Less likely to drift into deviant peer groups

Hypothesized Mechanisms: Anxious / Depressive Symptoms

- Improved teacher and parent instructional practices provide support for learning
- Improved achievement
- Improved perceptions of competence and control
- Improved psychological well-being

Design

- Effectiveness trial – existing teachers and school mental health professionals delivered interventions
- Completely randomized block design:
 - 3 first grade classrooms in 9 urban elementary schools (primarily African-American)
 - Randomly assigned to an intervention or a standard setting classroom
 - Children and teachers randomly assigned to classrooms within each school

Assessment design and methods

- Pretest assessment early fall of first grade
 - Teacher, school mental health professional, parent, peer, and youth reports
- Post-test late spring of first grade
- Annual follow-up each spring since 1st grade

Constructs assessed:

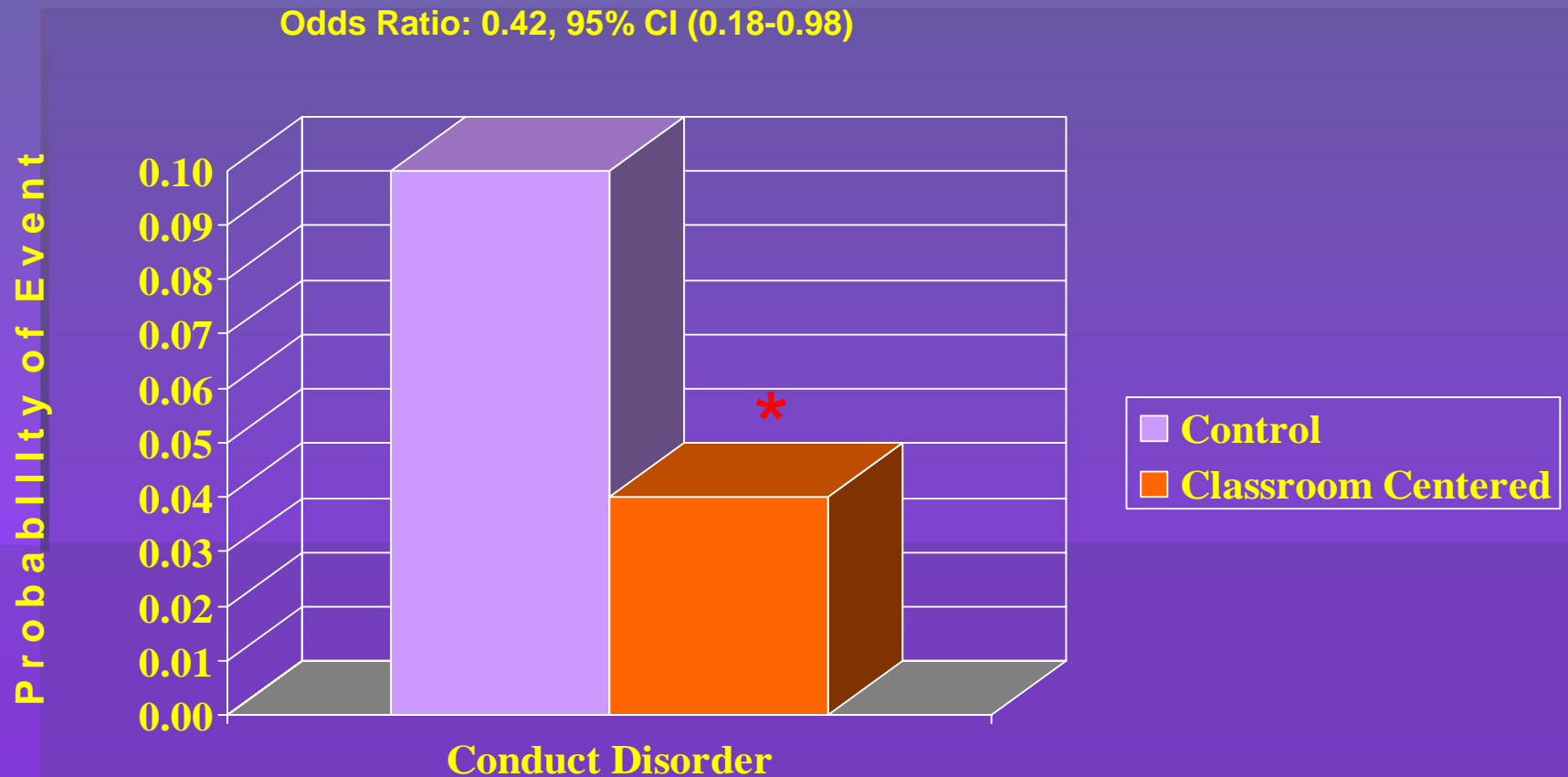
- Proximal targets:
 - Grades, standardized achievement scores, attendance, special education, disciplinary removals
 - Attention / concentration problems
 - Aggression
 - Shy / withdrawn behaviors
- Distal targets:
 - Conduct, affective, anxious, substance abuse symptoms and disorders
 - Grades, standardized achievement scores, attendance, special education, disciplinary removals

Proximal Impact Grades 1-2

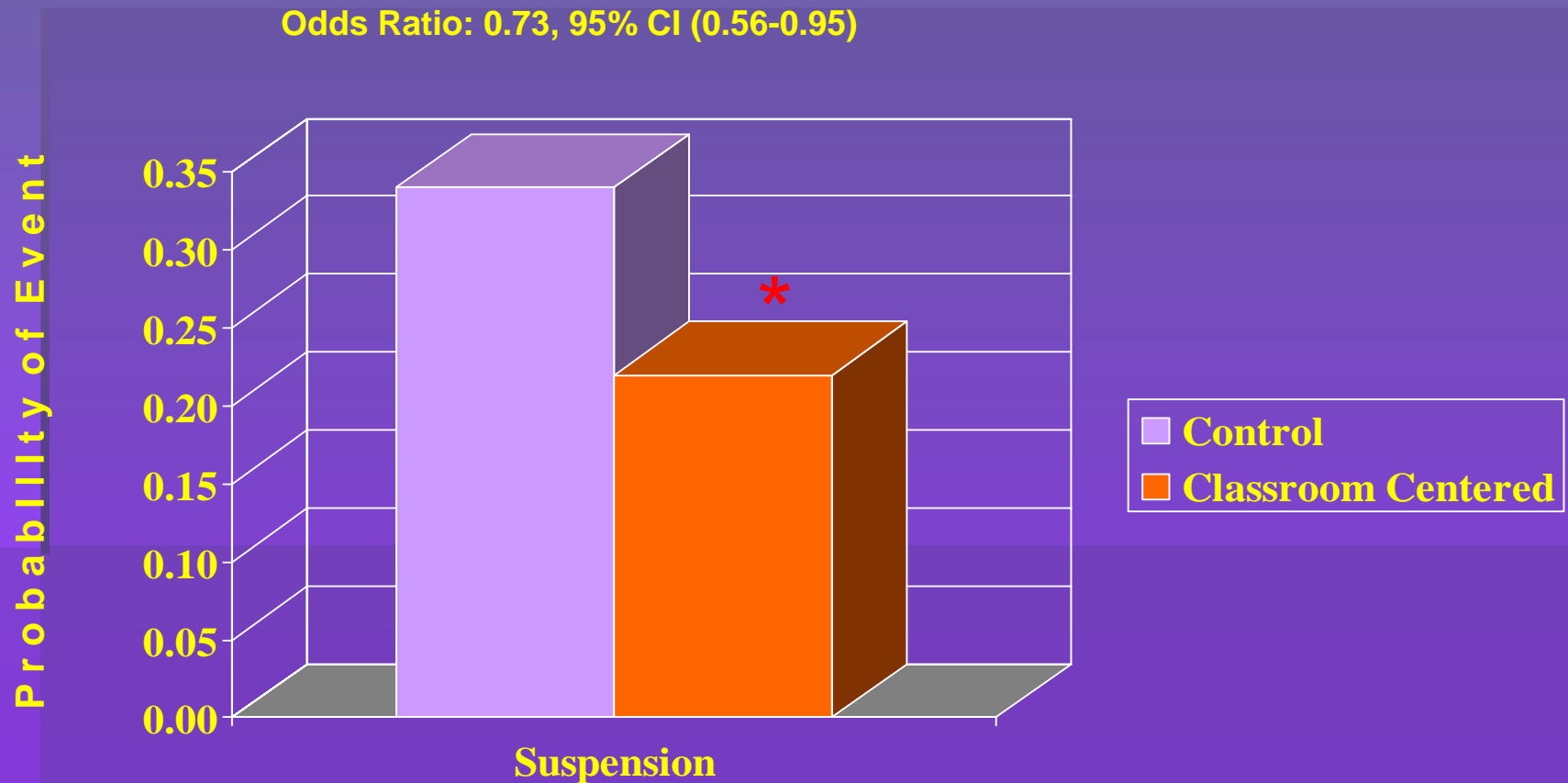
- Improved reading and math achievement
- Decreased teacher-rated total problem behaviors
- Decreased peer-nominated aggression
- Decreased parent-rated total problem behaviors
- Increased psychological well-being

Highlights of Intervention Impact: End of 6th Grade

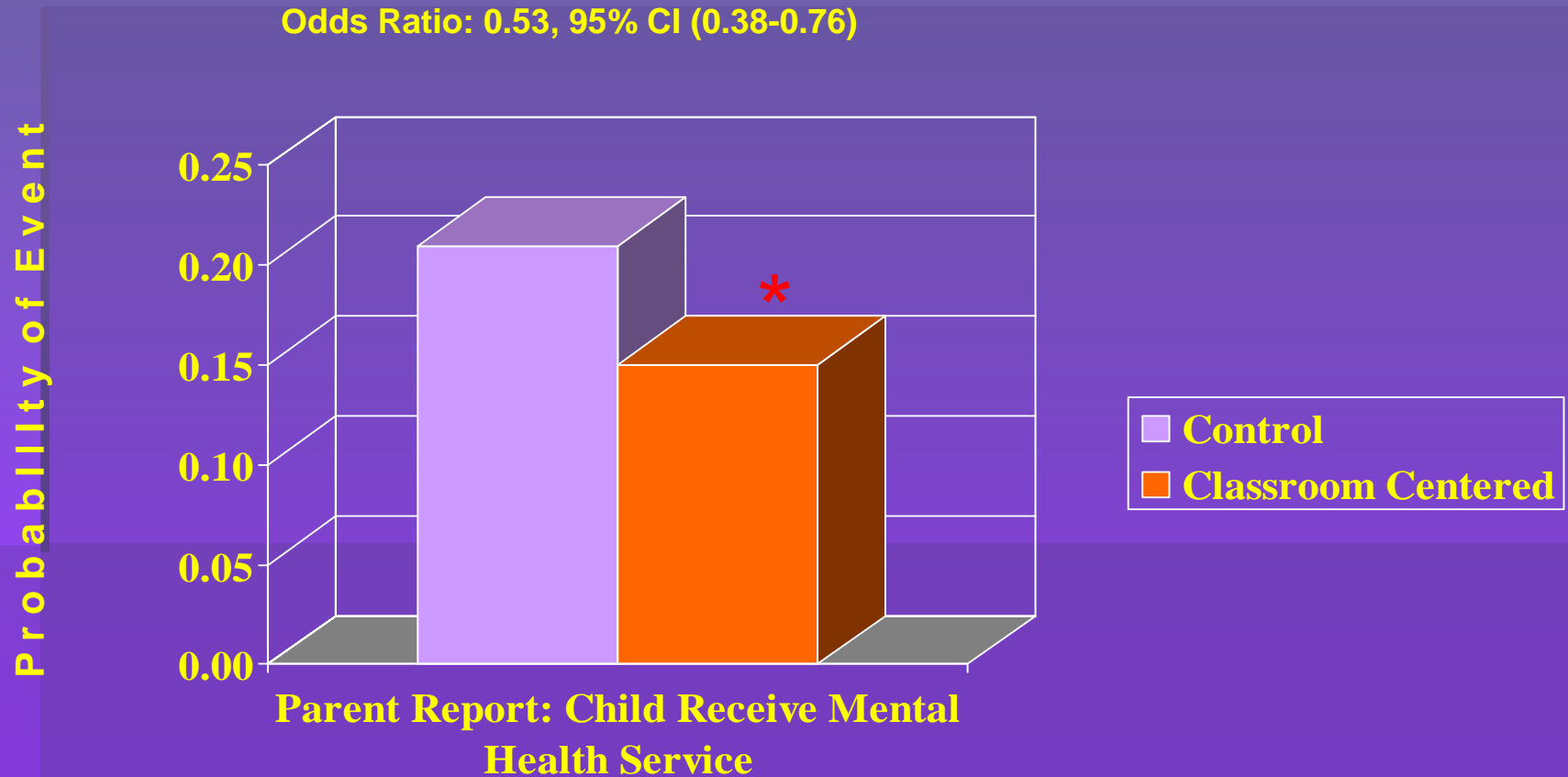
Classroom Centered vs. Control (6th grade boys)



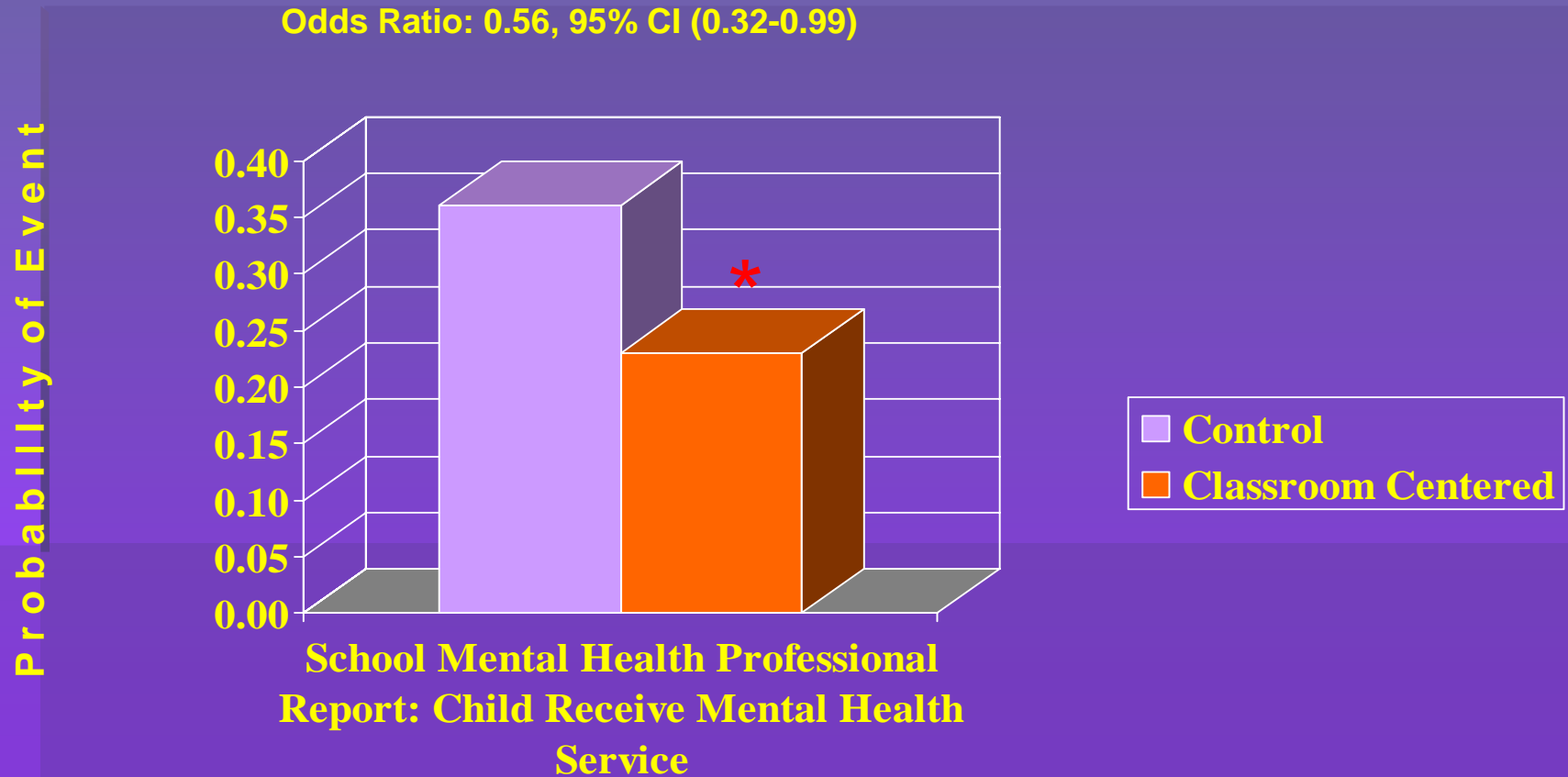
Classroom Centered vs. Control (6th grade)



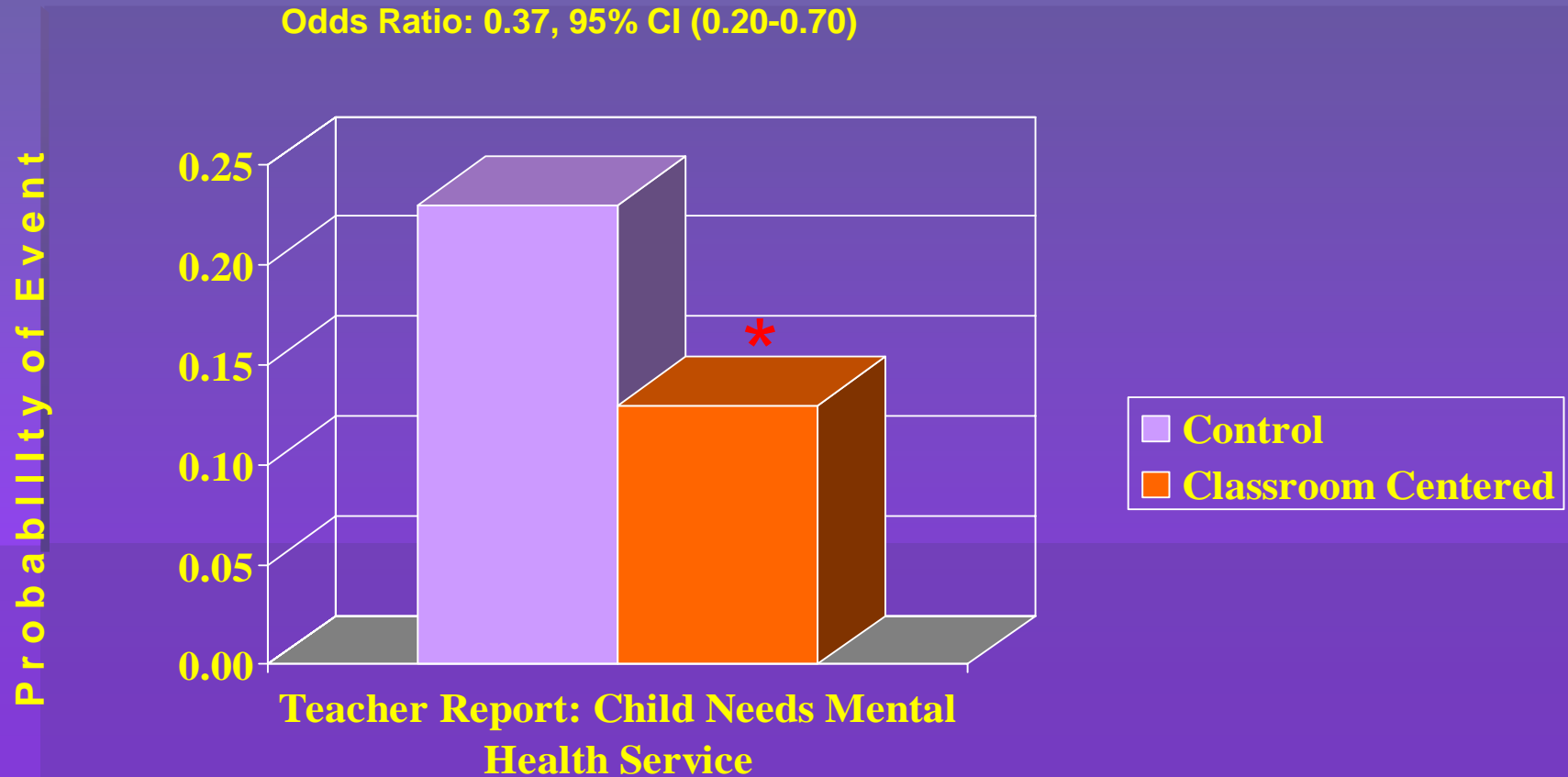
Classroom Centered vs. Control (6th grade)



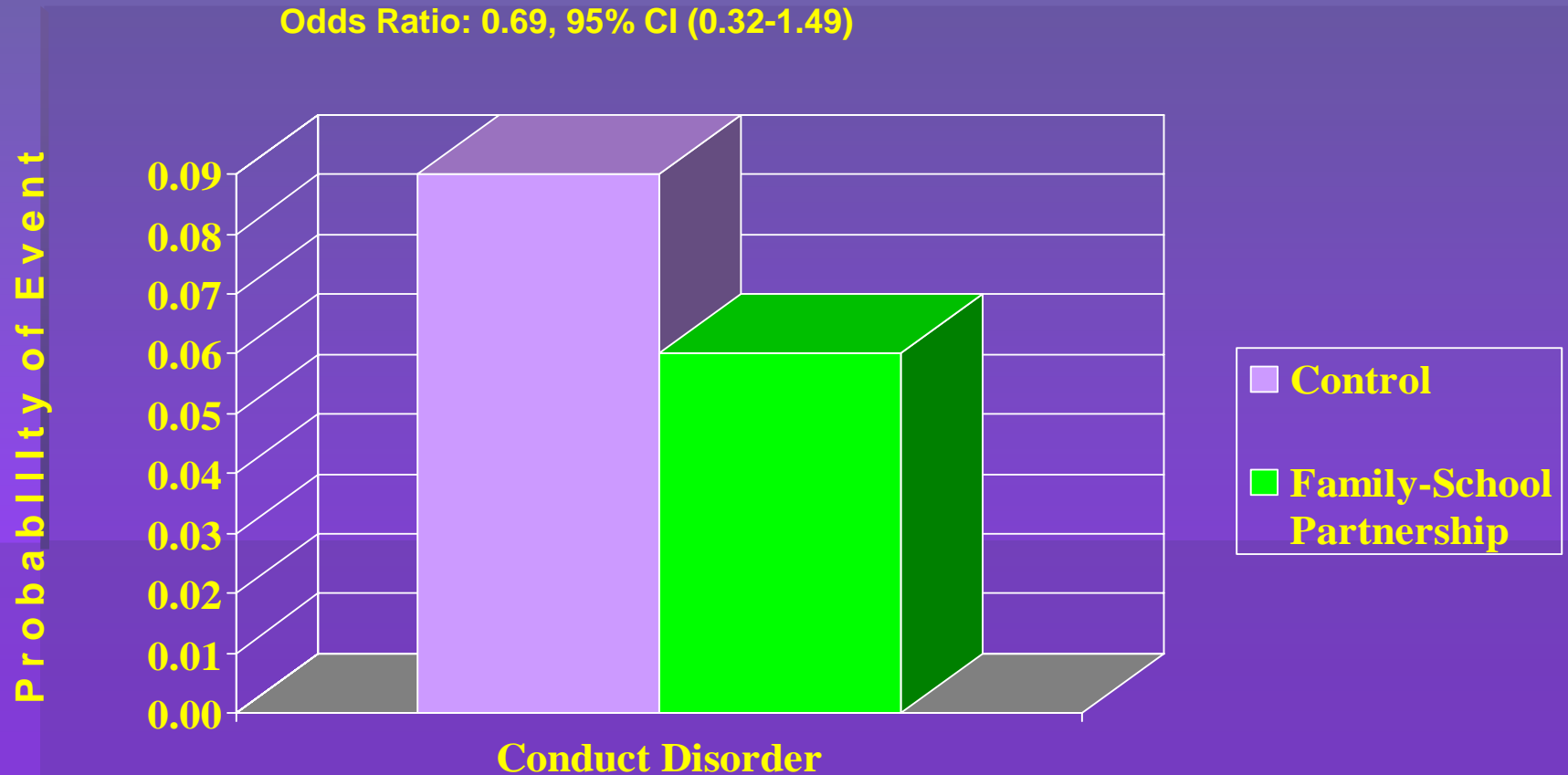
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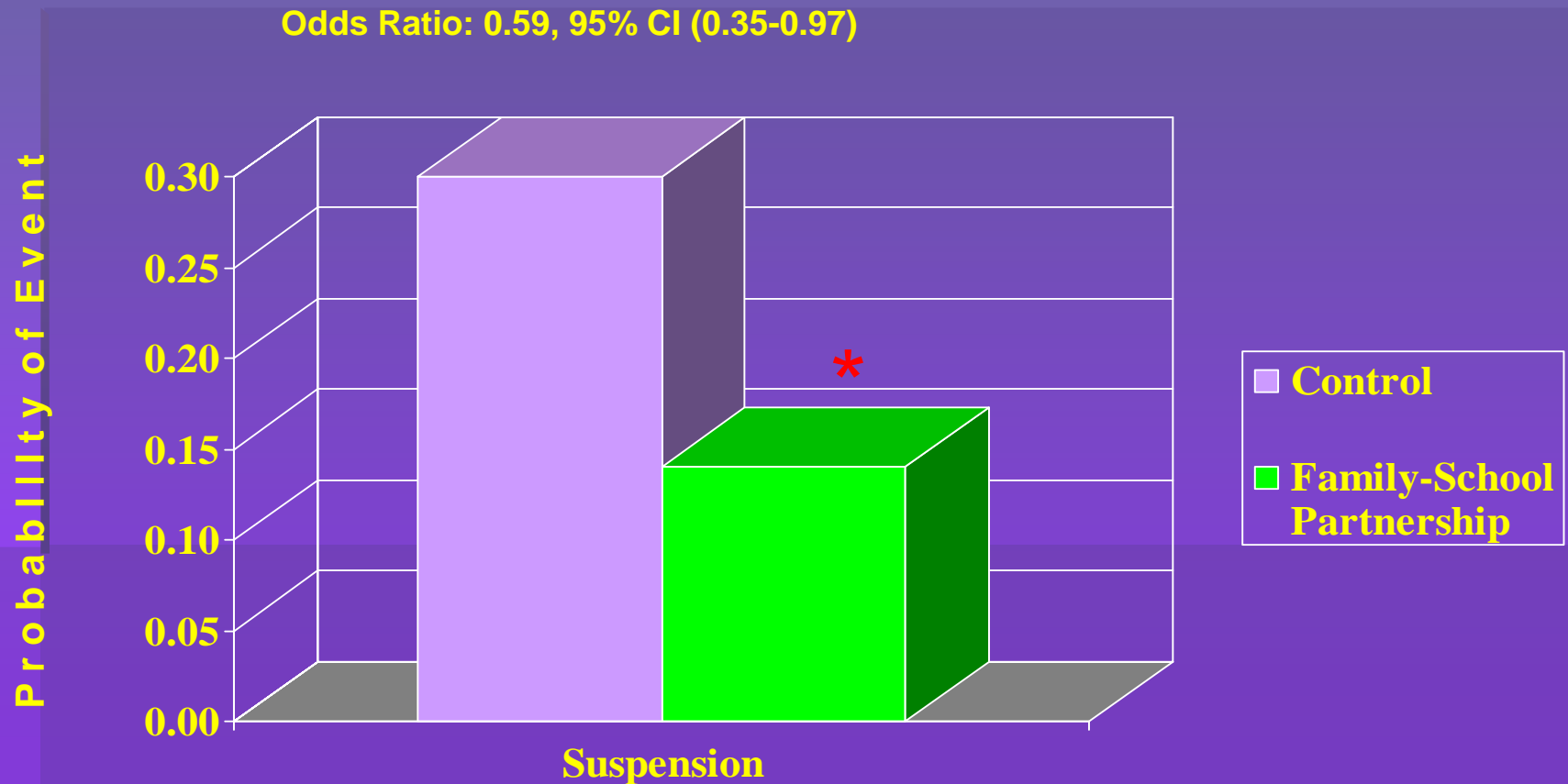
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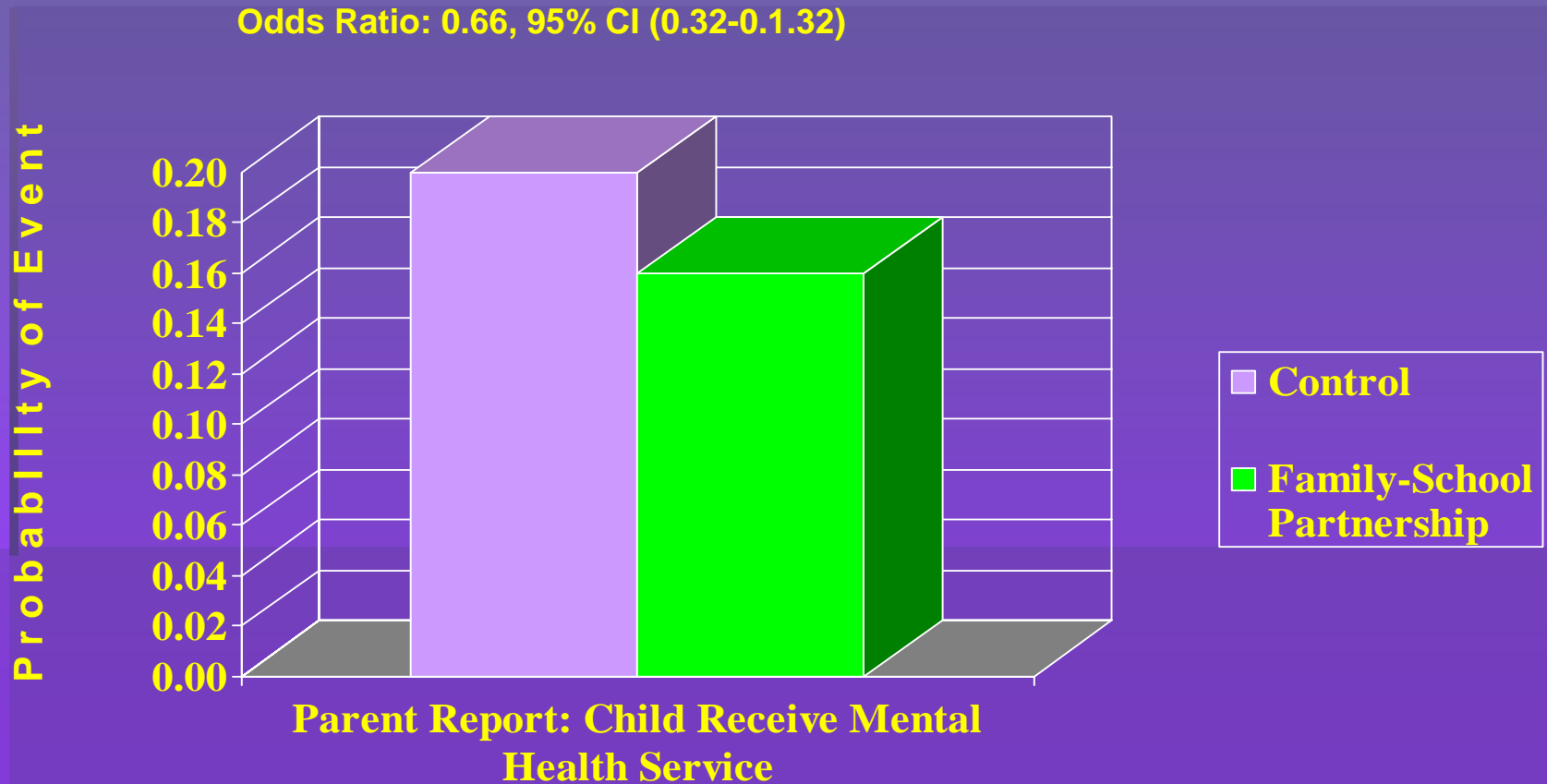
Family – School Partnership vs. Control (6th grade)



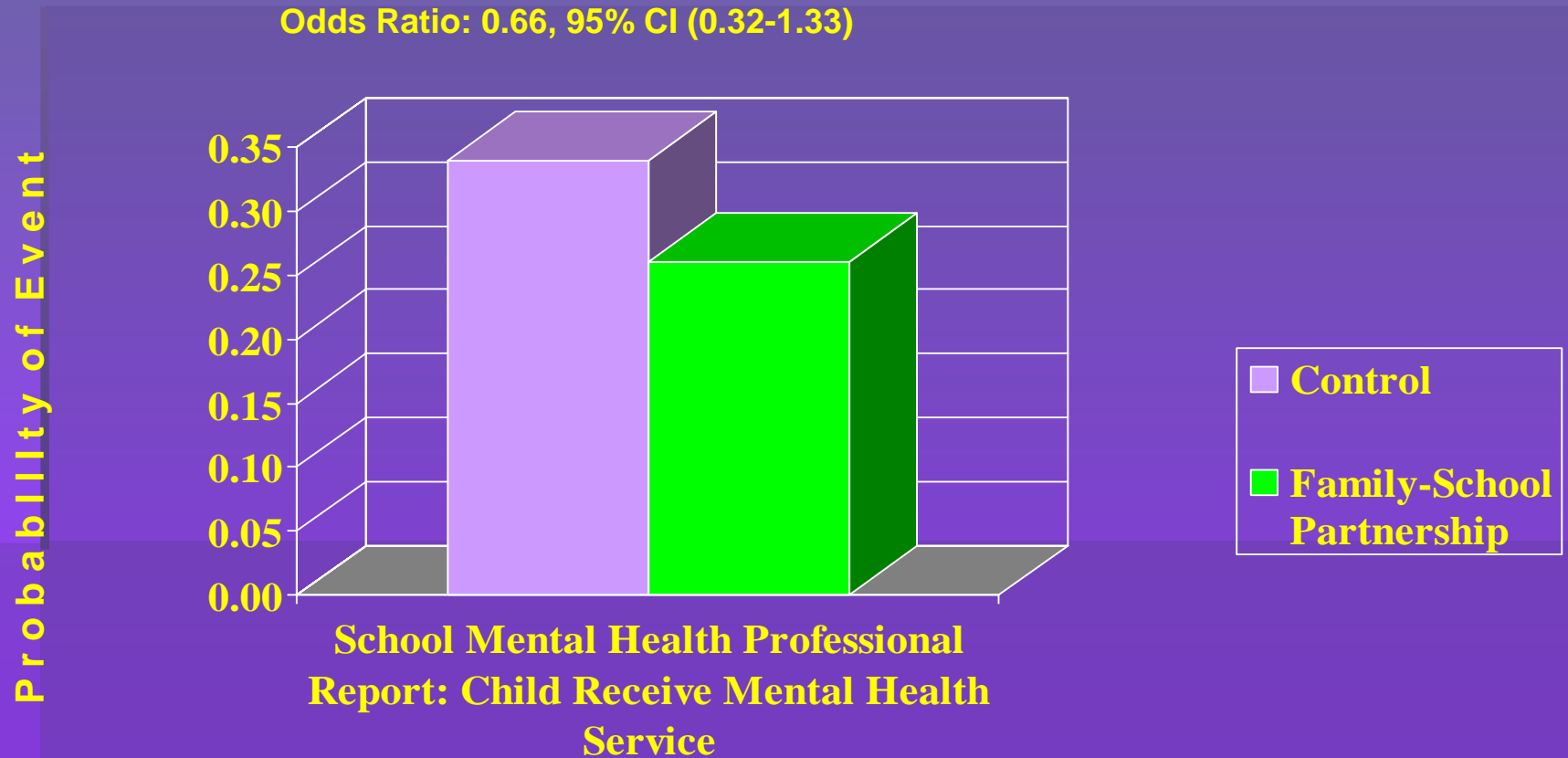
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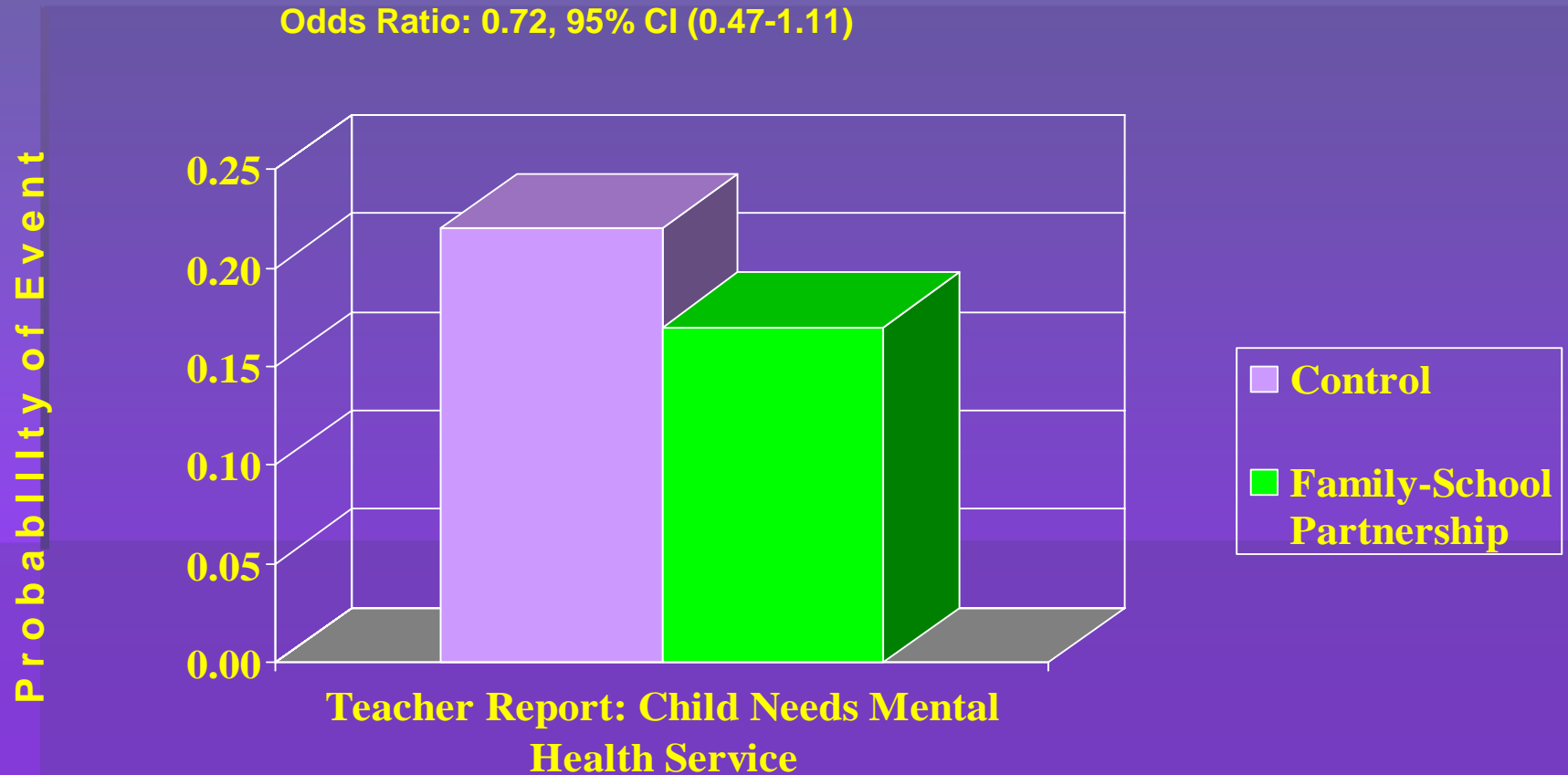
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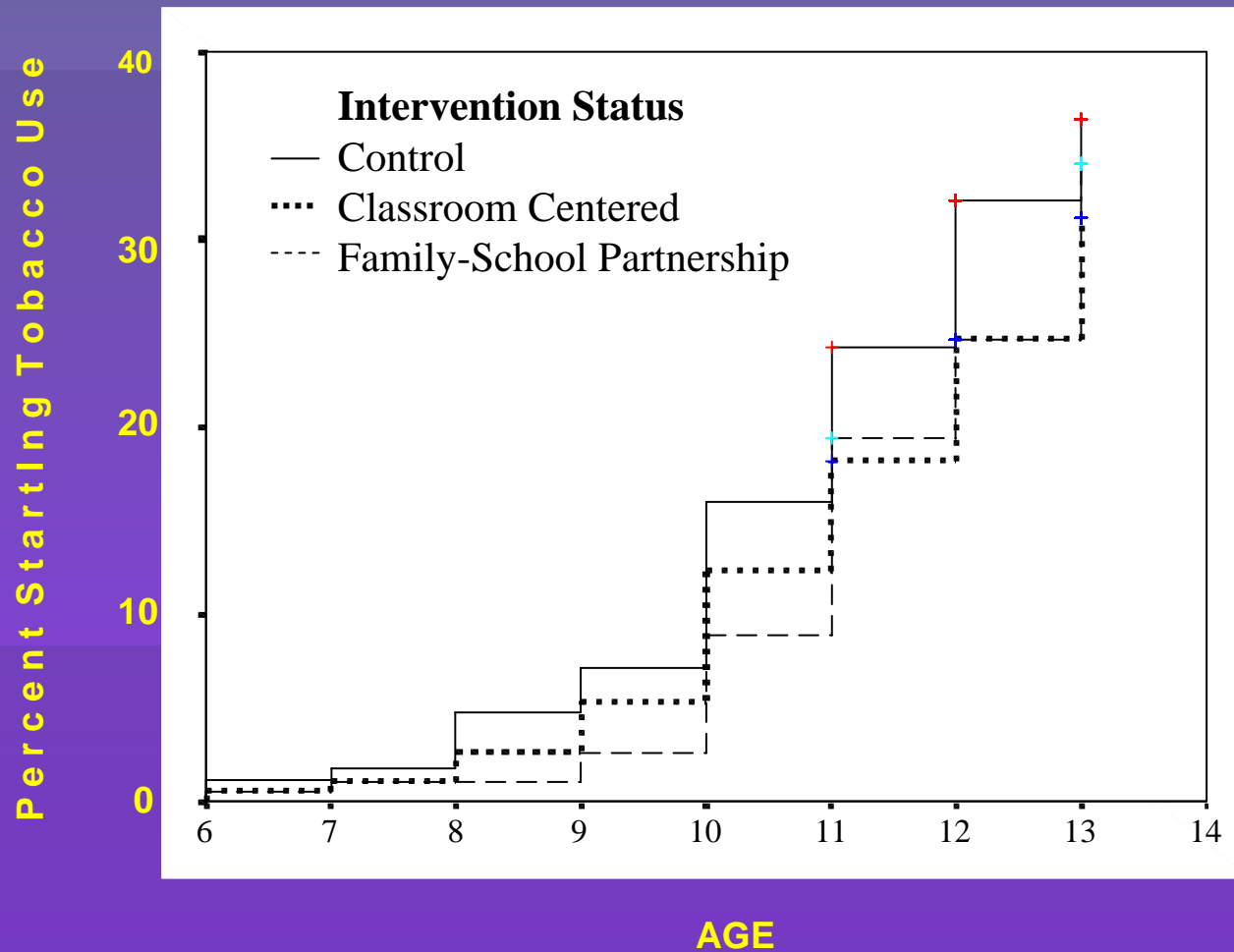
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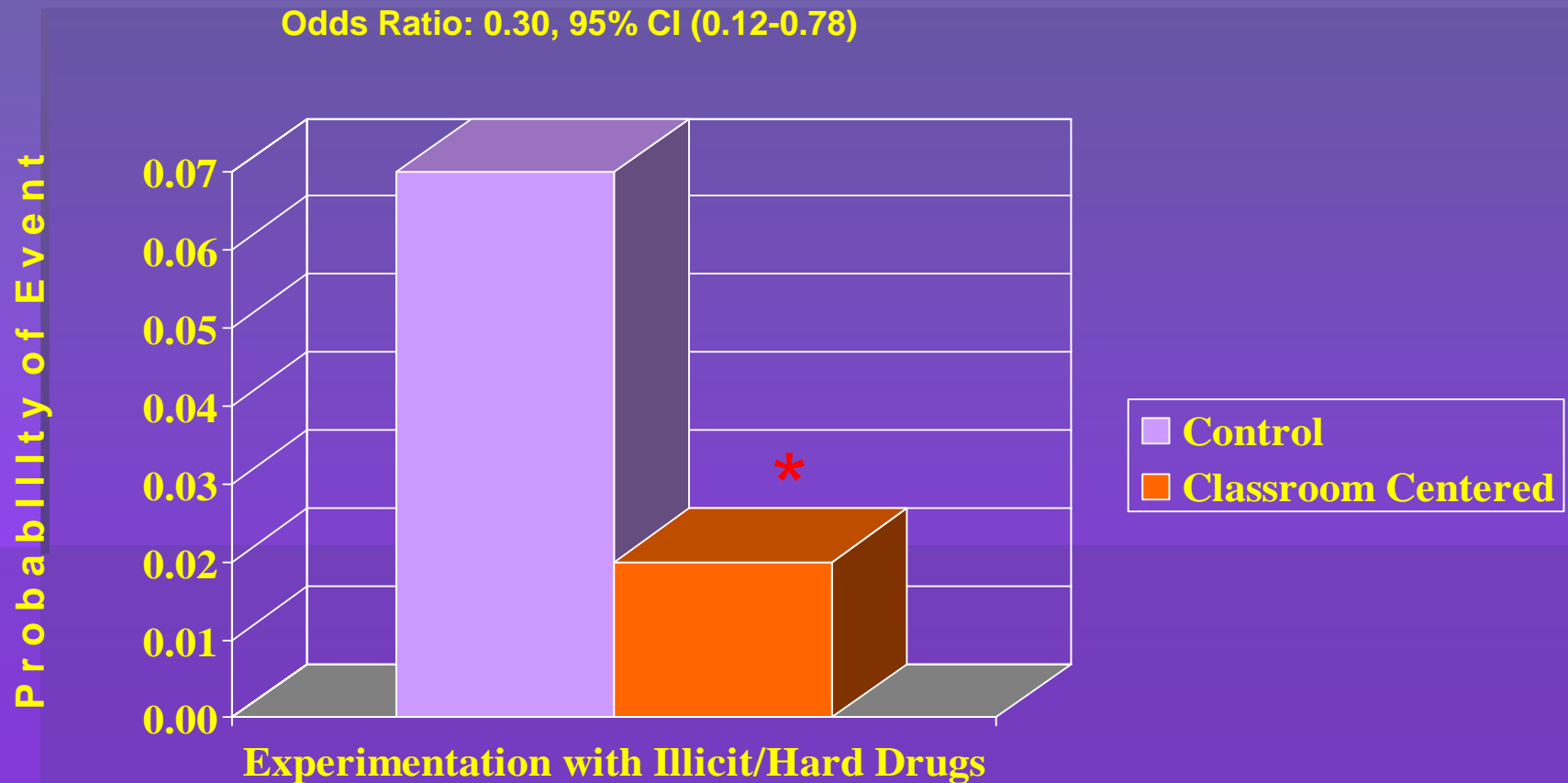


Kaplan-Meier Estimates of Impact of Interventions on Youth Tobacco Smoking

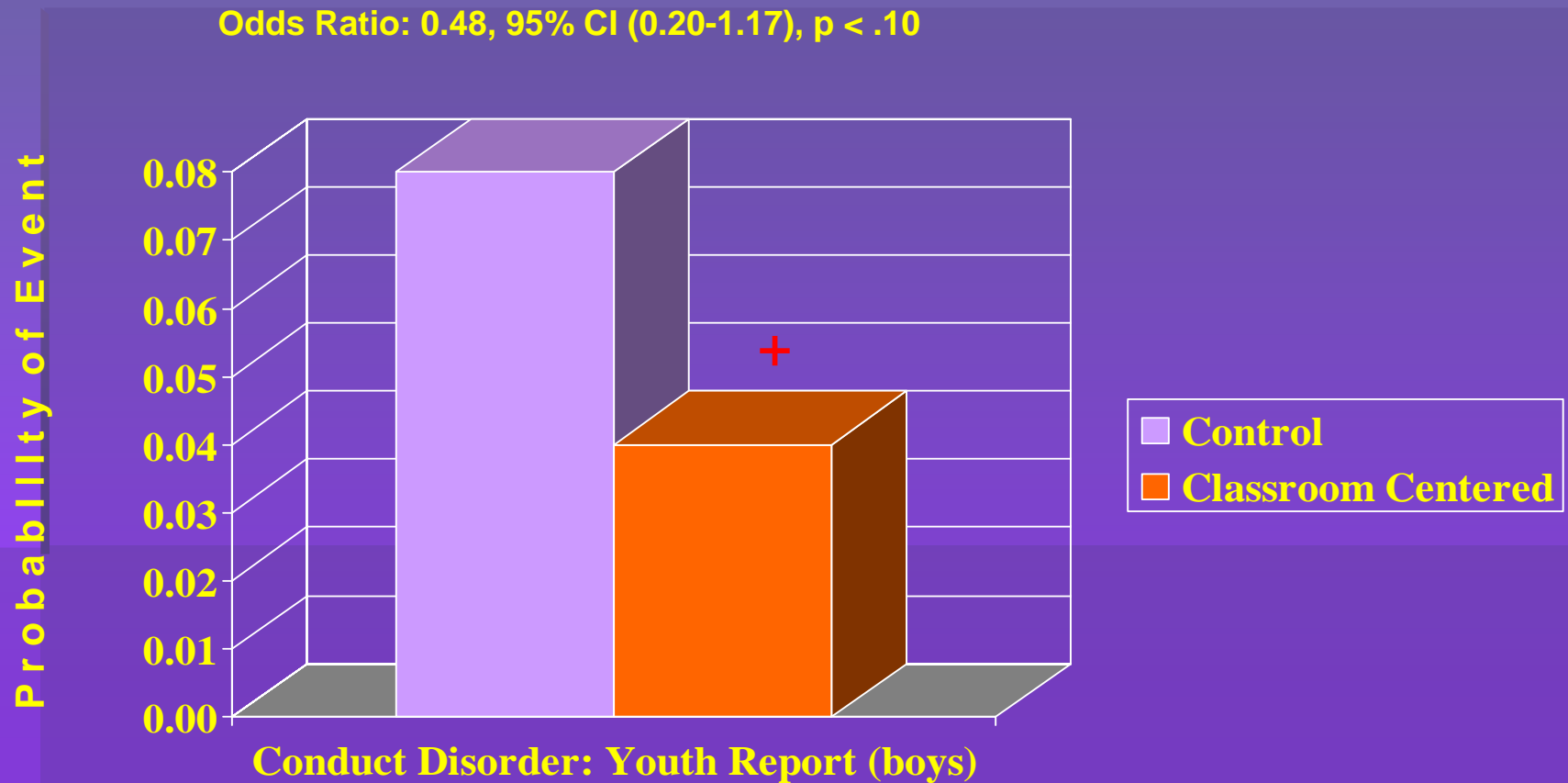


Highlights of Intervention Impact: 11th Grade

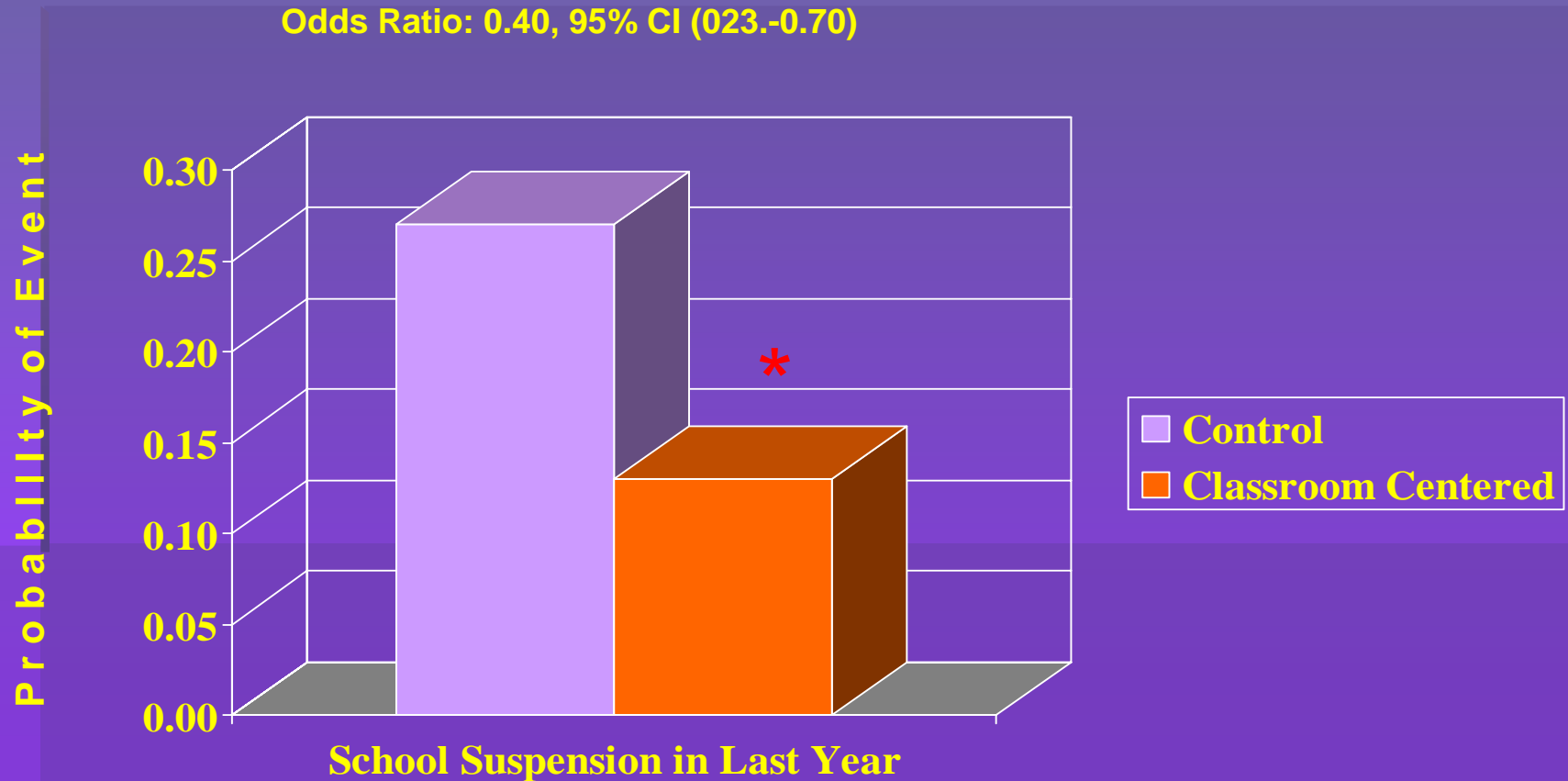
Classroom Centered vs. Control (11th grade)



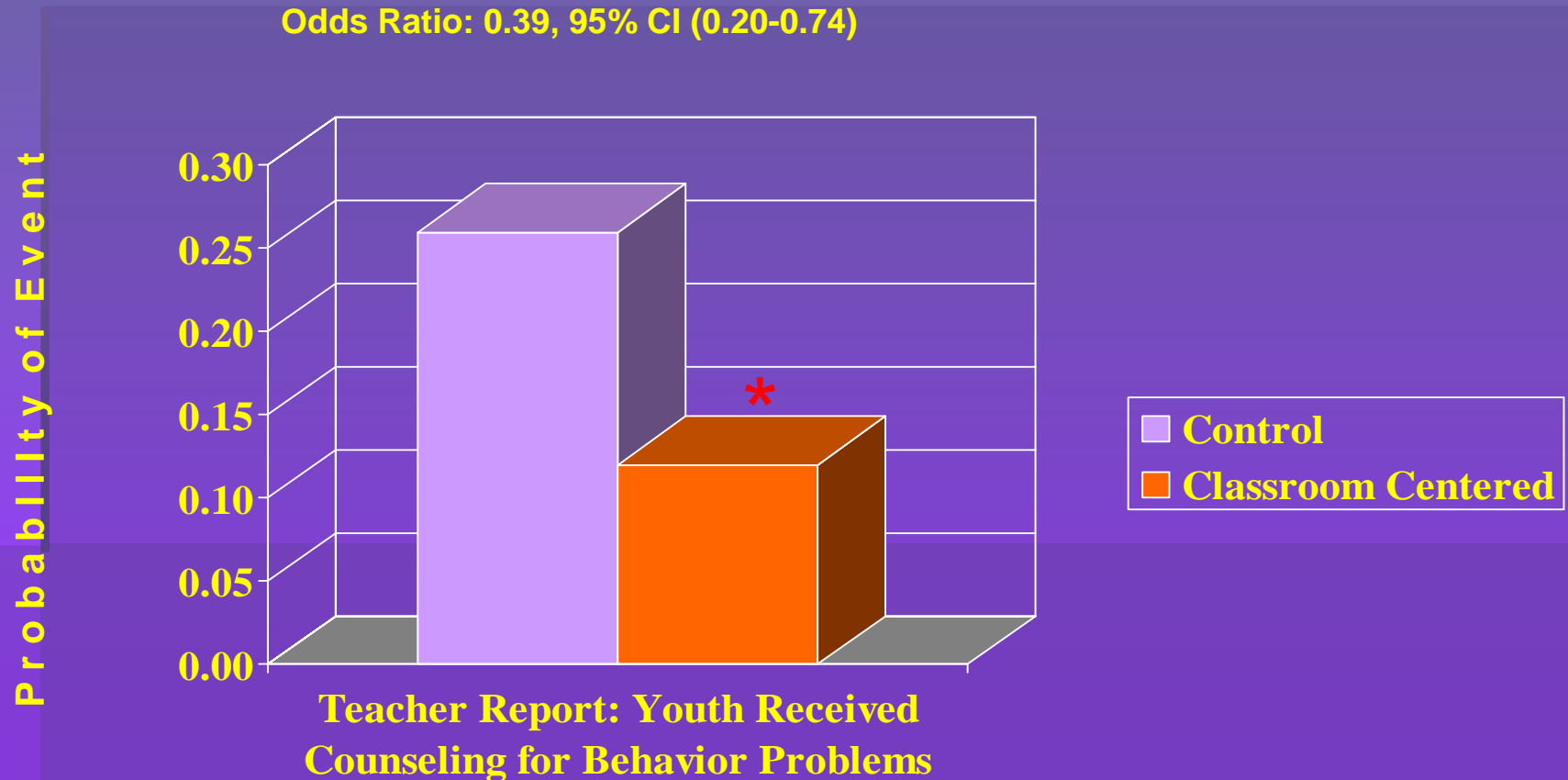
Classroom Centered vs. Control (11th grade boys only)



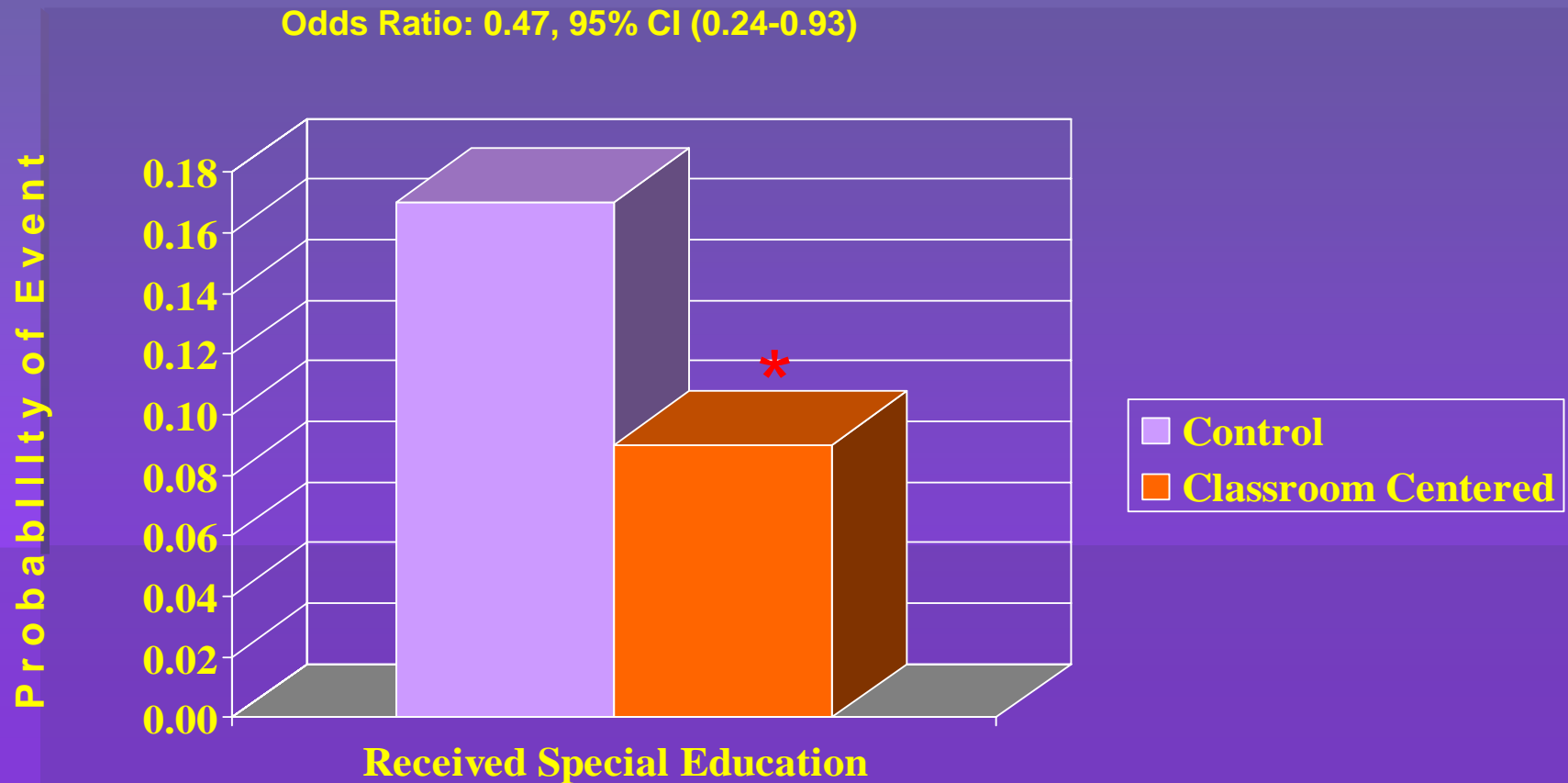
Classroom Centered vs. Control (11th grade)



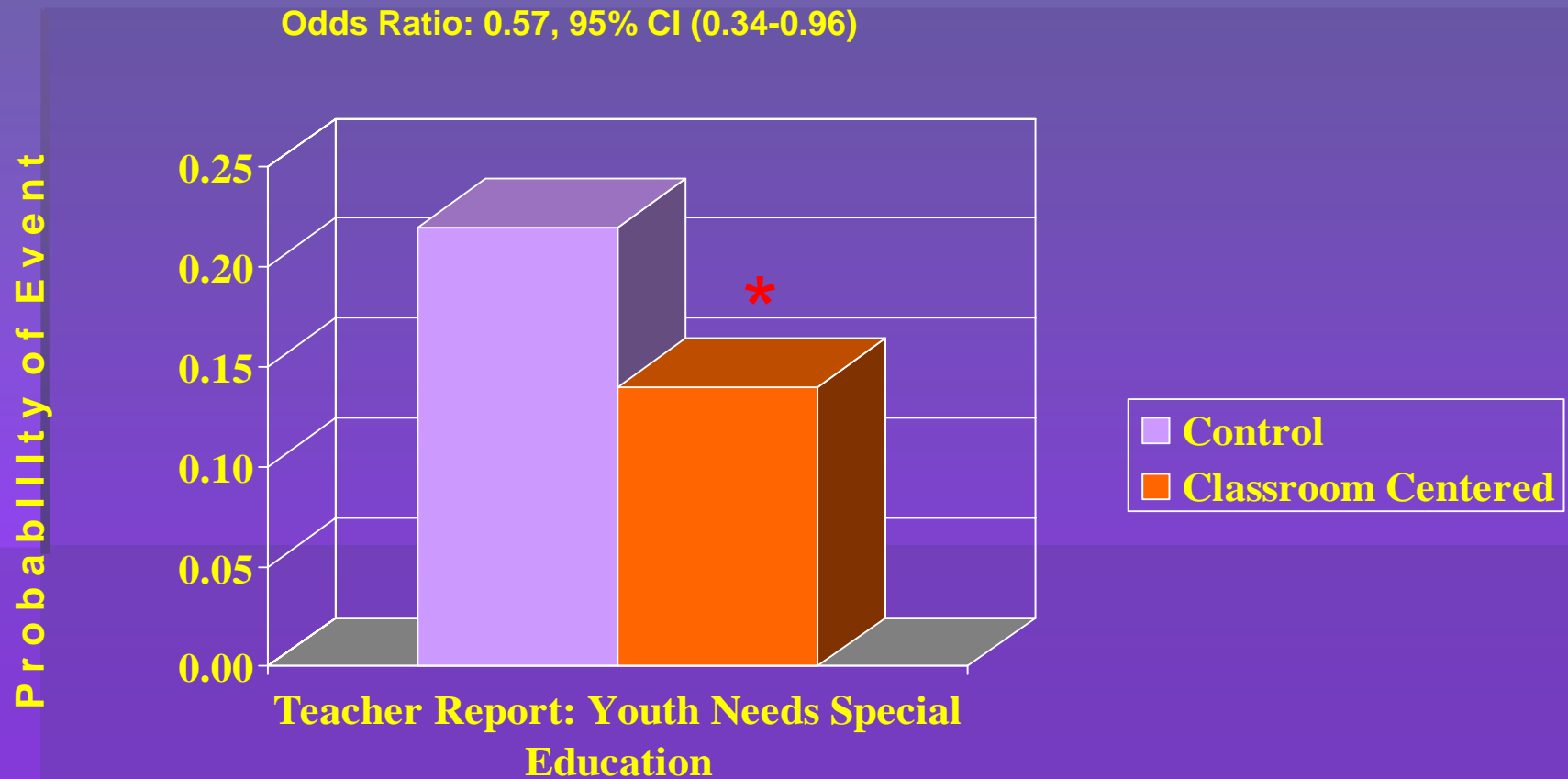
Classroom Centered vs. Control (11th grade)



Classroom Centered vs. Control (11th grade)



Classroom Centered vs. Control (11th grade)



Preliminary Conclusions

- Evidence of distal impacts of first-grade universal interventions (10 years later)
- Effects for school and externalizing outcomes but not internalizing outcomes
- Effects of CC interventions stronger and longer lasting than FSP effects
 - CC = Teachers received 60 hours training / supervision
 - FSP = Parents received nine 90-minute sessions; children well-behaved
- Impact seems to be greatest for youth at moderate risk

Future Directions for Understanding Distal Impact

- Moderator analyses – for whom, to what degree, for how long and in what contexts are interventions most effective
- Mediation analyses to examine hypothesized mechanisms
- Use of growth modeling methods to examine change in *trajectories* over time
 - Growth mixture methods to examine differential intervention effects for different trajectories

Future Directions for Prevention Trials

- Combinations of CC and FSP interventions may lead to additive if not synergistic effects
- Integration of selected and indicated interventions within universals
- Visit <http://www.bpp.jhu.edu> for slides and more information regarding new PIRC trials