Relationship between locomotive ability and amount of physical activity in elderly residents living in temporary housing after the Great East Japan Earthquake

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Purpose

Physical inactivity is a well-known risk factor that affects the health and well-being of elderly individuals. In March 2011, the Great East Japan earthquake occurred; since then, low levels of physical activity have been observed among the elderly evacuees living in temporary housing, and they might be at risk of developing locomotive disability. This study aimed to elucidate the relationship between locomotive ability and amount of physical activity (expressed as total number of daily walking steps) in elderly residents of temporary housing after the Great East Japan Earthquake.

Methods

Data were collected in March 2016 from 30 residents (7 men and 23 women), aged 65 years or more, who had been evacuated to temporary housing after the earthquake. Total daily walking steps for 7 days were measured using a walking intensity monitor (MEDIWALK, TERUMO Co. Japan). Additionally, the subjects answered Locomo 25, which is a questionnaire for screening musculoskeletal disorders that cause locomotive disability, and the responses were converted into numerical values ranging 0–100: lesser scores indicated better conditions. Spearman’s rank correlation coefficient was used to assess the relationship between these parameters. This study was approved by the ethics committee of Minamisoma Municipal General Hospital (ID: 28-04).

Results

The average number of daily walking steps was 4387 ± 2553 steps/day. A negative correlation between the Locomo 25 score and amount of physical activity was observed (p=-0.48, p<0.05).

Discussion

Our results suggest that physically active elderly evacuees living in temporary housing have higher locomotive ability. In previous studies, similar correlations were observed in community-dwelling elderly people. Generally, elderly evacuees lack the motivation to engage themselves in recreational physical activities. Therefore, physical therapists might play a significant role in encouraging them to perform more physical activities than usual in order to improve their health.