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# Birth Month and Sporting Success in Japan

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**Abstract** We found that the frequency of the birth months of Japanese professional soccer players show exactly the opposite pattern to that of Europeans, which has the peak about half an year behind. That is, Japanese players are significantly more likely to have been born from April to September than from November to March. We also found the same pattern for Japanese professional baseball players. These facts probably stem from the different school year system in Japan, in which children born from April to March consist of one academic grade and this is the base group of various competitions among students. This fact should be treated as a decisive evidence to show that the social circumstances and experiences in childhood have a crucial influence on their later lives.

**Key words** Sports, Birth-month effect, Succor, Baseball, Competition in childhood

## Introduction

Many investigations showed that the birth month or season affect various traits and abilities in human including sporting achievements. For example, in the professional ice hockey league and youth hockey league in Canada, there are more men who are born during January to March and fewer men born during October to December (Barnsley *et al.* 1985; Daniel & Janssen 1987; Barnsley & Thompson 1988). The distributions of the birth month frequencies of professional soccer players in UK, Netherlands, France, and Belgium, are also not flat, and is shown in Figure1. Substantially more players were born in autumn and less in summer (Verhulst 1992; Dudink 1994). But in United States and Canada, this seasonal or monthly variation does not found in the major league of baseball or the national basketball league of America, NBA (Daniel & Janssen 1987; also our unpublished data).

These birth seasonal variations may be caused by the competition in social grade in childhood. In Japan, the school grade, which bases on juvenile competition of sports, begins at April and ends March. (More preciously, it begins at April 2 and ends April 1, that is, the children born at the first day of April anomaly belong to the school grade of previous year in the Japanese educational lows.) It has shifted about half a year against Europe. We investigated whether there is the same tendency in Japanese players in two

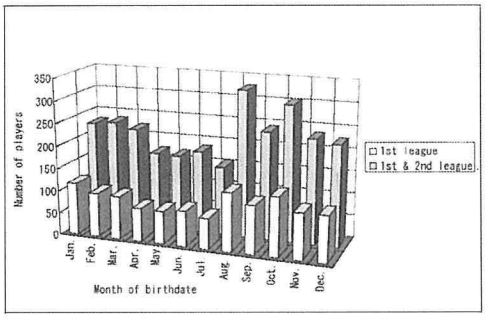


**Fig. 1.** Soccer players in UK, Netherlands, France, and Belgium ; cited from Verhulst (1992).

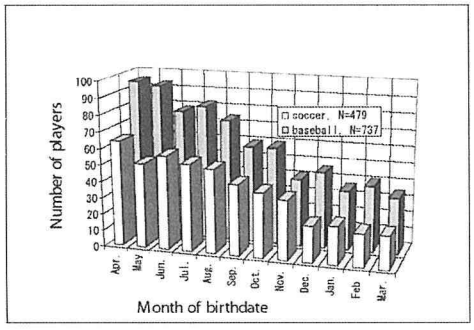


**Fig. 2.** Number of players in Japan.

popular sports, soccer and baseball. This becomes one critical test of the relative age effects.

## Method and Results

We investigated if there are some tendencies for Japanese players through newspapers and sports almanac (Official advertisement of Japanese league in soccer 1997; .The Year Book in Japan Major Baseball 1997). Players born outside Japan were surely omitted.

The distribution of the frequencies of this year (1997)'s players is shown is Figure 2. It is obvious that the frequencies decrease from April to March almost linearly. After adjusting the number of days in each month, the Kendall's rank-order correlation is -0.90 ($p<.0001$). In Japan, baseball is as popular as soccer. We figured out that baseball players show the same tendencies (correlation is -0.88, $p<.0001$). This is also true for the players three years ago (1994). Since many players are included in both analyses, it would be the same for years in between.

Because the official statistics given by the ministry of health and welfare in Japan

show that the differences in frequencies of birth months is at most 10% (Vital statistics of Japan [1955-1994] by Ministry of Health and Welfare), this finding is essential.

## Discussion

It may be true that humans and animals possibly have various differences in physiological functioning such as activity levels or mortality etc., due to their birth seasons (e.g., Majluf 1992; Douglas 1993). However, our finding that the European and Japanese patterns are totally opposite firmly rejects this possibility. The reasoning should be found in social-environmental factors. Due to the artificial clustering of children to form an academic year, the differences in physical development among children make early-born ones more advantageous than later-born ones. These experiences in the early stage of life provide imprinting memories, which in turn have ever-lasting influences on their later life.

The inborn talents in physiological and motor functioning obviously seem to be the most important factor to become a successful athlete. It is surprising to find that social interactions have a profound effect on this aspect of human life. This is truly suggestive for the malleability and educability of human beings.

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