

Prioritizing school sponsored sport based on observed physical activity

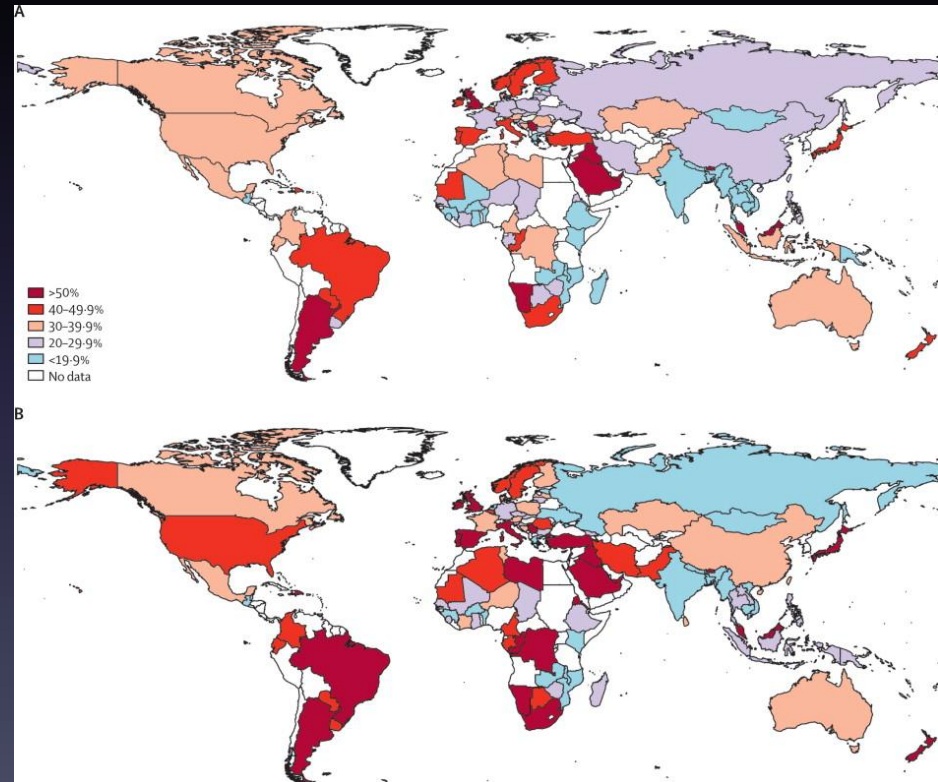
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Adolescent physical activity patterns

- Adolescent inactivity a global concern (Hallal et al., 2012; Peltzer & Pengpid 2011)



Rationale

- Youth sports – Effective mechanism to get PA and social benefits (*American Academy of Pediatrics, 2001; 2007*)
- Intramurals recommended but little data (*Institute of Medicine, 2005*)



Diminishing opportunities for children to play school sports (Carrel et al., 2005).



1 in 5 parents in households earning less than \$60,000/year say at least one of their children **don't play** school sports due to **cost**

61% of school sport participants pay to play



Average Fee	\$93
+ Additional Costs	<u>\$288</u>
Total Average Cost	\$381

Source: C.S. Mott Children's Hospital National Poll on Children's Health, 2012



How much physical activity is actually achieved through **Sport** Participation

(Leek, Carlson, Cain, Henrichon, Rosenberg
Patrick, & Sallis, 2011).

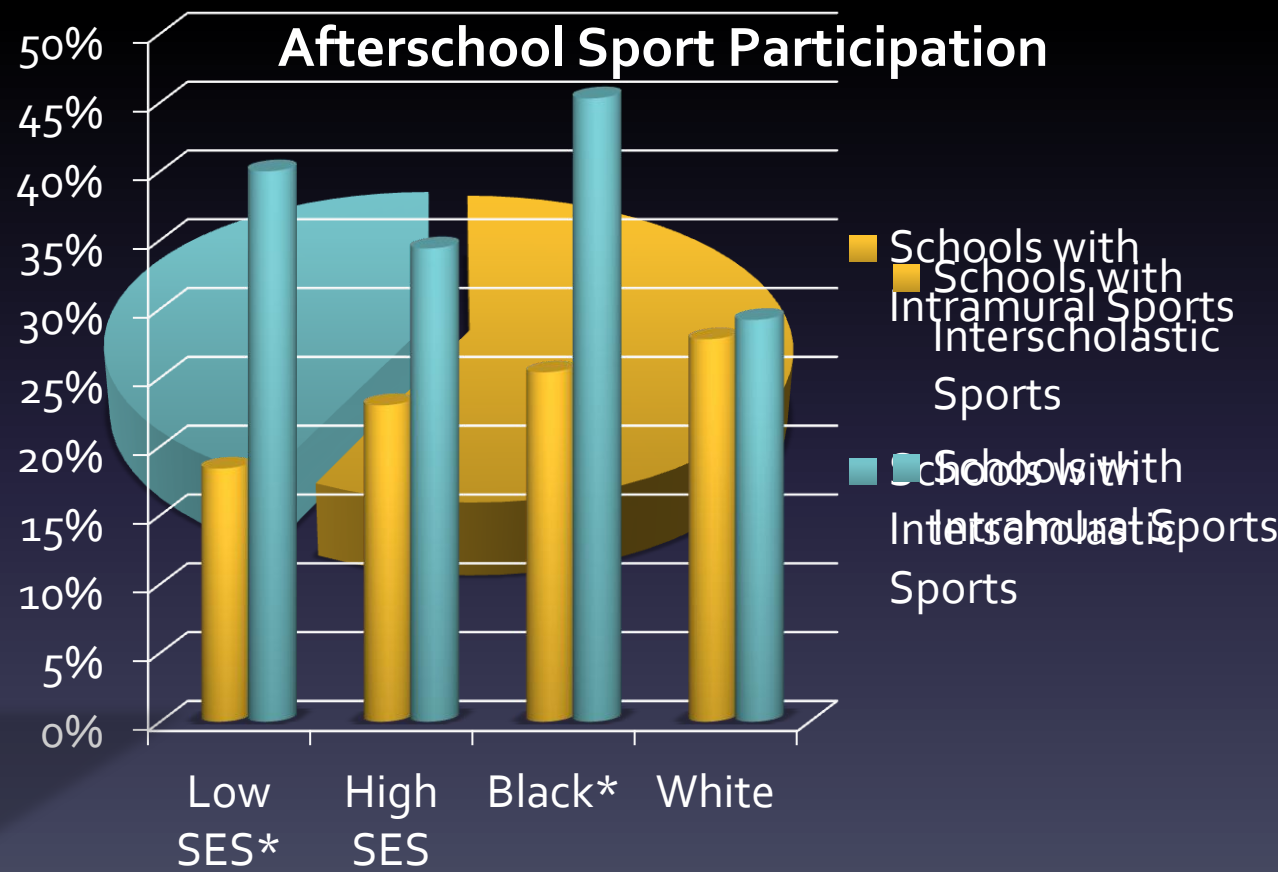


Methodology

- 4 Schools in Wake County
 - (Intramural vs Interscholastic)
- Research Design
 - **SOPLAY**
 - On line Survey
 - Focus Groups
 - Accelerometers – sub group of children from 4 schools

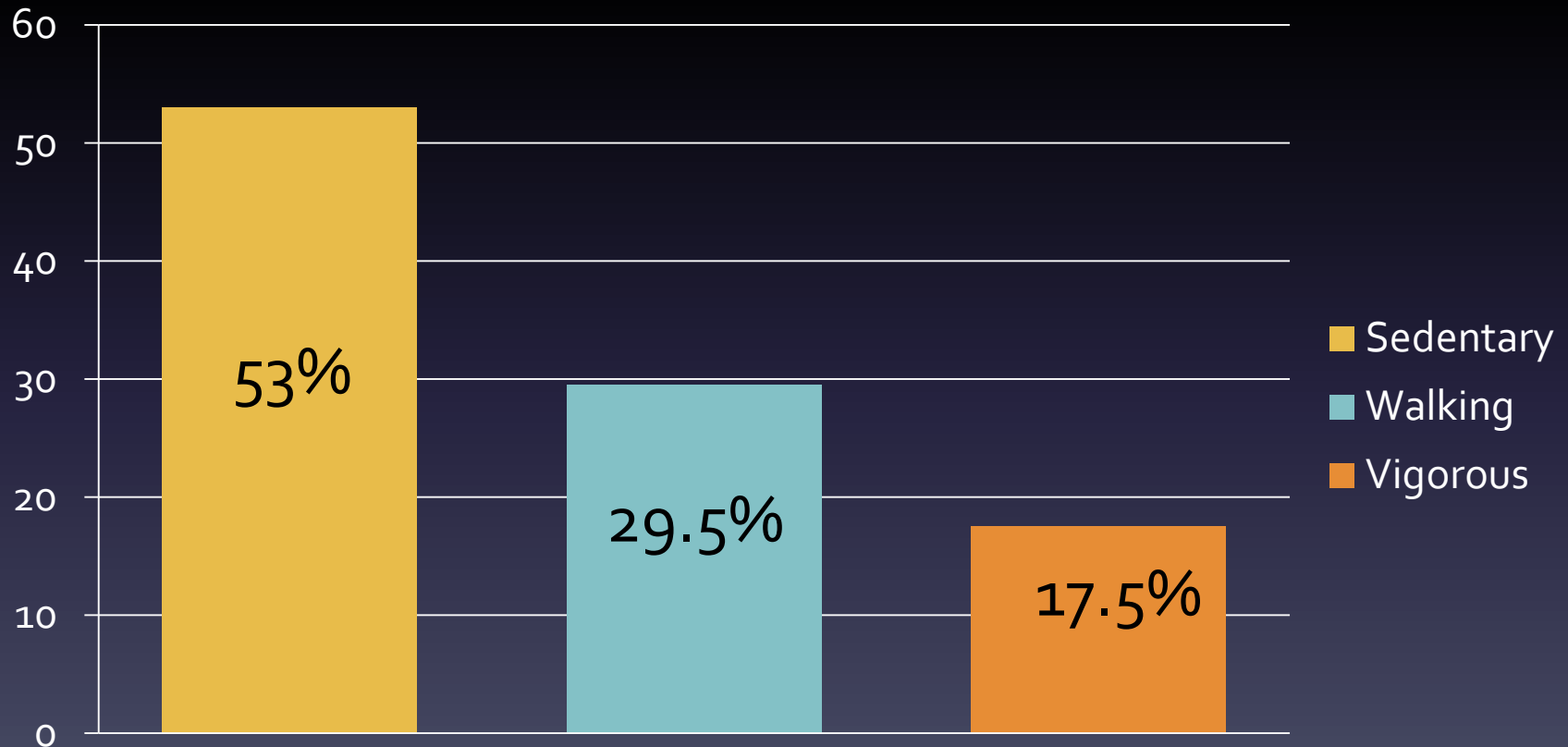


Middle Schools with Intramurals had more afterschool sport participants





Percent of Children Observed PA (n=6,821)



Girls were more likely to play in Interscholastic Sports and be more physically active than Girls in Intramural Sports

Boys were more active in Intramural Sports than Boys in Interscholastic Sports



School sport policy and school-based physical activity environments and their association with observed physical activity in middle school children

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ABSTRACT

Empirical research on the effects of school sport policies on children's physical activity is limited. This study examined sport policies (intramural vs. varsity), physical settings within schools, and supervision in relation to physical activity using the System for Observing Children's Activities (SOCAT). Data were collected on physical activity levels of children in four middle schools. Regression analyses assessed the main effects of sport policy, type of physical activity setting, and supervision as well as interactions. Regression models were stratified by gender. Children in intramural schools were more likely to use indoor spaces and be supervised. Regression models indicated that varsity sport programs were associated with lower physical activity levels among boys but not girls. Significant associations between type of physical activity setting and physical activity levels were observed only for boys. Adult supervision was not associated with children's physical activity levels. Finally, descriptive results showed athletic facilities were under-utilized in all schools.

1. Introduction

Childhood obesity and overweight in the U.S. (Hedley et al., 2004; Ogden et al., 2008, 2010), Australia (Gill et al., 2009), and other European countries (Janssen et al., 2005; Pader et al., 2004) remains a significant public health concern. Although regular physical activity provides numerous physiological and mental health benefits for children and adolescents (Craig et al., 2005), recent objectively measured data suggest that they are not getting recommended levels of physical activity (Troiano et al., 2008). Individual behaviors, community structures, lifestyle, and the built environment are primary contributing factors to this shortfall (Gorman et al., 2007; Trankovic et al., 2010). Furthermore, research specifically examining the physical environment and factors that facilitate or inhibit healthy behavior has increased over the past decade (Chowitz et al., 2011; Sallis et al., 2006). Children in most countries spend a substantial amount of time in schools, settings that provide safe and convenient programs and facilities that promote physical activity (Blitbaum et al., 2005; Johnson et al., 2007). Beyond physical education, schools offer

organized extracurricular activities, such as school sports, activity clubs, and other structured and non-structured leisure activities making schools a viable medium for promoting physical activity among youth (Holtzman and Kuban, 2008; Wechsler et al., 2000). A focus on school environments and policies that shape them aligns with ecologic models used in active living studies and health promotion (Sallis et al., 2006). In particular, schools and athletic facilities within them are behavior settings where physical activity behaviors occur. Examination of the accessibility and characteristics of school environments is useful therefore in understanding their contribution to children's physical activity. The model offered by Sallis et al. (2006) also highlights how the policy environment shapes physical activity behaviors through various mechanisms including the built environment, programs, and economic incentives.

Few studies have examined school sport policies and school athletic environments and their relation to children's physical activity despite their potential to support physical activity among children. This is unfortunate since sport participation declines significantly among both boys and girls during their middle school years (Carp et al., 2000; Henderson and Gould, 2004).

A study conducted among English and Welsh children showed that by age 16, most adolescents had adopted a pattern of leisure activities and sport participation that formed the foundation for

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Objectives

1. Identify observed physical activity levels of school sponsored sports,
2. Determine if there are significant differences in physical activity levels based on sport and school sport policy type (intramural versus interscholastic).

Measures

SOPLAY

System for Observing Play and Leisure Activity in Youth (McKenzie et al., 2002)

School visits (4 Schools):

- 2.30-4:30pm
- April – May; September – December, 2009
- Monday-Thursday

Scans

- 1,510 scans (868 SOPLAY only; 642 reliability)
- 1,189 scans used in analysis (duplicates removed)
- Inter-rater reliability for SOPLAY codes was acceptable ($\kappa > 0.70$)



System for Observing Play and Leisure among Youth (SOPLAY)

Sedentary

**Walking
(Moderate)**

**Very Active
(Vigorous)**

20 or 80%

1 or 4%

4 or 16%

Analysis of individual sports

- Limited to those with 50 observations or more
- Where applicable t-tests were used to identify differences in PA levels based on policy type



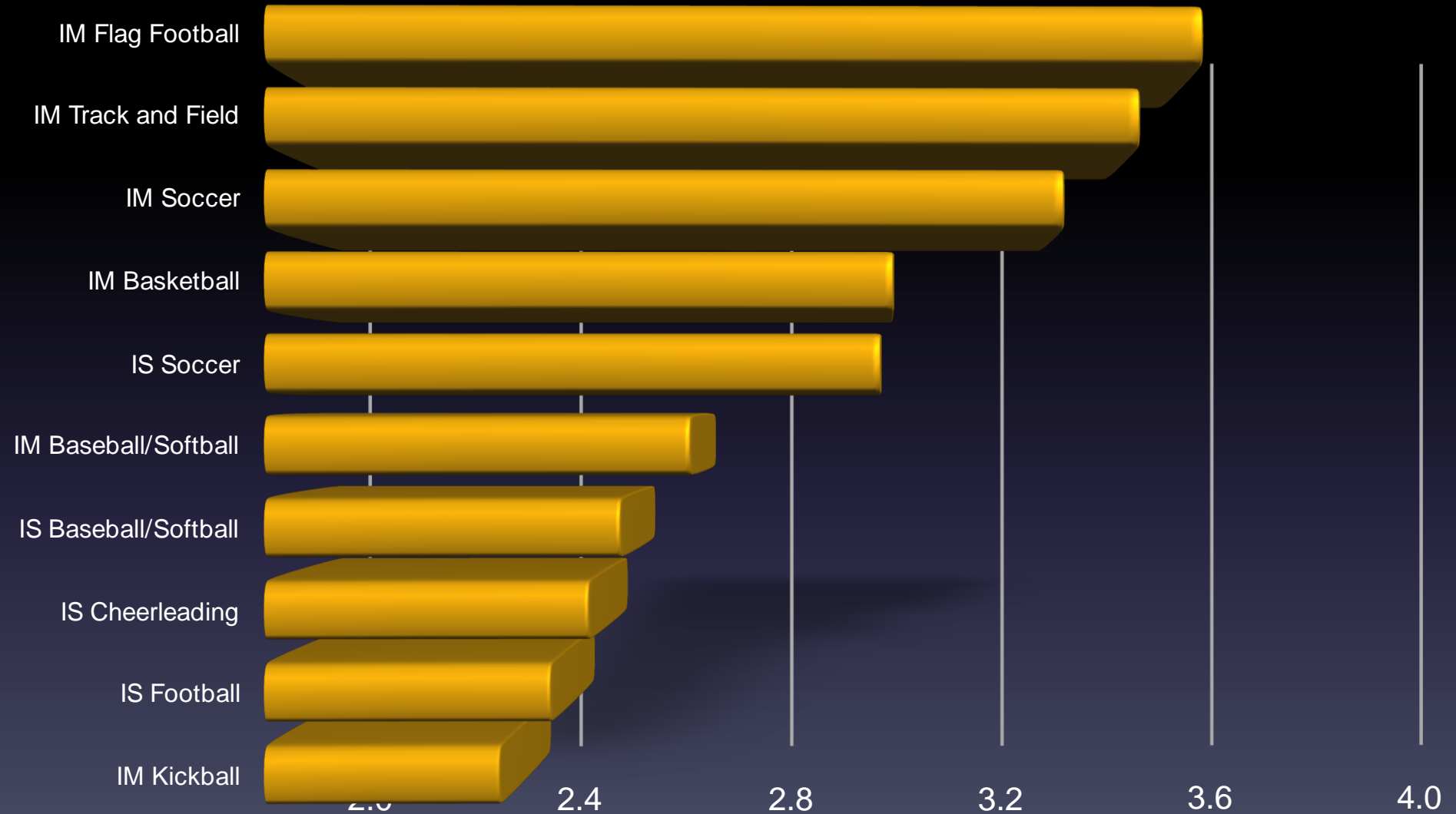
Sports with mean MET values above MPA threshold



Lowest levels of PA



Sports with highest and lowest levels of PA



Major findings

- IM Sports significantly higher MET values than IS sports (**$t=-3.69$, $p<.001$**)
- Regression Models showed school policy type (regardless of type of sport) had largest association with PA (**$B=.581$, $p<.001$**) with the exception of gender (**$B=.574$, $p<.001$**)
- IM activities ranked in top 4 of 5 sports in terms of PA levels

Recommendations

1. Data can allow schools to be more strategic in programming
2. Adopting intramural programming that is more likely to facilitate activity among girls (e.g., sports exclusively for girls and more student involvement in the selection of intramural sports)
3. A 'full' implementation of an intramural program would likely increase physical activity.



EXIT 1A

Where next?

EXIT  ONLY

Sport Practice Structure and physical Activity



SOHO RECORDING FORM 12/20/11

Date: _____ Rink: _____ Level: _____ Time Start: _____ Time Finish: _____ Practice Length: _____
 No of Players: _____ Number of Coaches: _____ Observer: _____ Rel. Observe: _____ Page 1 2 3 4 of _____

Interval	Player Activity	Practice Context	Notes
1	1 2 3 4 5	M K F S G O	
2	1 2 3 4 5	M K F S G O	
3	1 2 3 4 5	M K F S G O	
4	1 2 3 4 5	M K F S G O	
5	1 2 3 4 5	M K F S G O	
6	1 2 3 4 5	M K F S G O	
7	1 2 3 4 5	M K F S G O	
8	1 2 3 4 5	M K F S G O	
9	1 2 3 4 5	M K F S G O	
10	1 2 3 4 5	M K F S G O	
11	1 2 3 4 5	M K F S G O	
12	1 2 3 4 5	M K F S G O	
13	1 2 3 4 5	M K F S G O	
14	1 2 3 4 5	M K F S G O	
15	1 2 3 4 5	M K F S G O	
16	1 2 3 4 5	M K F S G O	
17	1 2 3 4 5	M K F S G O	
18	1 2 3 4 5	M K F S G O	
19	1 2 3 4 5	M K F S G O	
20	1 2 3 4 5	M K F S G O	
21	1 2 3 4 5	M K F S G O	
22	1 2 3 4 5	M K F S G O	
23	1 2 3 4 5	M K F S G O	
24	1 2 3 4 5	M K F S G O	
25	1 2 3 4 5	M K F S G O	
26	1 2 3 4 5	M K F S G O	
27	1 2 3 4 5	M K F S G O	
28	1 2 3 4 5	M K F S G O	
29	1 2 3 4 5	M K F S G O	
30	1 2 3 4 5	M K F S G O	
31	1 2 3 4 5	M K F S G O	
32	1 2 3 4 5	M K F S G O	
33	1 2 3 4 5	M K F S G O	
34	1 2 3 4 5	M K F S G O	
35	1 2 3 4 5	M K F S G O	
36	1 2 3 4 5	M K F S G O	
37	1 2 3 4 5	M K F S G O	
38	1 2 3 4 5	M K F S G O	
39	1 2 3 4 5	M K F S G O	
40	1 2 3 4 5	M K F S G O	
41	1 2 3 4 5	M K F S G O	
42	1 2 3 4 5	M K F S G O	
43	1 2 3 4 5	M K F S G O	
44	1 2 3 4 5	M K F S G O	
45	1 2 3 4 5	M K F S G O	
46	1 2 3 4 5	M K F S G O	
47	1 2 3 4 5	M K F S G O	
48	1 2 3 4 5	M K F S G O	

USA HOCKEY 6U Practice: 1 & 2 Theme / Goals: Skill Development/Fun

Equipment Required / Set-up: Borders, cones, tires & ringette rings **Ice Time:** 50 Minutes

Free Puck Time: 5 Minutes
 Let the players have the first five minutes of time as free play. Dump as many items as possible onto the ice and let kids experiment. (ringette rings, blue pucks, black pucks, softballs, tennis balls, etc)
 Coaches set up stations.

Warm Up: 5 min- Sharks & Minnows
 Two players are designated as the sharks to start. The minnows must skate from side boards to side boards without being tagged. If they are tagged, they become sharks too.

Stations: 6 Stations x 5 minutes
 On the whistle, players do 3 two foot jumps before changing stations. Be sure to give each player water after chrono stations.

Station 1: ABC's - Wave Skating
 2 foot glide, 2 foot glide with butt to heels, run on skates, glide & 2 foot jump, drop to knees & get up.

Station 2: Activity - Freeze Tag
 Select one player to be the tagger. When a player gets tagged they must stand still (frozen) until a teammate touches them to become free again.

Station 3: Stationary Passing
 Players partner up, stand 6-10' apart and pass back and forth. Work on proper technique, emphasize keeping the hands away from the body and sweeping the pucks. Players should stare sideway so that they pass cross body.

Station 4: Relay Race
 As shown or create your own. Variation: 360 around each obstacle.

Station 5: Chaos Puck-handling
 Players stickhandle skating around obstacles. All players are involved. Check to see that each player is holding their stick properly. Hands about shoulder width apart and top hand at the end of the stick partially held in the palm with the V between thumb and forefinger on to of the stick. Use ringette rings instead of pucks.

Station 6: Obstacle Course
 Players skate through the course with emphasis on turns and edges. Have players maintain good control of their stick by leading with the stick blade around each cone.

Game: 2v2 Hit the Tire - 10 minutes
 Have the players stay and play in each of the six zones. Play 2v2 for 30 to 45 second shifts. Use one tire in each zone as the goal. Teams score by hitting the tire with the puck.

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Questions

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