How Playing Catch Develops Children

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https://psychology.ucsd.edu/undergraduate-program/undergraduate-resources/academic-writing-resources/writing-research-papers/research-paper-structure.html#discussion

Abstract:

Introduction:

Baseball is estimated to be played by about 65 million people worldwide and each MLB game averages about 1.8 million streams, per the World Baseball Softball Confederation and Major League Baseball Organization. Many have been positively impacted through the playing of one of the most popular sports worldwide. Baseball grows those who play it through many means, with the aspect that perhaps grows those the most being the simple action of catch and throw. Beyond all the benefits that are gained in childhood, adolescence, and into adulthood from playing a team sport such as teamwork, it is the most basic action done by every baseball player that gives them the most benefits.

This research was not conducted through personal experimentation but rather through the research of other experiments that yielded results that showed how playing catch positively grows children. Specifically, I wanted to target the research of motor skill development and how that benefits children as well as the relational development caused by playing catch.

My main source of research centered around the development of motor skills was an experiment conducted by Roscoe, Taylor, Weir, Flynn, and Pringle. They conducted an 18 week long trial on children between the ages of 4-5. These children, through their school's physical education program, were screened to identify where they landed in their current physical ability. After this original screening, they were each placed in 3 different categories (green, amber, and red, green being the best and red the worst) based on their performance. Of the original 394

children assessed, 231 were selected to partake in the study as they scored in the high red, however by the end only 219 children's data was used due to inconsistent attendance.

Each week, the children would undergo the standardized program of the United Kingdom (the place of study) physical education program which aimed to increase fundamental motor skills. These fundamental motor skills (FMS) are described to be essential for the "development of more advanced movement patterns that are essential for sports and physical activity participation and daily living."[1] FMS are divided into three subcategories; locomotor skills (running and jumping), object manipulation (throwing and catching), and stability (bending and stretching). Beyond just being the building blocks of a child's physical engagement, high FMS scores lead to the "competence, confidence, and motivation for purposeful physical activity"[2]. The FMS scores are what the children were originally rated on, and is what is being measured in the 18 week period.

During the 18 weeks, the selected children would go through activities that were made to specifically target the FMS. There was no control group, but rather they were compared to their prior scores before the targeted training. In order to see the proper development that was created through the experiment the original scores were kept along with two other points of data. This new data would come from the 9th and 18th week where the children were put through the same test as week 0. To keep the scores legitimate and not give the researchers the ability to skew the data, physical education specialists along with sports coaches were the ones who graded the children on their FMS scores.

The results of this experiment proved to be a dramatic increase in the FMS scores. In the short 18 week period of testing the frequency of a child not meeting the standard scores went down from 25.30% to .46%. Table 1[3] shows this drastic increase in scores for the children.

Table 1

	Pre-Intervention		Mid-Intervention		Post-Intervention	
	Frequency	%	Frequency	%	Frequency	%
Not meeting	278	25.39	113	10.32	5	0.46
Working towards	348	31.78	349	31.87	124	11.32
Competent	469	42.83	633	57.81	966	88.22

The frequency in this table stands for one's FMS score in a particular category (locomotor skills, object manipulation, and stability). Each child did not have to be not meeting expectations for every FMS score for their age group in order to be placed in red and therefore chosen to partake in the experiment, but rather had to have not been meeting expectation in any FMS score at all. Table 2[4] shows the results in the same matter, but instead of including every FMS score, it only shows the object control scores.

Table 2

	Pre-Intervention		Mid-Intervention		Post-Intervention	
	Frequency	%	Frequency	%	Frequency	%
Not meeting	267	24.38	78	7.12	12	1.10
Working towards	603	55.07	477	43.56	477	11.69
Competent	225	20.55	540	49.32	955	87.21

Following the same pattern as Table 1, Table 2 exhibits the growth of the children from not meeting expectations percentage being 24.38% dropping down to 1.10%. As stated prior, this table is exclusively object control scores which contains the physical activity of catching and throwing.

Motor skills are some of the most important parts of development when a child, but they have more than just a physical benefit according to Peng Shi and Xiaosu Feng of Shanghai, China. They, in a 14 page paper, summarize the results of their tests on children and adolescents where they found the benefits in training motor skills, and how different motor skills train different parts of the brain.

Adding to the previous proof of the ability to grow fundamental motor skills, the growth of these motor skills actually leads to cognitive development as well. “This study reviewed research on the cognitive effects of acute interventions of motor skills in children and adolescents, and found that opensequence skills, which constitute cognitive challenge and physical coordination, promoted attention and verbal working memory”[5].

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“In addition, Manion and Alexander (1997) suggest that working on tasks with peers improves children’s executive functions such as strategy selection and application, and problem understanding and solving.”

Discussion:

These two main growth factors that can be attributed to playing catch (or any peer focused sports in general) together show how important the simple action of throwing and catching a ball can be for the development of children. Roscoe, Taylor, Weir, Flynn, and Pringle’s research gives us the evidence that motor skills are highly developed when focused on through consistent training. Shi and Feng continue the list of benefits showing the cognitive development that is achieved by the growth of those trained motor skills as well as their combined verification with

This is not even taking into consideration the known benefits from participating in team sports that give many lessons they hold onto for the rest of their lives.

References:

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