

Exercise Knowledge, Exercise Beliefs, Physical Activity Engagement and Physical Function in Older Adults

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ABSTRACT

Historically, recall surveys have been used to gather information about exercise knowledge and beliefs (EKB) and physical activity (PA). There seems to be a disconnect between what people know and believe about exercise and the choices they make about engaging in exercise. Advancements in the capacity to capture verifiable PA data have greatly improved with application of accelerometers. The ability to objectively verify PA makes reexamining the relationship between EKB and both PA and physical function (PF) worthwhile. The aim of this investigation was to revisit the relationship between EKB and PA and PF in older adults using recall surveys and accelerometry. Fourteen older adults (8 females; 6 males; M age 69.5 ± 9.4) underwent a single, 75-minute session consisting of questionnaires to gather information about EKB and PA (CHAMPS) and PF tasks (examples: chair sit and reach and 400m aerobic walk) to assess function. The EKB questionnaires were comprised of subsets, such as knowledge about aerobic exercise, beliefs about flexibility exercise, and beliefs about resistance training. Subset scores were compared to PF outcomes in that specific area. A total knowledge score was summed from the subset scores. Based upon age and sex specific norms, PF tasks were scored as below average, average, or above average. A 7-day period of objectively-determined PA was recorded by the ActivPal accelerometer. Partial correlations controlling for age were run on the variables described below. Neither CHAMPS PA nor total steps (accelerometry) correlated with the total EKB score ($p > 0.05$). The flexibility subset score rating correlated negatively with the chair sit and reach rating ($r = -.554$, $p = 0.049$). The aerobic knowledge and beliefs subset score trended towards significance when correlated with the 400 meter walk task ($r = -.518$, $p = 0.070$). The resistance training subset score did not correlate with either the arm curl or the chair stand task ($p > 0.05$). Previous research employing recall surveys has shown that EKB do not predict activity engagement. The present research (with accelerometry) supports this assertion which suggests the lack of relationship is not connected to survey collection recall bias. Subset EKB in flexibility and aerobic exercise correlated or trended towards (respectively) functional outcomes in those areas. It is interesting to speculate that the convenience of engaging in flexibility and aerobic exercise makes acting upon knowledge and beliefs easier when compared with resistance training.