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## Developing a Self-Reported Physical Fitness Survey

NiCole R. Keith, PhD<sup>1,2</sup>, Timothy E. Stump, MA<sup>5</sup>, and Daniel O. Clark, PhD<sup>1,3,4</sup>

<sup>1</sup>Indiana University Center for Aging Research

<sup>2</sup>School of Physical Education and Tourism Management

<sup>3</sup>Division of General Internal Medicine and Geriatrics, Indiana University School of Medicine

<sup>4</sup>Regenstrief Institute, Inc.

<sup>5</sup>Division of Biostatistics, Indiana University School of Medicine

### Abstract

Physical fitness measures indicate health status and could be used to improve management of overall health.

**Purpose**—To describe the development of a Self-Reported Fitness (SRFit) survey intended to estimate fitness in adults aged 40 years across four domains; 1) muscular strength and endurance, 2) cardiovascular fitness, 3) flexibility, and 4) body composition.

**Methods**—SRFit items were developed from the previously validated Rikli and Jones Senior Fitness Test battery of physical tests. Face-to-face participant interviews were used to refine SRFit item wording. Data from a pilot administration of the SRFit survey were used to guide further revisions of SRFit items. The Senior Fitness Test battery was used to evaluate the four fitness domains. The BodPod was used to measure body composition. Height, weight, and resting blood pressure were measured and the revised SRFit survey was administered to 108 participants.

**Results**—Forty-five percent of the participants were female and 37% reported being Black or in the “other” race category. Mean age was 53.5±8.0 years and mean body mass index (BMI) was 30.6±8.8 kg/m<sup>2</sup>. SRFit summary score means (SD) and correlations found between summary score means (SD) and fitness test scores were: Upper body strength m=12.8 (2.4), r=0.59, p<0.001; lower body strength m=12.6 (2.6), r=0.68, p<0.001; upper body flexibility left-side m=12.3 (2.8), r=0.47, p<0.001; right-side m=12.4 (2.8), r=0.67, p<0.001; lower body flexibility m=17.4 (3.8), r=0.55, p<0.001; cardiovascular endurance m=12.9 (2.6), r=0.66, p<0.001; BMI m=7.7 (2.23), r=0.79, p<0.001; and percent body fat m=7.7 (2.2), r=0.78, p<0.001.

**Conclusion**—SRFit survey items in each fitness domain were correlated with analogous Senior Fitness Test items indicating that participants could accurately use the SRFit survey to self-report physical fitness.

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**Corresponding author:** NiCole R. Keith, Ph.D., IU School of Physical Education and Tourism Management, 901 West New York Street, Indianapolis, IN 46202-3012, Phone: (317) 278-8438, Fax: (317) 278-2041; nkeith@iupui.edu.

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## Keywords

health; aging; wellness; assessment

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## 1 Introduction

Physical Fitness is an acquired or attained set of attributes that relate to a person's ability to perform physical activities (8). It is well substantiated that low physical fitness is a pathway to pathology, impairment, functional limitation, and disability (7, 13, 14, 17, 5). While health care providers are likely to address pathology, impairment, functional limitation, and disability, fitness is less easily assessed in a health care setting (21). Reasons for failure to address fitness may be due to limitations in time, expertise, or finances available in the clinical settings (10, 4). Purath et al. (16) recommend that providers use the Senior Fitness Test (18) battery of physical tests to measure the physical fitness of older adults in a primary care setting. The Senior Fitness Test has established validity and reliability and has been used to assess fitness among thousands of older adults (18). However, the Senior Fitness Test has a number of limitations as a tool for evaluating fitness in a primary care setting. These include the lack of a measure of body composition, the need for administration by a trained staff member or provider, and the additional time required thereby extending the length of a primary care visit.

Currently available surveys that are related to physical fitness often include both physical activity and physical function measures. Caspersen et al. (4) explain that while these measures have historically been used interchangeably, they represent different concepts. In a review of existing survey instruments, we identified surveys that measured variables related to physical fitness including general health, physical function, chronic illness and behavioral risk factors, but the items within these survey instruments that were intended to capture physical fitness were incomplete. For example, the validity and reliability of the Physical Fitness and Exercise Activity in Older Adults Scale were evaluated using 35 males and 57 females aged 60 to 90 (6). The instrument combined perceptions of physical fitness, perceived barriers and motivators to physical activity and exercise frequency but was not a focused physical fitness instrument. Schuler et al. (19) used a tool that measured physical activity, physical function, and performance self-efficacy and found it had poor validity when compared to performance-based fitness measures (19, 9). Results from these studies indicate that surveys measuring physical activity, physical function, and performance self-efficacy may not predict physical fitness.

Perhaps the most complete and valid self-report survey to date is that of Abadie (1) who constructed a 15 item survey intended to reflect all measures of health-related fitness. The survey also included self-efficacy, physical activity, and physical function items. The survey was evaluated in a sample of 146 men and 166 women aged 21 to 68 years. Convergent validity was judged to be good based on comparisons of active (self-reported participating in an aerobic program for at least one year) and inactive (self-reported no exercise for at least three months) lifestyles and test-retest reliability was high ( $r=0.97$ ). Concurrent validity was determined when survey items were correlated with performance measures in a sample of older ( $N=30$ ) and younger ( $N=28$ ) adults separately. In the older adult sample, strong correlations between physical measures and survey items were apparent in the domains body composition ( $r=0.67$ ) and cardiovascular fitness ( $r=0.43$ ) but not muscular strength and endurance ( $r=0.07$ ) or flexibility ( $r=0.12$ ). In the younger adult sample, strong correlations were apparent in all domains; cardiovascular fitness ( $r=.61$ ), muscular strength and endurance ( $r=0.47$ ), flexibility ( $r=0.53$ ), and percent body fat ( $r=-0.68$ ).

While Abadie's survey showed significant progress, it included items unrelated to physical fitness and words that did not describe movements typically performed on a physical fitness test. The survey also did not separate upper and lower body flexibility or upper and lower body muscular strength and endurance which are measured separately on a physical fitness test. Body weight was addressed on Abadie's survey, however, BMI and body fat were not. A valid self-report physical fitness survey could address these limitations (11, 20). The purpose of the current study was to perform the early phases of development of a new Self-Reported Fitness (SRFit) survey. The SRFit survey reflected items on the Senior Fitness Test and was intended to estimate fitness in adults 40 years of age across four fitness domains; 1) muscular strength and endurance, 2) cardiovascular fitness, 3) flexibility, 4) body composition. This new measure could be useful in clinical settings or in research efforts. .

## Methods

### Study Design

This cross-sectional study examined whether participants were able to accurately self-report physical fitness. The Rikli and Jones Senior Fitness Test and the SRFit survey were administered to 108 participants. Scores from the Senior Fitness Test and SRFit survey item scores that measured the same fitness domain were correlated (e.g., the Chair Stand Test was correlated with the SRFit survey item that asked, "How many times can you move from a standing position to a seated position...") in order to determine whether self-reported physical fitness was consistent with measured physical fitness.

### Participant Recruitment

This study was approved by the Indiana University (IU) Institutional Review Board. Participant recruitment occurred at urban primary care community health centers (CHC) and an urban commercial fitness center. CHC study participants were recruited by the IU Research Network (ResNet) recruiters who worked in the CHCs. Other participants had existing memberships to the commercial fitness center and were invited to participate in the study by a letter mailed to their homes or by a flyer posted in the fitness center locker room. This fitness center also served as the testing site. Informed consent was obtained from eligible participants who received a \$50 cash incentive upon completion of their testing.

To assess internal consistency among related SRFit items and validity across a range of fitness levels, approximately one-third of the participants were recruited from the fitness center. All others were recruited from the CHCs. The CHCs served a lower socioeconomic status and more racially and ethnically diverse population than that served by the fitness facility (15). This gave our sample socioeconomic diversity. We also reasoned that persons who frequented a fitness facility had better fitness than those recruited from a CHC and this would increase the fitness range of our sample.

### Participant Characteristics

All participants were aged 40 years or over. Additional inclusion criteria were: 1) could walk without assistance, 2) could independently move from standing to sitting on chair and back up 3) had normal range of motion in elbow and wrist joints, 4) was English-speaking, and 5) had regular access and ability to use a telephone. Exclusion criteria were: 1) made five or more errors on the Short-Portable Mental Status Questionnaire for moderate to severe cognitive impairment, and 2) primary care physician refused permission to enroll in the study due to terminal illness (not expected to live beyond 1 year) and/or American College of Sports Medicine absolute contraindications to exercise.

## Survey Development

Survey item development occurred in several steps. First, existing instruments were reviewed. Next, new SRFit survey items were developed to describe the movements performed in the previously validated Senior Fitness Test battery of physical tests (18). The new SRFit items were then reviewed by an expert team that included a survey researcher, two exercise physiologists, a medical sociologist and two internal medicine clinician-researchers. Third, expert recommended SRFit items were reviewed with a group of 12 participants recruited from a CHC using a cognitive interviewing technique. Each participant took part in a one on one interview in a quiet, private room. During the cognitive interviews, each SRFit item was presented and discussed for individual word meaning, phrasing, and item response set options. Participants of the cognitive interviews were not part of the survey or physical test data collection which occurred in two subsequent phases.

We completed the SRFit survey, the Senior Fitness Test, height, weight, resting heart rate, resting blood pressure, and body composition measures with a sample of 102 participants recruited from a CHC. In analyses of these phase one data, SRFit items left blank because participants did not understand what they were being asked or were unsure of the correct response, with floor or ceiling effects, or with low concurrent validity (Spearman  $\rho < 0.25$ ) relative to analogous fitness tests were revised. The revised survey items were reviewed through additional face to face individual cognitive interviews with a different group of 12 participants recruited from a CHC in a final round of cognitive interviewing. No more revisions were made.

## Survey Item Scoring

The final SRFit 22-item survey included three upper-body strength and endurance items (UBS), three lower-body strength and endurance (LBS) items, six upper-body flexibility (UBF) items, four lower-body flexibility (LBF) items, three cardiovascular fitness (CVF) items, and three body composition (BC) items. The stem of each item described the corresponding fitness test. For example, one item asked, “How hard is it for you to move from a standing position to a seated position on the middle of a hard surface chair without using your arms?” For items that inquired about difficulty level, the response options were, “not hard at all,” “somewhat hard,” “hard,” “very hard,” “can’t do it,” or “don’t know.” “Not hard at all,” received a score of five, each subsequent item score declined by one point and “don’t know” received a score of zero. For items that inquired about the number of times, the distance, or the length a movement could be performed, the response options were consistent with the range of scoring in the Senior Fitness Test (18). For example, one item asked, “How many times do you think you can move from a seated to a standing position without using your arms in 30 seconds (or half of a minute)?” For this item, the possible responses were, “18 or more,” “12–17.5,” “8–11.5,” “4–7.5,” “can’t do it,” or “don’t know.” Half scores were possible. For example, a participant could have reported a score of 11.5 if he thought he could move from a standing to a seated position 11 times but could not return to a standing position the 12<sup>th</sup> time in a 30 second time frame. The response, “18 or more,” received a score of five, each subsequent item score declined by one point and “don’t know,” received a score of zero. Two UBF, two LBF, and three BC items were reverse coded. Summary scores were determined by adding the mean score of each item within a particular domain. For example, we added the mean scores from the responses to the following items: “How hard is it to move from a standing position to a seated position...,” “How hard is it to move from a seated position to a standing position...,” and “How many times can you move from a seated position to a standing position...,” in order to calculate the LBS summary score. The possible summary score ranges for each domain were: UBS (0–15), LBS (0–15), UBF (0–30), LBF (0–20), CVF (0–15), and BC (0–15). A higher score indicated a higher level of fitness.

## Measures

The principal investigator trained four research assistants to collect both physical test and survey data. To insure inter-rater reliability the research assistants practiced data collection with the principal investigator, each other, and with volunteer participants whose data were not included in the analyses. Research assistants participated in quarterly refresher training and met with the principal investigator weekly in order to discuss study progress. In phase two, the fitness tests and revised SRFit survey were administered to 108 new participants (N=41 Fitness Center and N=67 CHC). All participants received pre-test instructions when their appointment was scheduled and during a reminder phone call that occurred the day before their scheduled test. Participants were instructed to refrain from caffeine intake two hours prior to the physical test, refrain from alcohol consumption six hours prior to the physical test, avoid vigorous activity 24 hours prior to the physical test, and avoid a large meal before the physical test but to not come on an empty stomach. Participants were instructed to wear tennis shoes and bring spandex shorts (and a sports bra for women), a bathing suit, or tight clothing for the BodPod if they owned them.

Testing occurred during regular fitness center hours (between 6:00 A.M. and 7:00 P.M.) at a time when participants were able to attend an appointment. The order of evaluation was patient consent, the SRFit survey, resting blood pressure, resting heart rate, height, weight, body composition, and the Senior Fitness Test. To avoid being biased by the survey responses, one research assistant delivered the survey to the study participant while a different research assistant conducted the physical tests. Participant consent was completed in approximately five minutes and the SRFit survey was completed in approximately 10 minutes. Immediately following the survey, in the same private, quiet room, the participant remained silent and seated for an additional five minutes. Next, resting heart rate and resting blood pressure were measured using an A&D UA-767 Digital Blood Pressure Monitor and LifeSource large or regular adult automated blood pressure cuff (A&D Medical, San Jose, CA). Participant height was measured using a wall-mounted stadiometer (Seca, Birmingham, United Kingdom). Weight and body composition were measured using the BodPod scale and air displacement plethysmography system (Life Measurement Inc., Concord, CA). When compared to hydrodensitometry (the gold standard of body composition determination), the BodPod has been shown to be a valid and reliable measure of body composition (3, 15, 12). During the height, weight, and body composition assessments, all participants were barefoot and appropriately clothed.

In the Senior Fitness Test, upper body strength and endurance were evaluated using the arm curl test. Participants were asked to use their dominant arm and complete as many arm curls as possible in 30 seconds. Lower body strength and endurance were measured using the chair stand test. Participants were asked to sit on a hard surfaced chair and return to standing without using their arms or other items for assistance for as many times as possible in 30 seconds. Upper body flexibility was evaluated using the left and right back scratch tests. The score represented one's ability to reach over and under opposite shoulders and touch or overlap the fingers of opposite hands (a negative number was the distance between fingers and a positive number was the amount fingers overlapped). Lower body flexibility was evaluated using the chair sit and reach test. The score was the distance one could bend at the waist and reach the fingers down one leg (a negative number was the distance between the middle fingers and the toes and a positive number was the distance the fingers exceeded the toes). Cardiovascular fitness was evaluated using the summary estimate of the distance walked (meters) during the Six Minute Walk Test. Participants were asked to walk as far and as fast as they could in six minutes. Participants walked on a flat, rubberized, indoor track. Participants performed most tests one time. Upper-body and lower-body flexibility tests had two trials and the better of the two scores was used. The physical measures took approximately 30 minutes to complete (18).

## Analyses

Results from the Senior Fitness Tests and SRFit surveys from the CHC and fitness center participants were combined, plotted, and graphed to ensure normality of the dependent variables. All variables were normally distributed. Data were analyzed using SAS/STAT® 9.2 User's Guide (Cary, NC: SAS Institute Inc. 2008). We examined whether there were demographic or physical test differences between the participants recruited from the CHC and those recruited from the fitness center. Group comparisons were made using chi-square for categorical variables and t-tests for continuous variables. Cronbach's Alpha was used to determine the internal consistency of items within each fitness domain. Validity was assessed using Spearman Rank Order correlations. Correlations were computed only between corresponding Senior Fitness Tests and SRFit items.

## Results

Forty-five percent of the participants were female and 37% reported being Black or in the "other" race category. The mean age was  $53.5 \pm 8.0$ yr (range=40–71) and there was no difference in age between participants recruited from the CHCs and those recruited from the fitness center ( $p=0.43$ ). The mean BMI was  $30.6 \pm 8.8$  kg/m<sup>2</sup>. Demographic and physical test data for the total sample and by site of recruitment are presented in Table 1. Participants recruited from the fitness center had more education ( $p<0.0001$ ) and performed significantly better on all physical fitness test measures. The observed range for each measure (not shown) was considerable and indicated that we had a diverse sample not just sociodemographically but in terms of fitness as well. Spearman Rank correlations shown in Table 2 indicate the associations between individual SRFit self-report items and the Senior Fitness Test physical tests in the following domains: UBS, LBS, UBF, LBF, CVF, and BC. These values range from 0.29 to 0.74 and all values were significant at the  $p<0.01$  level. Cronbach's Alpha values for the survey summary scores representing each fitness domain ranged from 0.75 to 0.87 and are also presented in Table 2. Correlations between SRFit summary scores and Senior Fitness Test physical test values range from 0.47 to 0.79 and all values were significant at the  $p<0.001$  level. Correlations between each mean physical test score and the mean of each individual SRFit survey item within a fitness domain were generally similar to the correlations between each mean physical test score and the SRFit summary scores of that fitness domain. The SRFit instrument took less than ten minutes to administer and complete. All SRFit items were completed by 92 percent of participants.

Table 3 shows the total sample mean (SD) physical test scores and their corresponding SRFit survey summary scores. For comparison, the Senior Fitness Test performance category scores and the highest possible SRFit summary scores also are presented in Table 3. When participants from both recruitment sites were combined, they scored above average on the 6 minute walk test and average on the arm curl test. Scores were below average on all other tests.

## Discussion

Although work reported here was preliminary, the results were quite promising and showed the feasibility of developing a self-reported survey for health-related fitness. The internal consistency and validity of the survey items were explored in a relatively large and socioeconomically diverse study sample. We also demonstrated that the developed survey items were comparable to valid and reliable physical fitness tests and that the correlations representing the fitness domains were good to excellent. SRFit items and summary scores were consistent with Senior Fitness Test performance scores. For example, participants reported that moving from a standing position to a seated position was "somewhat hard," ( $4.6 \pm 0.8$ ), moving from a seated position to a standing position was "somewhat hard," ( $4.5$

$\pm .9$ ), and they could move from a seated position to a standing position approximately “8 – 11.5” times in 30 seconds ( $3.4 \pm 1.3$ ). The SRFit summary score for these LBS measures was  $12.6 \pm 2.6$  and the mean Senior Fitness Test Chair Stand score was  $13.4 \pm 5.4$ . A Chair Stand score of  $< 16$  is considered below average on the Senior Fitness Test (18). Results from both the SRFit survey and physical fitness test indicated the need to improve LBS in this sample.

Although the Senior Fitness Test can be completed in a clinical setting, in our research this test took 30 minutes to complete when delivered by trained test administrators. Our physical tests also included measures of height, weight, and body composition which required nearly 10 additional minutes to complete. While height and weight are likely to be measured during a regular primary care provider visit, body composition is less likely to be measured. Comparatively, the SRFit survey contains measures that are generally not assessed during a primary care visit. Additionally the survey was completed by participants in the current study in less than 10 minutes. It could be completed by patients without the need of a test administrator during the time the patient completes other paperwork and without adding to the patient-provider visit length. It could also avoid the need for extra space and provider resources during a primary care visit.

Having a valid, reliable and efficient SRFit instrument for assessing physical fitness could have many practical applications. In the primary care setting, the SRFit instrument could allow the provider to assess patients with regard to fitness for health. Annual physical fitness evaluations could help the primary care provider address declines in physical fitness that may delay declines in physical function and eventual disability by indicating the need to refer patients for further exercise testing and physical activity interventions. In population health assessments, the SRFit survey could provide a more accurate measurement of physical fitness. Health surveys and cohort studies, for example, could use such an instrument to better inform models and estimates of physical fitness and health-related quality of life.

## Limitations

This research has limited generalizability. The sample includes participants from a single, large, urban location in the United States. The sample only included participants who were English speaking and most reported being either White or Black race. It is unknown whether this survey would be appropriate for people who are other races and ethnicities, live outside of an urban U.S. location, or do not speak English. The survey was delivered in person, by trained fitness professionals, in a fitness center. This setting could have influenced participant responses and it is unknown whether this survey could be completed via telephone or electronically. Out of 2,376 possible responses, the “don’t know” option was selected 7 times (0.003% of the responses). There was no pattern to which participants selected the “don’t know” option and participants appeared to understand the items but simply reported not knowing which response was appropriate for them.

## Conclusions

The concept of a self-report physical fitness survey is quite unique and results from this preliminary research study favor further survey development. The next phase of this project will recruit a total of 200 participants and seek to further establish validity and reliability of the SRFit survey. Future research plans involve evaluating the survey to 1) estimate validity and reliability across varied racial/ethnic and socioeconomic groups, 2) determine sensitivity to either improvement or decrement in fitness over time, and 3) explore possible short forms of the SRFit survey. Finally, the predictive validity of the instrument should be established in reference to health service use, physical function, disability, cardiac events, and death.

Ideally, a series of studies will contribute to both the conceptualization and measurement of self-reported fitness.

Physical fitness includes the components of health-related fitness that allow an individual to perform activities. It is based on health fitness standards or physical capacity (2, 7). Standards based on physical capacity are associated with the ability to perform activities of daily living, recreational activities and competition. Health-fitness standards are the minimal physical fitness values needed for a healthy metabolic profile and physical function. While there are surveys that evaluate valid and reliable measures of physical activity and physical function, no surveys that describe physical fitness tests to evaluate physical fitness status currently exist. The novelty of the SRFit survey, its efficiency of delivery and completion, and its correlation with existing physical fitness tests indicate this survey's usefulness in future research and clinical practice.

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**Table 1**

Comparison of Fitness Center and CHC Participants (n=108)

Variable	Mean (SD)		p-value <sup>1</sup>	Mean (SD)
	Fitness Center (N=41)	CHC (N=67)		
Age (years)	52.76 (8.12)	54.01 (7.97)	0.4321	53.53 (8.02)
Education (years)	16.83 (2.90)	12.15 (2.85)	<0.0001	13.93 (3.65)
RHR (beats/min)	70.02 (13.55)	77.03 (14.34)	0.0134	74.37 (14.40)
Weight (kg)	75.19 (17.87)	96.53 (25.96)	<0.0001	88.43 (25.37)
BMI (kg/m <sup>2</sup> )	26.31 (5.25)	33.16 (9.49)	<0.0001	30.56 (8.78)
SBP (mmHg)	118.51 (18.67)	133.96 (20.51)	0.0002	128.09 (21.13)
DBP (mmHg)	76.51 (9.08)	85.28 (12.73)	0.0002	81.95 (12.21)
Race (%)	4.88	52.24	<.0001	34.26
Black	95.12	43.28		62.96
White	0.00	4.48		2.78
Other				
Sex (%)	41.46	62.69	.0316	62
Male	58.54	37.31		54.63
Female				45.37
Arm Curl (curls in 30 seconds)	20.62 (5.44)	15.93 (6.30)	0.0001	17.71 (6.39)
Chair Stand (stands in 30 seconds)	17.88 (3.96)	10.59 (4.18)	<0.0001	13.36 (5.41)
L Back Scratch (cm)	-5.14 (12.25)	-27.13 (16.50)	<0.0001	-18.70 (18.41)
R Back Scratch (cm)	-2.04 (11.08)	-22.11(17.23)	<0.0001	-14.49 (18.02)
Chair Sit and Reach (cm)	3.29 (12.83)	-6.92(13.94)	0.0002	-3.04 (14.36)
6 min walk (m)	661.48 (79.34)	416.96 (166.49)	<0.0001	510.65 (183.41)
% Body Fat	28.64 (10.16)	34.77 (13.86)	0.0170	32.31 (12.81)

<sup>1</sup> Group comparisons were made using chi-square for categorical variables and t-tests for continuous variables.

Table 2

Senior Fitness Test data and SRFit response item correlations (N=108).

Fitness Domain	Mean Score (SD)	Analogous Fitness Test	Spearman Rho	Cronbach's Alpha
<i>Upper-Body Strength and Endurance(UBS)</i>		<i>Biceps Curl</i>		0.75
<b>Abbreviated SRFit Survey Items</b>				
How hard is it to move a 5lb (8lb males) weight up to your shoulder	4.65 (0.69)	<i>Biceps Curl</i>	0.46***	
How hard is it to return a 5lb (8 lb males) weight to your side	4.64 (0.69)	<i>Biceps Curl</i>	0.46***	
How many times can you move a 5lb weight (8lb males) from your side to your shoulder and return in 30 seconds	3.43 (1.39)	<i>Biceps Curl</i>	0.58***	
SRFit Upper-Body Strength Summary Score mean (SD)	12.76 (2.37)	<i>Biceps Curl</i>	0.59***	
<i>Lower-Body Strength and Endurance (LBS)</i>		<i>Chair Stand</i>		0.75
<b>Abbreviated SRFit Survey Items</b>				
How hard is it to move from a <u>standing</u> position to a seated position	4.63 (0.82)	<i>Chair Stand</i>	0.52***	
How hard is it to move from a <u>seated</u> position to a standing position	4.48 (0.94)	<i>Chair Stand</i>	0.54***	
How many times can you move from sitting to standing in 30 seconds	3.40 (1.30)	<i>Chair Stand</i>	0.67***	
SRFit Lower-Body Strength Summary Score mean (SD)	12.57 (2.64)	<i>Chair Stand</i>	0.68***	
<i>Left Upper-Body Flexibility (UBF)</i>		<i>Left Back Scratch</i>		0.83
<b>Abbreviated SRFit Survey Items</b>				
How <u>hard</u> is it to reach your <u>left</u> hand <u>over</u> your <u>left</u> shoulder	4.29 (1.01)	<i>Back Scratch</i>	0.48***	
How <u>far</u> can you reach your <u>left</u> hand <u>under</u> your <u>left</u> shoulder	3.95 (0.95)	<i>Left Back Scratch</i>	0.44***	
How <u>far</u> can you reach your <u>left</u> hand <u>over</u> your <u>left</u> shoulder	4.05 (0.85)	<i>Left Back Scratch</i>	0.56***	
SRFit Left Upper-Body Flexibility Summary Score mean (SD)	12.29 (2.81)	<i>Left Back Scratch</i>	0.47***	
<i>Right Upper-Body Flexibility (UBF)</i>		<i>Right Back Scratch</i>		0.83
<b>Abbreviated SRFit Survey Items</b>				
How <u>hard</u> is it to reach your <u>right</u> hand <u>over</u> your <u>right</u> shoulder	4.34 (0.95)	<i>Right Back Scratch</i>	0.52***	
How <u>far</u> can you reach your <u>right</u> hand <u>over</u> your <u>right</u> shoulder	4.09 (0.85)	<i>Right Back Scratch</i>	0.44***	
How <u>far</u> can you reach your <u>right</u> hand <u>under</u> your <u>right</u> shoulder	3.96 (0.99)	<i>Right Back Scratch</i>	0.53***	
SRFit Right Upper-Body Flexibility Summary Score mean (SD)	12.39 (2.81)	<i>Right Back Scratch</i>	0.67***	
<i>Lower-Body Flexibility (LBF)</i>		<i>Sit and Reach</i>		0.83
<b>Abbreviated SRFit Survey Items</b>		<b>r value</b>		
How <u>hard</u> is it for you to reach down your <u>left</u> leg toward your toes	4.29 (1.04)	<i>Sit and Reach</i>	0.36***	
How <u>far</u> could you reach down your <u>left</u> leg toward your toes	4.47 (1.30)	<i>Sit and Reach</i>	0.49***	
How <u>hard</u> is it to reach down your <u>right</u> leg toward your toes	4.28 (1.01)	<i>Sit and Reach</i>	0.40***	
How <u>far</u> could you reach down your <u>right</u> leg toward your toes	4.35 (1.34)	<i>Sit and Reach</i>	0.51***	
SRFit Lower-Body Flexibility Summary Score mean (SD)	17.42 (3.78)	<i>Sit and Reach</i>	0.55***	
<i>Cardiovascular Endurance (CVF)</i>		<i>6 Minute Walk</i>		0.75
<b>Abbreviated SRFit Survey Items</b>				

<b>Fitness Domain</b>	<b>Mean Score (SD)</b>	<b>Analogous Fitness Test</b>	<b>Spearman Rho</b>	<b>Cronbach's Alpha</b>
How long could you walk at your normal speed without stopping	4.62 (0.82)	<i>6 Minute Walk</i>	0.29**	
How many times could you walk up and down a grocery store aisle in 6 min	4.1 (1.18)	<i>6 Minute Walk</i>	0.60***	
How many times could you walk around a track in 6 minutes	3.96 (1.33)	<i>6 Minute Walk</i>	0.52***	
SRFit Cardiovascular Endurance Summary Score mean (SD)	12.89 (2.64)	<i>6 Minute Walk</i>	0.66***	
<i>Body Fat and BMI (BC)</i>		<i>BodPod; BMI</i>		0.87
<b>Abbreviated SRFit Survey Items</b>				
What is your waist size	2.37 (0.74)	<i>BodPod; BMI</i>	0.71***; 0.71***	
What is your BMI	2.65 (0.85)	<i>BodPod; BMI</i>	0.74***; 0.72***	
What is your percent body fat	2.67010 0.88649	<i>BodPod; BMI</i>	0.71***; 0.67***	
SRFit Body Composition and BMI Summary Score mean (SD)	7.74 (2.23)	<i>BodPod; BMI</i>	0.79***; 0.78***	

\*\*\*  
p < 0.001,

\*\*  
p < 0.01,

BMI (Body Mass Index), SRFit (Self-Reported Fitness Survey)

Table 3

Senior Fitness Test Scores (SFT), SRFit summary Scores, and SFT Category Scores

Variable	SFT Score Mean (SD)	SFT Category Score			SRFit Summary Score Mean (SD)	SRFit Maximum Possible Summary Score
		Below Average	Average	Above Average		
Arm Curl (curls in 30 seconds)	17.71 (6.39)	<17	23	28	12.76 (2.37)	15
Chair Stand (stands in 30 seconds)	13.36 (5.41)	<16	22	26	12.57 (2.64)	15
Left Back Scratch (cm)	-18.70 (18.41)	<-1	-1 to 3	>3	12.29 (2.81)	15
Right Back Scratch (cm)	-14.49 (18.02)	<-1	-1 to 3	>3	12.39 (2.81)	15
Chair Sit and Reach (cm)	-3.04 (14.36)	<.5	.5 to 6.5	>6.5	17.42 (3.78)	20
6 min walk (m)	510.65 (183.41)	<405	405 to 498	>498	12.89 (2.64)	15
BodPod (% body fat)	28.6 (10.16)	No SFT category score available			7.74 (2.23)	15
BMI (kg/m <sup>2</sup> )	26.31 (5.25)					

Senior Fitness Test (SFT)