Implementation of the Student Health and Physical Education (SHAPE) Act in Georgia: an Evaluation of FITNESSGRAM® Administration

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Acknowledgments

GSU Evaluation Team

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Georgia S.H.A.P.E. Partnership

- Georgia Department of Education
- Georgia Governor's Office
- Children's Healthcare of Atlanta
- Georgia Department of Community Health
- Maternal and Child Health, Division of Public Health,
- Department of Community Health
- Atlanta Falcons Youth Foundation
- Arthur M. Blank Family Foundation
- Atlanta Braves Foundation

The S.H.A.P.E. Act

- Passed 2009 (to be implemented starting 2011-2012 school year)
- Each local school system shall conduct an annual fitness assessment program
- Grades 1-12
- During PE class and by certified PE teacher
- Report individual results to parents; aggregate results to state
- Annual report to Governor and recognition program

FitnessGram®

- Selected FitnessGram® as protocol for statewide fitness testing
- Combines both an educational assessment **and** a reporting software program
- Designed to promote lifelong physical activity
- Based on the latest research on children's fitness
- Uses criterion-referenced standards
- Components of fitness
  - Aerobic Capacity - PACER /Mile Run –
  - Muscular Strength and Endurance - Curl-Ups
  - Muscular Strength and Endurance - 90º PushUps
  - Flexibility - Back-Saver Sit and Reach
  - Body Composition - Height and Weight –

Teacher Training

- Developed and delivered by HealthMPowers, Inc. (certified FitnessGram trainer)
- Full day face-to-face testing protocol
- 142 training sessions delivered
- Webinar on data entry
- Booster sessions via webinar
- Schools provided FG materials/equipment and software

Goals of Evaluation

- Assess compliance of test administrators with training protocols for student instruction for testing and number of students tested concurrently
- Assess the accuracy of test administrator in scoring fitness test components
- Capture teacher and student perceptions and experiences with test administration

Recruitment

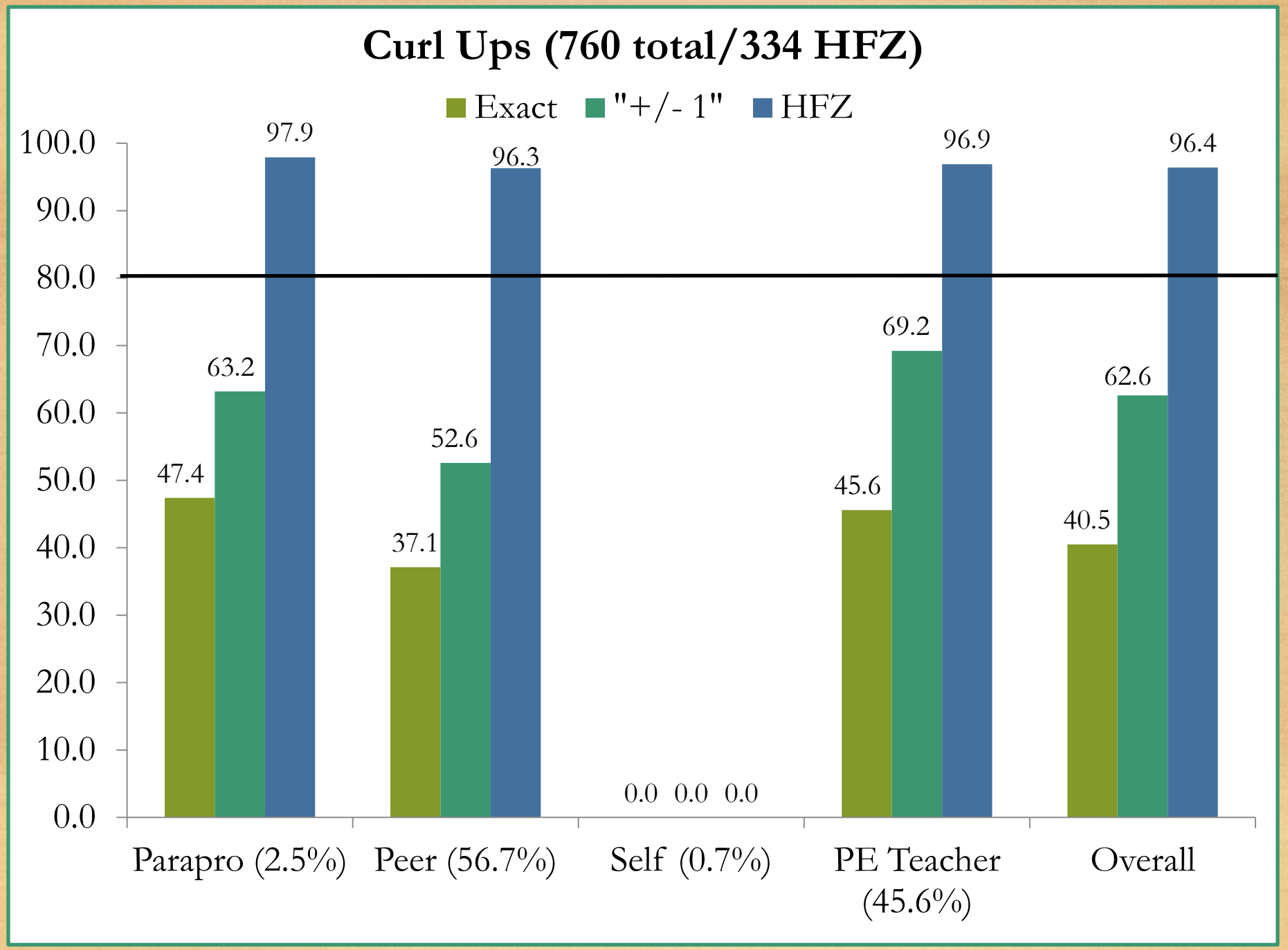
- Field Observations:
  - GSU requested participation from 182 school districts in Georgia
  - 31 districts gave consent to contact teachers
  - Following IRB approval, contacted trained teachers
  - 374 consented, equal geographic distribution
- Focus groups:
  - 70 teachers (8 districts)
  - 55 students – 4th and 5th grade (5 districts)

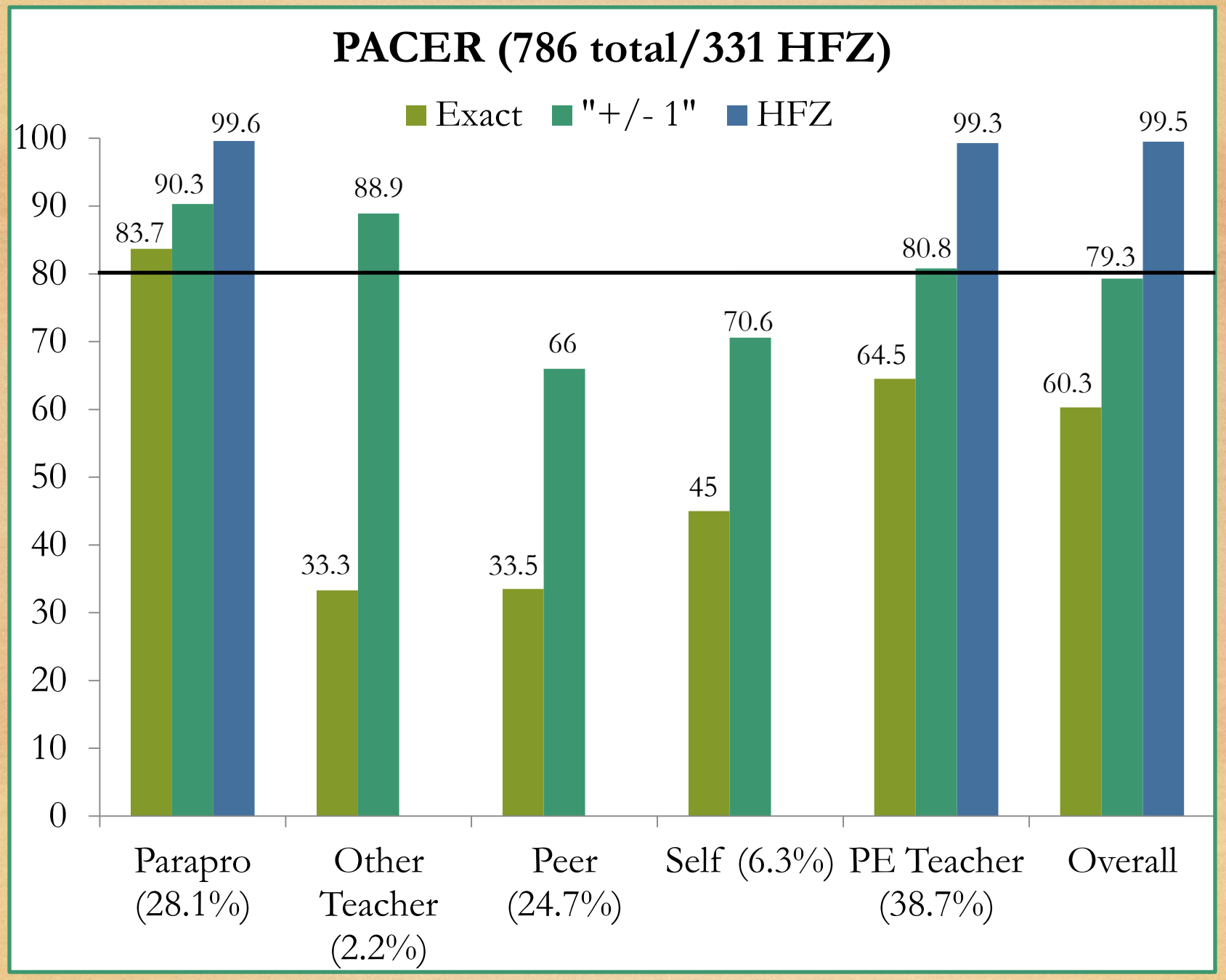
Data Collection

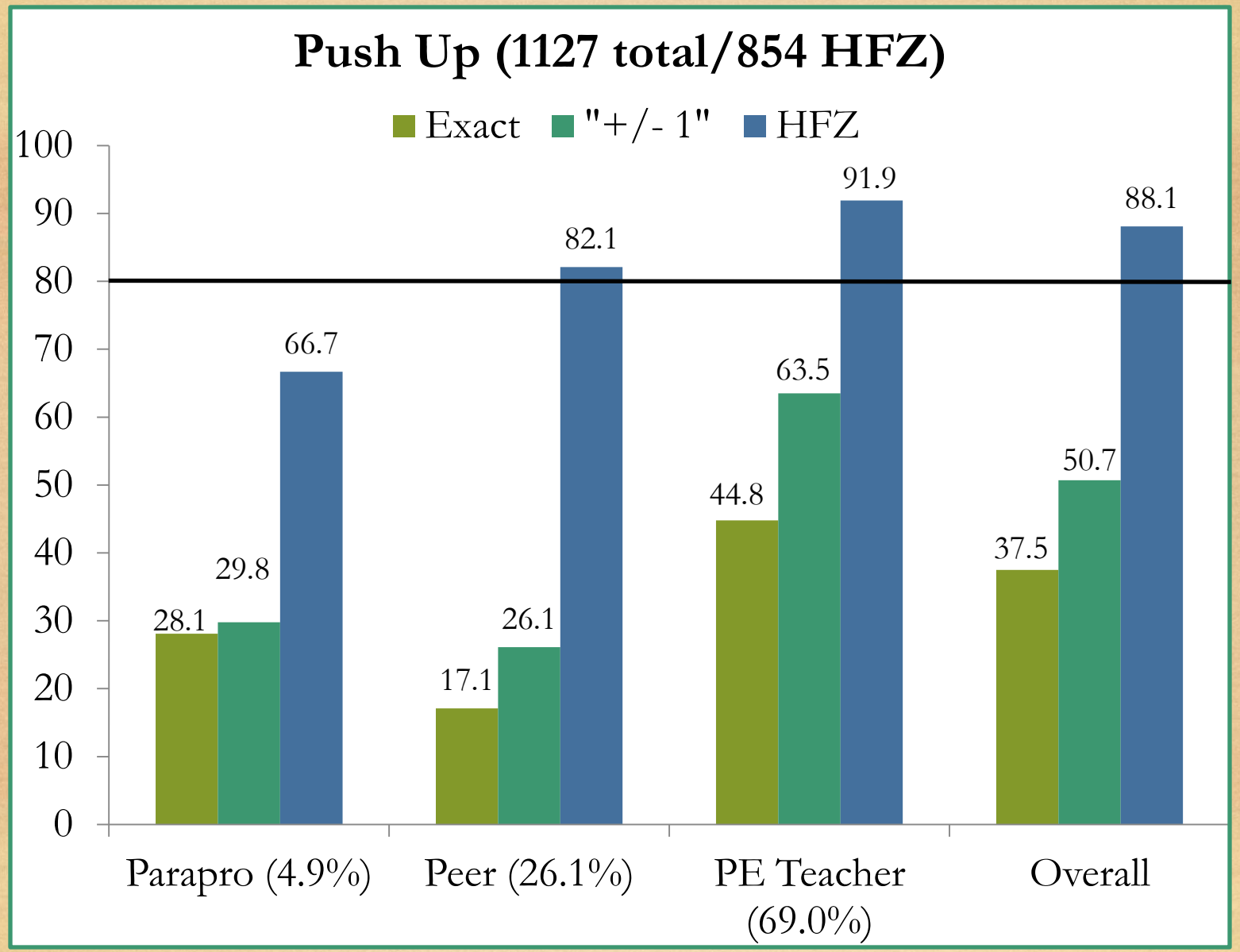
- Field Observations
  - Ninety-seven (97) teachers in 27 school districts observed
- Features of test administration observed:
  1. Number of students tested at one time
  2. Identification of the official recorder of student performance
  3. Adherence to instruction on each test
  4. Completed independent counts of tests according to FG testing protocols
- Focus groups
  - Teacher and student experiences and perceptions

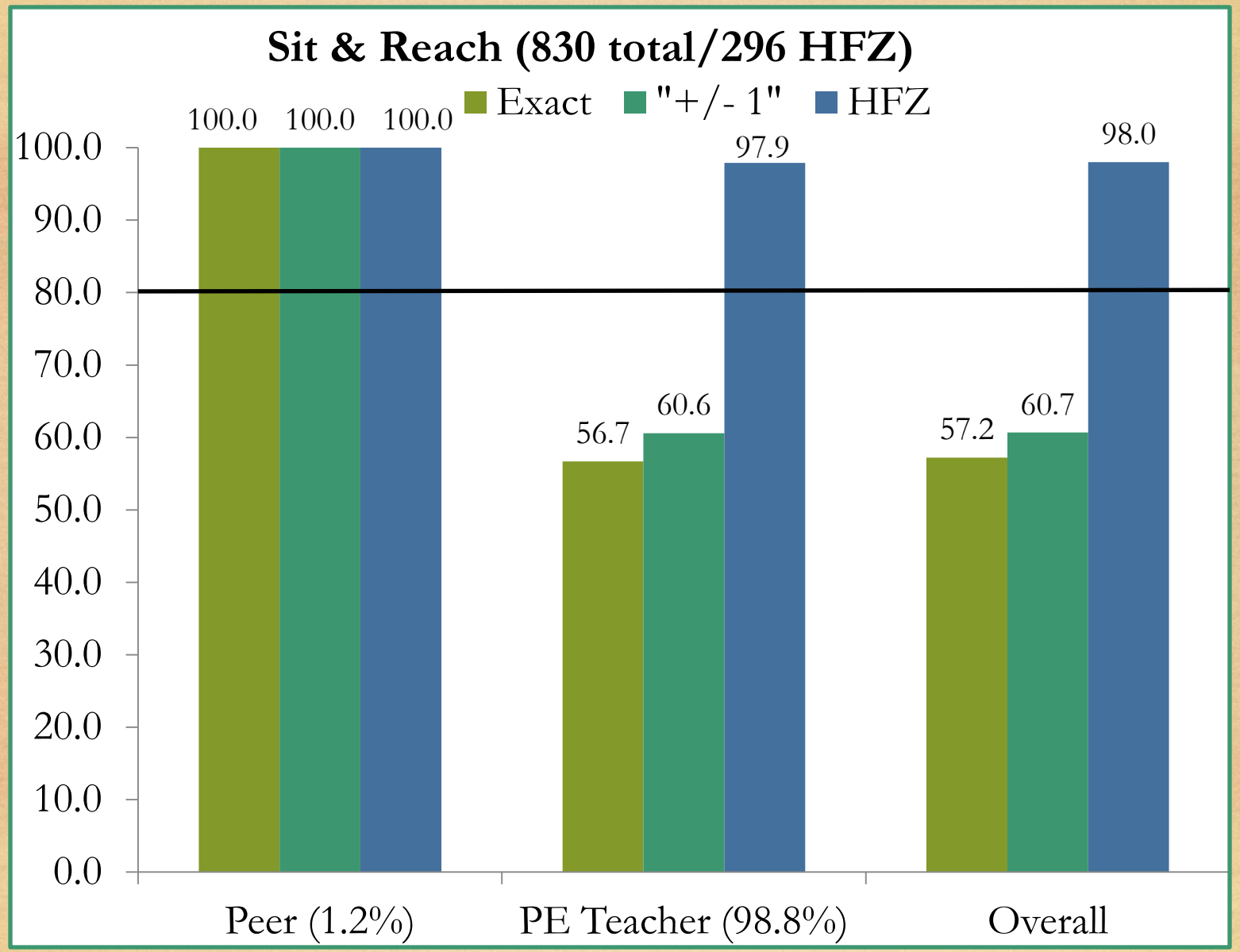
Results: Test Administration Compliance

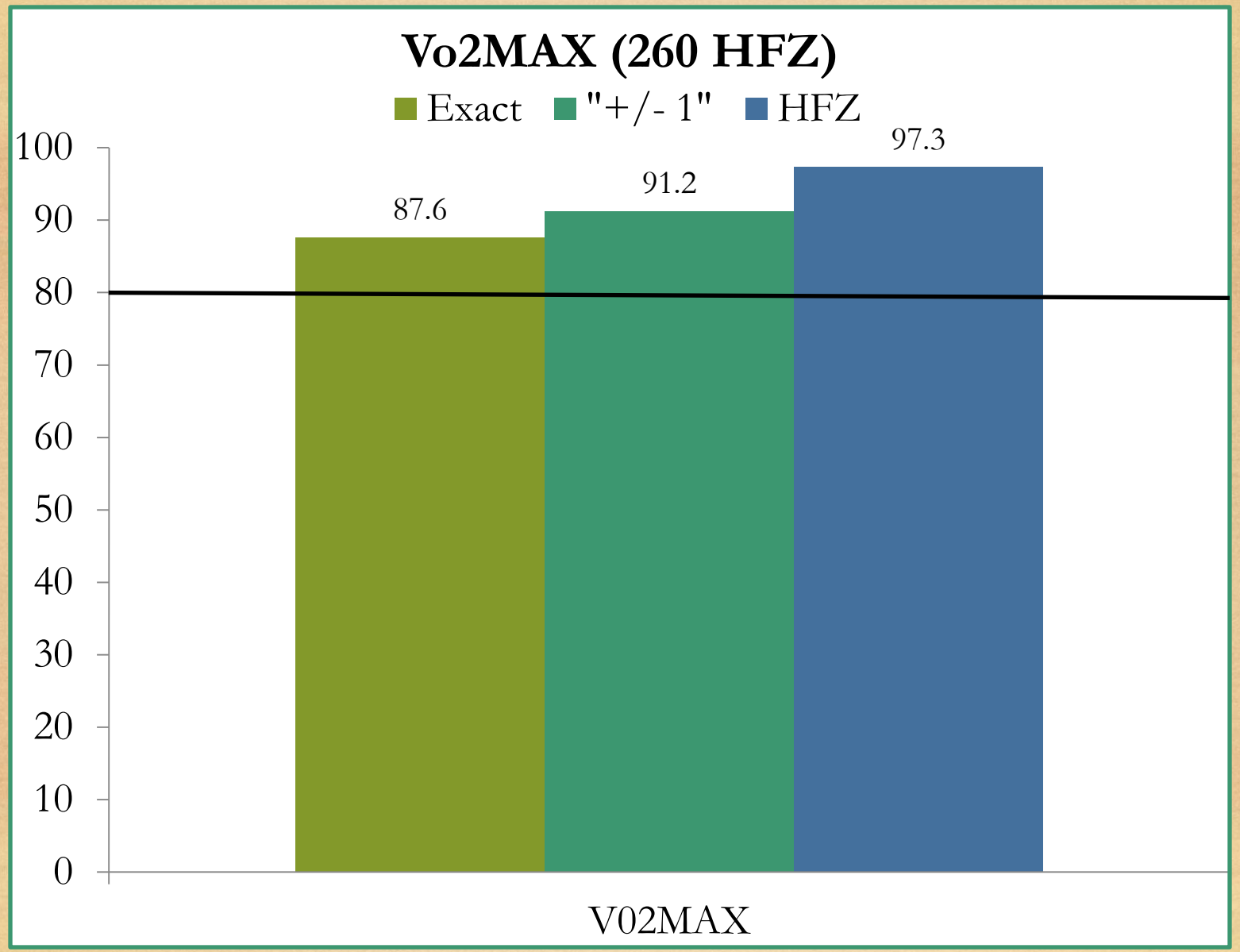
Test	N Teachers Observed	Test Elements	Elements Included and Correct	Recommended Max Test Group	Test Group Means	Range	Compliance with Max
Curl Ups	14	11	94.6%	4	6.7	1 – 25	49.6%
PACER	18	11	69.0%	6	8.9	1 – 18	36.8%
Push Ups	23	7	93.0%	4	4.9	1 – 24	54.6%
Sit & Reach	15	7	79.9%	1	1.1	1 – 4	96.7%
Height	13	6	73.0%	1	1.0	1 – 1	100%
Weight	14	4	91.1%	1	1.0	1 -- 1	100%


Curl Ups (760 total/334 HFZ)
Exact
"+/- 1"
HFZ
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
47.4
63.2
97.9
37.1
52.6
96.3
0.0
0.0
0.0
45.6
69.2
96.9
40.5
62.6
96.4
Parapro (2.5%)
Peer (56.7%)
Self (0.7%)
PE Teacher (45.6%)
Overall

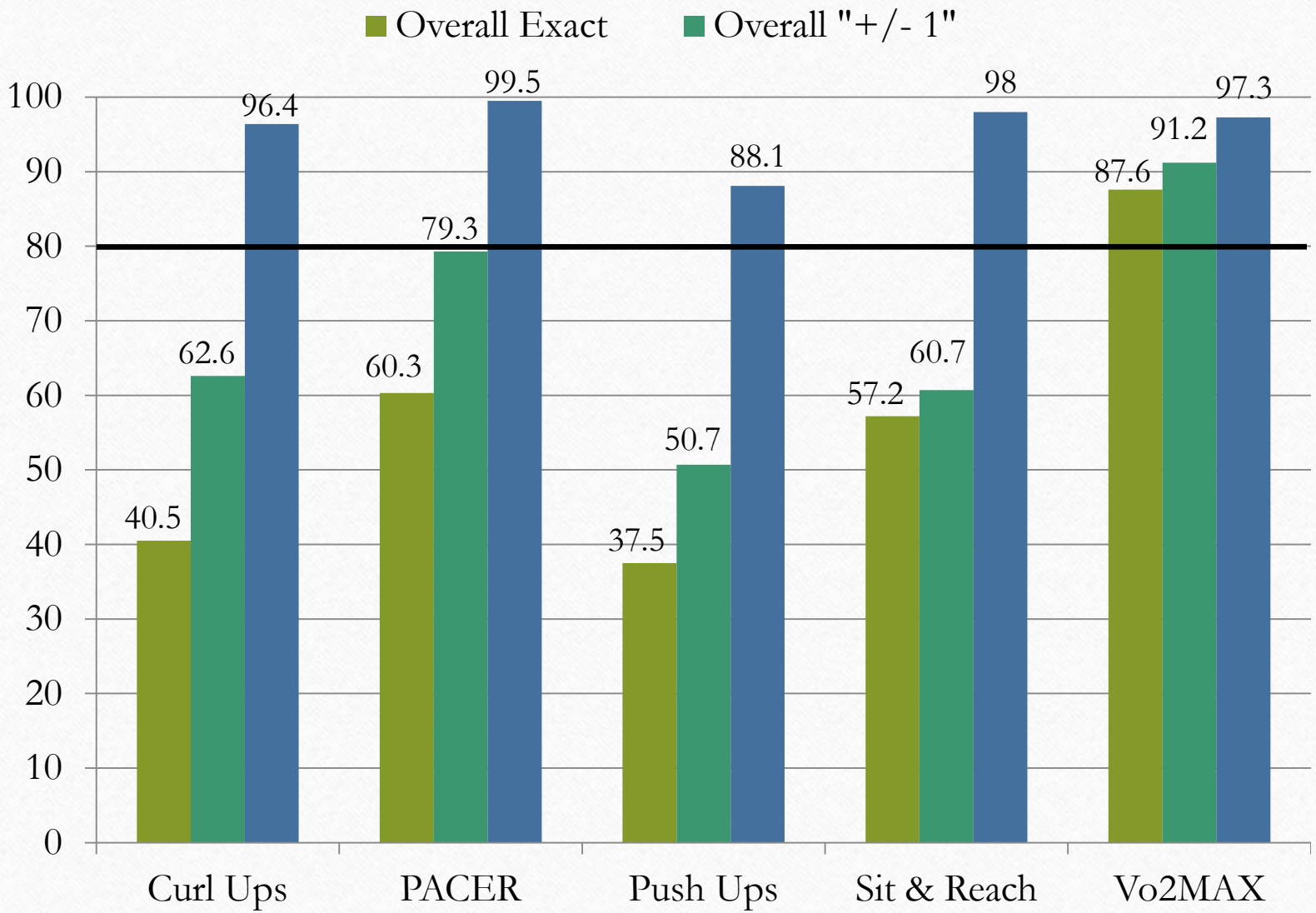

PACER (786 total/331 HFZ)
Exact
"+/- 1"
HFZ
100
90
80
70
60
50
40
30
20
10
0
83.7
90.3
99.6
33.3
88.9
33.5
66
45
70.6
64.5
80.8
99.3
60.3
79.3
99.5
Parapro (28.1%)
Other Teacher (2.2%)
Peer (24.7%)
Self (6.3%)
PE Teacher (38.7%)
Overall


Push Up (1127 total/854 HFZ)
Exact
"+/- 1"
HFZ
100
90
80
70
60
50
40
30
20
10
0
28.1
29.8
66.7
17.1
26.1
82.1
44.8
63.5
91.9
37.5
50.7
88.1
Parapro (4.9%)
Peer (26.1%)
PE Teacher (69.0%)
Overall


Sit & Reach (830 total/296 HFZ)
Exact
"+/- 1"
HFZ
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
100.0
100.0
100.0
56.7
60.6
97.9
57.2
60.7
98.0
Peer (1.2%)
PE Teacher (98.8%)
Overall


Vo2MAX (260 HFZ)
Exact
"+/- 1"
HFZ
100
90
80
70
60
50
40
30
20
10
0
87.6
91.2
97.3
V02MAX

Summary


Overall Exact
Overall "+/- 1"
100
90
80
70
60
50
40
30
20
10
0
40.5
62.6
96.4
60.3
79.3
99.5
37.5
50.7
88.1
57.2
60.7
98
87.6
91.2
97.3
Curl Ups
PACER
Push Ups
Sit & Reach
Vo2MAX

Focus Group Findings: Students

- **Peer testing generated inaccurate results**
  - "…if it was your friend spotting you, they'd let you slide… and we're all kind of friends, so the numbers might not be terribly accurate. I think with like a peer review, it's not very accurate because your friends cheat for you all the time."
  - "…a few girls would try and cheat at it. This is not what they're supposed to be doing. When we did the push-ups and stuff, a whole bunch of people took the test at once, and they can't watch every single one of us. And I was just thinking we could have done smaller groups doing it, like just a few kids, that way, you know everybody is doing it right."

Focus Group Findings: Teachers

- Student reactions generally positive, **with exceptions**
  - "Believe it or not for some students, this was traumatic. I had one or two girls that they were not overweight but they refused to weigh. One went in the restroom and shut the door and wouldn't come out."
  - Testing particularly bothered overweight students: "I would have some that would pretend that every time they came they were sick or they wouldn't come during the testing."
- Teachers' confidence to test diminished

Focus Group Findings: Teachers

- Time required to complete testing
  - Concern regarding large volume of time required; **varied from days – 1.5 months**
  - "With 115-120 students, it was difficult to get everyone tested, and ensure that the student were accurately doing the test."
  - "I do think that it's difficult to make sure that each one of them does it the same, especially with the curl-ups and the push-ups."
  - "It was a matter of just getting it done, the data will reflect that."
- Excessive sitting (sedentary time)
  - a major difficulty was finding ways to "supervise the ones that aren't actually involved in the testing and keeping them occupied..."

Discussion

- Fitness data can be used for evaluating students' HFZ performance
- Limited usefulness of raw scores for comparing indiv. performance over time
  - unacceptable inter-observer agreement
- Degree of compliance must be known prior to use of individuals data
- Time to test / accuracy trade off
  - One-on-one testing may increase accuracy of the scores; it also increases the time required
- Raises questions about quality of data in other states

Conclusion

- FG testing serves an important function – identifying child's health related fitness
- FG reports should and do provide HFZ categories for each child
- The very high HFZ IOA in this study provides good confidence in knowing where a child's health related fitness stands
- To improve testing administration and student experience
  - Supplement teacher training
  - Identify and promote strategies to reduce sedentary time
  - Sensitivity to student anxiety toward testing

Questions?

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