Carol C. Irwin, PhD, is currently an assistant professor in Physical Education Teacher Education at the University of Memphis. Dr. Irwin has been involved in all levels of education (PK-higher ed.) for over 30 years. She was a lifeguard, WSI, and swim team coach earlier in her career and continues to be an advocate for formal swimming lessons for all children. Her main research interests are minority swimming ability/participation and community programs to enhance swimming competence.

Abstract

Minority children experience fatal and non-fatal drowning at three times the rate of white peers. Swimming ability has been cited as a preventative mediator to drowning. The presentation will discuss the results from the USA Swimming Diversity in Swimming Study which examined swimming ability and associated variables among US minority children. This research was Phase II of a previous study conducted in 2008, both commissioned by USA Swimming. The Phase II study used a mixed method approach (Phase I-survey only). Six large cities in various regions of the US were chosen for data collection (Atlanta; Boston; Denver; Memphis; San Diego; & St. Paul/Minneapolis). Research team members worked with YMCAs in selected cities to solicit low income, minority subjects (youth & parents) who completed surveys (n=1,909) and participated in focus groups (n=72). Results show that African American respondents reported a 68.9% “low or no” swimming ability level (cannot swim - uncomfortable in deep end of pool). Hispanic/Latino youth confirmed a 57.9% “low/no” level while 41.8% of White participants rated themselves in “low/no” category. Free/reduced lunch program participants cited 66% “low/no.” Regression analysis confirmed “fear of drowning,” parental encouragement, appearance issues (hair, skin) were significant predictor variables. Financial and access concerns were variables included within the model, but were not significant. Focus group feedback verified regression results and uncovered valuable solutions. These results indicate that minority children are at significant disadvantage concerning swimming ability. Major barriers to swimming instruction include parental fear and lack of encouragement. These obstacles can be overcome through implementation of focus group solutions, which will be highlighted.
USA Swimming Diversity Research Summary: Emerging Solutions from the Pool Deck

Carol C. Irwin, Richard L. Irwin, Tim D. Ryan, Nathan T. Martin, and Sally R. Ross
Department of Health and Sport Sciences
University of Memphis

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The Problem-
Minority fatal and non-fatal drowning rates

- Second leading cause of unintentional injury death for all children ages 1-14 (CDC, 2011)
- African American (AA) fatal drowning rate (ages 5-14) is 3.1 times that of White peers (CDC, 2011)
- Between 2000 & 2005, fatal unintentional drowning rate for AAs (all ages) was 1.3 times that of Whites. For American Indians & Alaskan Natives, this rate was 1.7 times that of Whites (CDC, 2011)

Swimming Ability/Participation

- Limited adult swim ability—62% AA, 44% Hispanic, 32% White (Gilchrist, Sacks, & Branche, 2000)
- Within last year—Almost 75% AAs – no swimming participation; 60% White participation in swimming at least once (Hastings, Zahran, & Cable, 2006)
- USA Swimming, the NGB for swimming in the US, confirmed ethnicity identity for their competitive swim club members (2008)
  - 92.5% Caucasian
  - 4.2% Hispanic
  - 1.2% African American
  - 1% Asian/Pacific Islander
  - 0.5% Native American
- No known research concerning swimming ability levels for children
Methodology (Phase I & II)

- Funding: USA Swimming Foundation.
- Design: Mixed methods; survey research & focus group interviews (Phase II only).
- Setting: Six US cities—Atlanta, Boston, Denver, Memphis, Minneapolis/St. Paul, and San Diego; YMCAs used to solicit subjects for both surveys and focus groups.
- Subjects: A convenience sample (n=1,909) was gathered, targeting poor, minority populations. Parents of children aged 4-11 years (completed surveys for their child) & adolescents (12-17).

Procedures

- Original survey instrument drawn from Phase I research and previous youth physical activity studies
- Visits with each YMCA organization in each market to train staff on survey administration protocol including consent
- Used subjects from non-swimming programs
- Focus groups at each market site (n=72)
  - 1 group with non-swimming parent/caregivers
  - 1 group with swimming parent/caregivers
- Each participating YMCA organization was offered $500 for meeting survey objectives

Swimming Ability Question

---No---  Low  Skilled

<table>
<thead>
<tr>
<th>Cannot swim at all</th>
<th>Can splash around-shallow end</th>
<th>Can put face in water-blow bubbles</th>
<th>Can hold head under water-5-10 secs</th>
<th>Can glide a little-face in water-shallow end only</th>
<th>Can swim a little in the deep-end-face in water-can float a little</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can swim with true front crawl stroke-1 pool length-no stopping</td>
<td>Can swim front crawl stroke 2-3 pool lengths-no stopping-can tread water for 5-10 mins</td>
<td>Can swim 4 or more pool lengths-no stopping-know 3 or 4 different strokes</td>
<td>Can swim many lengths w/out stopping-on a swim team or could be on a swimming team</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

National Swimming Pool Foundation ∙ 4775 Granby Circle ∙ Colorado Springs, CO 80919 ∙ (719)540-9119 ∙ www.nspf.org
Results - Swimming Ability (4-18 yrs)

<table>
<thead>
<tr>
<th></th>
<th>No Ability - Can't Swim</th>
<th>No/Low Ability</th>
<th>Skilled Swimmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>10.2%</td>
<td>61.5%</td>
<td>38.5%</td>
</tr>
<tr>
<td>Males</td>
<td>11.1%</td>
<td>57.0%</td>
<td>43.0%</td>
</tr>
<tr>
<td>Females</td>
<td>9.3%</td>
<td>64.3%</td>
<td>35.7%</td>
</tr>
<tr>
<td>4-11 yrs</td>
<td>13.1%</td>
<td>73.1%</td>
<td>26.9%</td>
</tr>
<tr>
<td>12-18 yrs</td>
<td>8.5%</td>
<td>54.0%</td>
<td>36.0%</td>
</tr>
<tr>
<td>Parent</td>
<td>19.4%</td>
<td>53.8%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Afr. Amer.</td>
<td>13.9%</td>
<td>68.9%</td>
<td>31.1%</td>
</tr>
<tr>
<td>Hisp/ Latino</td>
<td>7.4%</td>
<td>57.9%</td>
<td>32.2%</td>
</tr>
<tr>
<td>White</td>
<td>5.6%</td>
<td>41.8%</td>
<td>58.2%</td>
</tr>
<tr>
<td>Free/Red Lunch</td>
<td>11.9%</td>
<td>65.6%</td>
<td>34.2%</td>
</tr>
<tr>
<td>No Lunch Prog.</td>
<td>6.7%</td>
<td>50.2%</td>
<td>49.8%</td>
</tr>
</tbody>
</table>

Multiple Regression Analysis
“No/Low” Swimming Ability

- Highly significant variables (in order)-
  - Fear of drowning and injury
  - Lack of parental encouragement to swim
  - Personal appearance issues (hair, skin, eyes, etc.)
- Other less significant variables in model-
  - Financial barriers
  - Access issues

Results - Focus Group Themes

- **Traditional Access Constraints**
  - Facilities, cost, time, transportation

- **Cultural Constraints**
  - Cultural norms & socialization
  - Multi-generational lack of water competency
Results- Focus Group Quotes

• The “Fear Factor”
  • Yvonne, Denver: “You’re already uncomfortable and scared. You’re like, ‘I’m paying them so I can have heart palpitations on the sidelines?’ It’s not worth it. It really isn’t. Why should I have to pay money to be afraid?”

Results- Focus Group Quotes

• Personal Appearance Issues
  • Nan, Boston, non-swimming kids: “I like the pool, I like to be in the water but me and the hair issues? No! Having to do my hair over and over again, and with the chlorine (laughing). To be truthful, that’s why I don’t swim.”

Results- Focus Group Quotes

• Socialization
  • Sharyl, Boston, African American mom, swimming kids: “I still stick on the fact that its culture. I still think it’s that and what you see on TV, you see a lot more of Caucasian kids or adults loving the beach, loving the water you know what I mean, being fish-like, a lot of things play into this it’s not just the statistics; it has to deal with life.”
Conclusions

- Results show that swimming ability in urban minority children is dangerously low - a clue to disproportionate drowning rates?
- Close to two thirds (61.5%) of the sample were considered to be "no/low" swimmers, with 68.9% of African–American and 57.9% of Hispanic/Latino respondents deemed "no/low" swimmers, as well as, 64.3% of female respondents.
- African–American girls reported the highest level of "no/low" swimming ability (73.5%) followed by Hispanic/Latino girls (61.6%)- White girls noted a “no/low” rate of 38%.
- Economically disadvantaged children qualifying for free or reduced lunch programs are significantly less able to swim (65.6%) than the more affluent or "no lunch" program (50.2%).

Proposed Solutions

- Consider the Messenger
  - “Fliers don’t work”
  - Deliver message via trustworthy individual or group; role models
- Focus Message on Water Safety
  - Risk of drowning as leading part of the message

Proposed Solutions

- Educate Kids AND Adults
  - Train healthcare workers
  - Include water safety in WIC education sessions
  - Provide instructional & convincing DVDs for parents
  - Create DVDs with characters popular with kids
Proposed Solutions

- Formal Swimming Lessons and Minority Swimming Programs
  - Make lessons affordable; start them young
  - Provide incentives for completing programs
  - Require parent-free pool decks during lessons
  - Support mandatory school programs and community programs (free/low cost)

One example...

Make a Splash Mid-South “Learn to Swim” Program - Memphis, TN
- Pilot program - February, 2009
- Approx. 500 children have learned to swim
- Developmental swim team

www.makeasplashmidsouth.org

Thank you!

Dr. Carol Irwin – cirwin@memphis.edu
Dr. Richard Irwin – rirwin@memphis.edu

Questions?