**ASSOCIATIONS BETWEEN MUSCLE STRENGTH AND PHYSICAL FUNCTION IN OLDER**

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**Aim**: The present study aimed to examine the associations between muscle strength and physical

function in females aged 80 years and over living in extended care, and compare the data to those

living independently.

**Methods**: 12 females in extended care (Mean age: 88.2±6.6; range 80-98 years) and 12

community-dwelling females (Mean age 84.2±3.7; range80-90) were studied. Grip strength was

measured using Jamar dynamometer. Physical function was measured using the Timed up and go,

Tinetti scale and the time taken from lying on a bed to standing (a non-validated test of function).

Pearson’s correlations assessed association between muscle strength and physical function.

Independent t-test compared data from those in extended care to community-dwelling females.

**Results**: Mean grip strength was 10.1Kg (±5.9) in the extended care group and 20Kg (±3.8) in

community-dwelling older females. Significant differences were found between the groups for grip

strength, Timed up and go and Tinetti scale (p<0.05). Moderate correlation was noted between

grip strength and Tinetti scale (r=0.53, p>0.05) and time taken from lying to standing (r=-0.696,

p<0.05). Age was significantly correlated with Timed up and go (r=0.60, p=0.03) and Tinetti scale

(r=-0.74, p=0.006).

**Conclusions**: The current study provides novel data on associations between muscle strength and

function in females aged 80 years and over living in extended care. Muscle strength and functional

ability were significantly lower in the extended care group compared to those living independently.

Chronological age was more highly correlated with physical function than grip strength, suggesting

that age may be a better determinant of function within this older age group. These findings

warrant larger studies of the interrelationships to determine whether the widely accepted indicator

offered by grip strength is valid with this group.