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REDUCING GLOBAL HEALTHCARE COST:

Using the development of self-efficacy through sport-specific training
Objectives

- Analyze stats on global childhood/adult obesity rates vs. rate of sport/sport specific-training participation
- Analyze stats on global health costs associated with care for the obese population
- Establish a correlation between participation in sport/sport specific-training participation and reduction disease risk/health care cost
- Analyze the differences within the 3 domains of learning and 3 pillars of self-efficacy
- Application of statistical, clinical, and practical findings into a developmental program
Obesity Stats

- The worldwide prevalence of obesity more than doubled between 1980 and 2014.
- In 2014, more than 1.9 billion adults, 18 years and older, were overweight. Of these over 600 million were obese.
- 39% of adults aged 18 years and over were overweight in 2014, and 13% were obese.
- 38% of men and 40% of women were overweight, 11% of men and 15% of women were obese in 2014.
- Most of the world's population live in countries where overweight and obesity kills more people than underweight
- 42 million children under the age of 5 were overweight or obese in 2013.
Physical Activity Stats

- Only one in three children are physically active every day.
- Less than 5% of adults participate in 30 minutes of physical activity each day; only one in three adults receive the recommended amount of physical activity each week.
- Only 35 – 44% of adults 75 years or older are physically active, and 28-34% of adults ages 65-74 are physically active.
- More than 80% of adults do not meet the guidelines for both aerobic and muscle-strengthening activities, and more than 80% of adolescents do not do enough aerobic physical activity to meet the guidelines for youth.
- In 2013, research found adults in the following states to be most likely to report exercising 3 or more days a week for at least 30 minutes: Vermont (65.3%), Hawaii (62.2%), Montana (60.1%), Alaska (60.1%). The least likely were Delaware (46.5%), West Virginia (47.1%) and Alabama (47.5%). The national average for regular exercise is 51.6%.
Physical Activity Stats (cont.)

- Children now spend more than seven and a half hours a day in front of a screen (e.g., TV, videogames, computer).
- Nationwide, 25.6% of persons with a disability reported being physically inactive during a usual week, compared to 12.8% of those without a disability.
- Only about one in five homes have parks within a half-mile, and about the same number have a fitness or recreation center within that distance.
- Only 6 states (Illinois, Hawaii, Massachusetts, Mississippi, New York and Vermont) require physical education in every grade, K-12.
- 28.0% of Americans, or 80.2 million people, aged six and older are physically inactive.
- Nearly one-third of high school students play video or computer games for 3 or more hours on an average school day.
### Youth Sport Statistics (Ages 5-18)

<table>
<thead>
<tr>
<th>Stat</th>
<th>Data</th>
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<tbody>
<tr>
<td>Number of kids who play organized sports each year</td>
<td>36,000,000</td>
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<tr>
<td>Percent of parents who are worried about injuries in youth sports</td>
<td>87 %</td>
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<tr>
<td>Percent of kids who play sports outside of school</td>
<td>60 %</td>
</tr>
<tr>
<td>Percent of boys who play organized sports</td>
<td>66 %</td>
</tr>
<tr>
<td>Percent of girls who play organized sports</td>
<td>52 %</td>
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<tr>
<td>Percent of coaches who are dads coaching their own kids</td>
<td>85 %</td>
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<td>Percent of corporation executives who played sports</td>
<td>73 %</td>
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</table>

### High School Sports Numbers

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<th>Stat</th>
<th>Data</th>
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<tr>
<td>Number of boys playing high school soccer</td>
<td>286,000</td>
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<tr>
<td>Number of girls playing high school soccer</td>
<td>211,000</td>
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<tr>
<td>Number of boys playing high school football</td>
<td>1,200,000</td>
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<td>Number of boys playing high school basketball</td>
<td>510,000</td>
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</table>
Obesity Global Healthcare Costs

- Obesity is 3rd on the list costing the global economy $2 trillion per year, behind smoking and armed conflict.
- 21% of all current medical spending in the United States is now obesity related.
- Childhood obesity is estimated to cost $19,000 more per child when comparing lifetime medical costs to those of a normal weight child.
- $12,900 more per child when considering the possibility of normal weight children becoming overweight or obese in adulthood.
Participation Guidelines Children & Adolescents (Age 6-17)

No Chronic Conditions

- 60 minutes or more of physical activity daily at a moderate intensity of aerobic activities
- Vigorous-intensity aerobic activity at least 3 days per week
- Muscle-strengthening and bone-strengthening activity at least 3 days per week.

Chronic Conditions

- Develop a physical activity plan with your health care professional.
- Avoid inactivity.
Participation Guidelines Adults (Age 18-64)

No Chronic Conditions

▪ 150 minutes a week of moderate-intensity, or 75 minutes a week of vigorous-intensity aerobic physical activity
▪ Muscle-strengthening activities that involve all major muscle groups performed on 2 or more days per week.

Chronic Conditions

▪ Develop a physical activity plan with your health care professional.
▪ Be as physically active as possible.
▪ Avoid inactivity
Participation Guidelines Older Adults (Age 65+)

No Chronic Conditions

- Follow the adult guidelines, or be as physically active as possible.
- Avoid inactivity.
- Exercises that maintain or improve balance if at risk of falling.

Chronic Conditions

- Develop a physical activity plan with your health care professional.
Taxonomy of Cognitive Domain

1. Knowledge
   - Identify
   - Memorize
   - Recognize

2. Comprehension
   - Classify
   - Summarize
   - Explain

3. Application
   - Develop
   - Demonstrate
   - Exhibit

4. Analysis
   - Investigate
   - Differentiate
   - Separate

5. Synthesis
   - Propose
   - Design
   - Arrange

6. Evaluation
   - Assess
   - Compare
   - Appraise
Taxonomy of Affective Domain

1. Receiving
   - Sense
   - Experience
   - Pursue

2. Responding
   - Cooperate
   - Conform
   - Contribute

3. Valuing
   - Acceptance
   - Preference
   - Commitment

4. Organization
   - Examine
   - Clarify
   - Systematize

5. Characterization
   - Review
   - Conclude
   - Internalize
Taxonomy of Psychomotor Domain

1. Reflex movements
   - Involuntary muscle contractions
     - Present at birth
     - Emerging through maturation

2. Fundamental movements
   - Walking, running, & jumping
   - Pushing, pulling, manipulating

3. Perceptual abilities
   - Visual
   - Auditory
   - Tactile

4. Physical Abilities
   - Strength & endurance
   - Agility & reaction ability
   - Flexibility & dexterity

5. Skilled movements
   - Games
   - Sports
   - Dances
   - Performances

6. Nondiscursive communication
   - Posture
   - Gestures
   - Facial expressions
   - Creative Movements
Self-Efficacy

- Self-efficacy is a judgment of one’s capability to perform a particular behavior or task (Bandura, 1986).
- Bandura (1986) suggests self-efficacy may influence all aspects of behavior.

<table>
<thead>
<tr>
<th>Aspects of behavior</th>
<th>influenced by self-efficacy</th>
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<tr>
<td>new behaviors</td>
<td>inhibition of existing behaviors</td>
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<td>disinhibition of current behaviors</td>
<td>choices of behavioral settings</td>
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<td>the amount of effort expended in a task</td>
<td>length of time one will persist in the face of obstacles.</td>
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</table>
3 Pillars of Self-Efficacy

- **Pillar 1: Adopting Success Strategies**
  - Accelerate your learning
  - Match strategy to situation
  - Achieve alignment

- **Pillar 2: Enforcing Personal Disciplines**
  - Plan your work and work your plan
  - Set aside time for the hard work
  - Check in with yourself

- **Pillar 3: Building Your Support System**
  - Find your Paul (mentor)
  - Find your Silas (peer)
  - Find your Timothy (mentoree)
Developmental Program

- **Initial evaluation**
  - Pre-screen health history/risk stratification
  - Assess overall athletism in comparison to peers
  - Assess sport-specific skills in comparison to peers

- **Cohort Program**
  - Place participants in ability groups (athletism)
  - Place participants in ability groups (sports-specific skills)

- **Level Playing Field**
  - Recreational
    - Instructional
    - Academy
    - Premiere
  - Competitive
    - AA
    - AAA
    - MAJOR
<table>
<thead>
<tr>
<th>Player</th>
<th>Running</th>
<th>Throwing</th>
<th>Catching</th>
<th>Hitting</th>
<th>infield</th>
<th>Outfield</th>
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<td>6:00</td>
<td><strong>Opening remarks:</strong> Coach explains the importance of a good attitude, focus, and hustle.</td>
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<td>6:05</td>
<td><strong>Warmup:</strong> Players will prepare bodies for sprinting, warmup lead by coach.</td>
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<td>6:20</td>
<td><strong>Base running:</strong> Lineup players at home plate. Time players home to 1B and 1B to 3B.</td>
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<td>6:35</td>
<td><strong>Warmup:</strong> Players with play catch with a partner, coaches observe and evaluate ability.</td>
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<td>6:45</td>
<td><strong>Infield:</strong> Lineup half at 2B and half 1B. Coach throws groundball to 2B, player fields and throws to 1B. Players then rotate from 2B to 1B. Players will rotate positions until each player has fielded and thrown to 1B from 2B, SS, 3B. This rotation should make 3 complete rounds to include a ground ball causing movement glove side, throwing side and right to position.</td>
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<td>7:05</td>
<td><strong>Outfield:</strong> Lineup players in outfield. Place 3 cones 10 feet apart. Player will lineup at center cone. Coach throws flyball at center cone and player catches and throws to 2B. Player rotates from OF to 2B. Second round move player to cone on throwing side. Coach throws fly ball at center cone. Players moves to catch ball and throws to 2B. Second round move player to cone on glove side. Coach throws fly ball at center cone. Players moves to catch ball and throws to 2B. Each player receives 1 flyball at each position.</td>
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<td>7:25</td>
<td><strong>Hitting:</strong> Place one hitter at home plate to face live pitching for 2 bunts, 7 swings, and then rotate. Place remaining players safe around fencing utilizing various drill stations (i.e., soft toss, double tee, high tee, and low tee) rotating players through each station to include live hitting. <strong>Wrap up:</strong> Coaches thank players for good effort and release to parents.</td>
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Recreational Developmental Program

▪ Level 1: Instructional
  – Emphasis on Fundamentals
  – Focus on Fun
  – Introduce basic movement competencies

▪ Level 2: Academy
  – Learning to Train
  – Master basic movement competencies
  – Introduce compound movement competencies

▪ Level 3: Premiere
  – Training to Train
  – Master compound movement competencies
  – Introduce performance-based tasks
Competitive Developmental Program

- **Level 1: AA**
  - Training to Compete
  - Progression of performance-based tasks
  - Priority on sport-specific techniques and abilities

- **Level 2: AAA**
  - Training to Win
  - Mastery of performance-based tasks
  - Priority on sports-specific strategies, skills, and abilities

- **Level 3: MAJORS**
  - Training to be Elite
  - Mastery of specific strategies, skills, and abilities
Conclusions

- Physical activity/sports participation reduces disease risk and global healthcare costs
- Increases in self-efficacy will increase physical activity/sports participation, reduce disease risk and global healthcare costs
- Assessment of a client’s athleticism and skill level will increase self-efficacy by proper placement with like-ability level cohorts, which will increase physical activity/sports participation, reduce disease risk and global healthcare costs
- The opportunity to progress within the competitive or recreational developmental program will increase self-efficacy, which will increase physical activity/sports participation, reduce disease risk and global healthcare costs
After Action Review (AAR)

- Sustains
  - 1.
  - 2.
  - 3.
  - 4.
  - 5.

- Improves
  - 1.
  - 2.
  - 3.
  - 4.
  - 5.