The study investigated the effects of preschool Physical Education Curriculum-program (PEC) on 4-5-year-old children's fundamental motor skills [1]. The PEC was part of the international Early Steps project [2], aiming at creating an innovative physical education curriculum for preschool-aged children. The PEC was based on the idea that by means of motor skill learning through developmentally appropriate activities, children would understand the importance of a healthy lifestyle, and the development of social skills would be fostered [1,2]. The PEC constituted altogether 48 physical education lessons from September 2005 to April 2006.

Two experiment and two control preschools in the Jyväskylä region participated in the study. The experiment group consisted of 16 girls with a mean age of 4.6 ± 0.5 years and 23 boys with a mean age of 4.4 ± 0.5 years. The control group consisted of 22 girls with a mean age of 4.5 ± 0.5 years and 23 boys with a mean age of 4.6 ± 0.5 years. The APM-inventory [3] was used to measure balance, locomotor and manipulative skills before, in the middle, right after and three months after the PEC. The APM-inventory [3] has been found to be a valid and reliable method in assessing fundamental motor skills in children younger than eight years; test-retest correlations have varied between 0.86 and 0.94 in previous studies [3]. The analysis of the repeated measurements was carried out with linear mixed models, allowing for incomplete data, using the MIXED procedure of SAS software [4].

The results indicated a statistically significant effect of treatment for girls in static balance ($F[1, 3] = 5.16, p = 0.030$) and standing broad jump ($F[1, 33] = 4.34, p = 0.045$), whereas for boys an almost significant effect of treatment was found in dynamic balance ($F[1,8] = 4.39, p = 0.068$). In addition, a significant interaction effect between treatment and repeated measurements was found for girls in static balance ($F[3, 87] = 3.07; p =.032$) and for boys in running ($F[3, 68] = 3.72; p =.015$).

The findings of the study indicate that the positive effects of the PEC were found in a few of the measured fundamental motor skills. If all the fundamental motor skills are to be fostered, the planning and implementation of an appropriate physical education program should be constructed by focusing on the practice of fundamental motor skills.

References