

TITLE: Study Abstract into the Choices of Activity of 7 - 11 Year Olds

DATE: 7<sup>th</sup> August 2007 TIME: 19:00 – 20:30

LOCATION: Studio 3, Fleming park Leisure Centre, Eastleigh, Southampton, UK

### **EXECUTIVE SUMMARY:**

Children aged between 7 – 11 years old choose active gaming in unstructured play over traditional games and exercise. Active gaming combines both physical activity and video games. It was found children are 6 times more likely to engage in physical activity if combined with games. Children were observed to be 3 times more likely to choose sedentary games over physical activity without active gaming.

### **STUDY DETAILS:**

#### Purpose:

The aim for the study group is to observe unstructured play in 7 – 11 year old children to determine their preferences between games, exercise and active gaming.

#### Equipment:

Three activity stations were set up, one for each of games, exercise and active gaming. Each activity station had the capacity for 2 participants and a spectator area.

Station A (exercise) comprised of a stationary exercise cycle and stair stepper designed for children. Station B (games) comprised of a table and chairs on which was placed popular children's games and magazines. Station C (video game + exercise) comprised of identical exercise machines connected via Gamercize interfaces to a video games console.

Stations A and C were arranged at the corners of the room and Station C centrally.

#### Participants:

Eight girls and boys from the local area, ages ranging from 7 to 11 years old.

#### Brief:

Upon arrival the children were told they could use anything they wanted to. Water was provided as the only drink and the children's parents were asked not to interact or influence their child's choices. Each child chose a number, worn for identification, and was entered into a register.

#### Execution:

The study group session lasted one and a half hours, during which time a video recorder was used to unobtrusively monitor all three stations. Adult interaction was used only to facilitate the children's participation in explaining the functions of exercise and video game + exercise (Gamercize) stations. Adult interaction was minimally used to ensure children shared the popular stations.

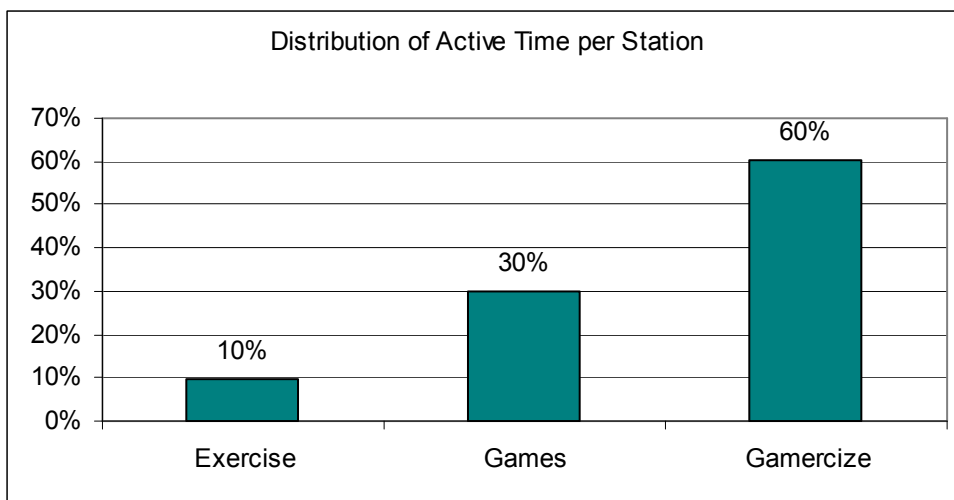
**STUDY OBSERVATIONS:**

Spectating Vs Participating:

With eight children and six places on Activity Stations available, there was a certain amount of spectating expected. The actual level of spectating was observed to be higher than the minimum.

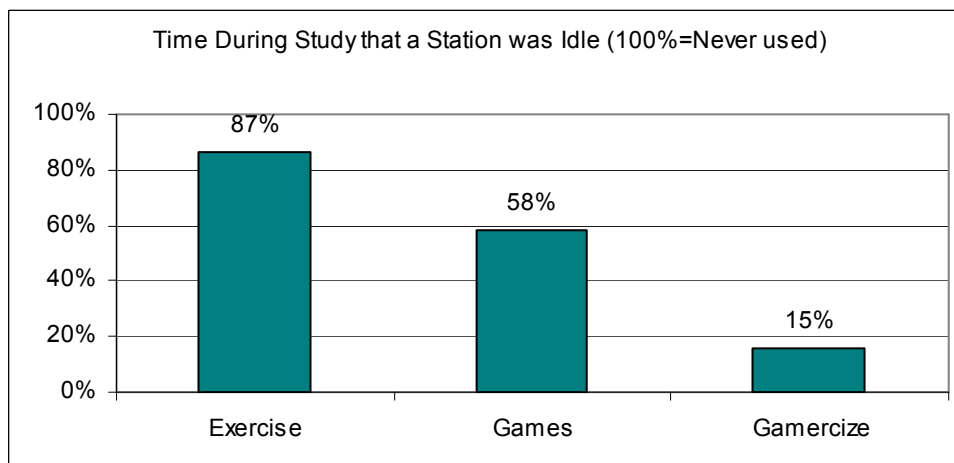
Participation Split:

Analysing the time spent of the chosen activities showed a ratio of 1:3:6 between exercise, traditional games and Gamercize. Participation was limited due the capacity of the Gamercize station, so choice was restricted slightly for this activity. The percentage of active time is shown split in the graph



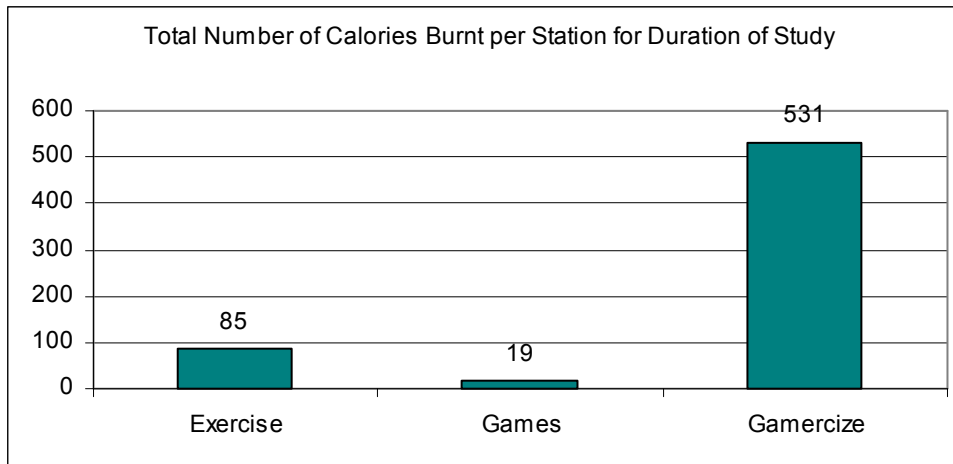
Un-utilised Time:

During the entire study the time a station had capacity was recorded and analysed and found to correlate well with active participation. Exercise was the station with the idlest time, followed by the games station and then the Gamercize station. The graph below shows each station's idle capacity as a percentage over the entire study period.



### Physical Benefit:

The exercise station and the Gamercize station have the same cardio-vascular benefits and the same calorific burn. The time spent on each station showed lack of motivation to exercise being a key factor in obtaining fitness benefits. It was also observed the rate and consistency of exercise was much lower on the exercise station, although this has not been reflected in the graph below showing



### CONCLUSIONS AND RECOMMENDATIONS:

- The exercise station was used and chosen the least of all in an unstructured session. Instruction and supervision is best applied to gain the most benefit and use from the machines, with the ideal motivational platform being a programme on a regular basis.
- The traditional games were played most towards the middle and end of the session, after the children had been physically exerting themselves. The nature of the use of this station was well behaved, although separate study could be made to determine if this was due to the previous physical exertions.
- The Gamercize station lacked capacity and drew the most spectators during the session. Despite the children changing games more frequently throughout the latter half of the session, causing a break in use, the utilisation was high. The motivation and demand was high so a further study would be useful to determine the sustainability of this medium for delivering exercise in the longer term.
- The ability to change the game on the video game console at the Gamercize station was observed to be a major factor in maintaining interest. Children changing the game allowed the Gamercize station to appeal equally to girls and boys.