

The Effectiveness of Interventions to Increase Physical Activity among Elementary School Children in Okinawa, Japan

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Okinawa Prefecture is well known as having one of the highest longevity in the world. Recently, however, it has been indicated that middle-age mortality are higher than the national average, suggesting lower future longevity in Okinawa. Physical inactivity and decline in physical fitness are also becoming common and serious problems among young Japanese people. There is a need to improve physical activity and sedentary behavior in childhood and adolescence to prevent lifestyle-related diseases later in life.

The aim of this study was to determine improvements in the levels of physical activity and physical fitness of children by conducting various interventions, while taking into account the particularities of the designated area. The study area was Taketomi of Iriomote Island, the southernmost part of Okinawa, Japan, and had the subtropical climate. We fully utilized the seaside environment and the warm climate for creating the intervention programs.

Fifty pupils participated from the intervention and control schools. Outcome measures were physical activity levels using accelerometers, physical fitness levels, and body composition. These were measured at baseline and after a 5-month intervention. The intervention programs included: evening beach walks; self-management; school-based health education; placement of staff to play with children; and snorkeling guidance.

Compared with children in the control group, those in the intervention school showed significantly improved physical activity levels, which had repercussion on children's physical fitness as a secondary effect.

The intervention revealed that regional particularities can be a valuable method of improving children's physical activity in the short term. If these improvements were sustained, the intervention programs would then contribute to the promotion of health for young people.