

Examination of the Psychometric Properties of the Spiritual Fitness Assessment

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Abstract Using a sample of 196 undergraduate students, the present study investigated the psychometric properties of the Spiritual Fitness Assessment, a measure of spiritual fitness designed for use by health and fitness professionals. Examination of inter-item consistency produced satisfactory alpha coefficients for the total test and its three subscales. Correlations of the SFA with measures of spirituality and spiritual well-being provide support for convergent validity. Significant positive correlations with a measure of self-esteem suggest that the test has satisfactory criterion validity. Correlations with age, sex, and a measure of social desirability indicate that the SFA is significantly, though only moderately, affected by demographic variables and motivated response tendencies. Factor analysis of the SFA items indicate that the test is factorially complex and subscales may need to be refined to better measure their intended constructs. Overall, the results of the study suggest that the test may be useful for evaluations of spiritual fitness. Further research with samples drawn from different populations is needed on the test to better establish its reliability and validity.

Keywords Spirituality · Fitness · Psychometric · Measurement · Evaluation

Interest in spirituality and religion has been on the rise among scientists and practitioners in a variety of disciplines (e.g., psychology, nursing, medicine, counseling, social work) over the past several years with the emerging literature largely suggesting that they have positive implications for health and well-being (e.g., Oman and Thoresen 2005). Curiously, one applied area where spirituality has not found much by way of formal scholarly expression is in the area of health and fitness. As can be seen in the numerous websites and periodicals that are now available (such as Faith and Fitness magazine, and www.faithandhealthconnection.org), fitness instructors, trainers, and coaches have been increasingly adopting more holistic approaches to health in their work with clients based

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upon the growing recognition that all aspects of functioning—the physical, mental, and spiritual—need to be addressed to best facilitate total health.

While there are a number of existing ways that physical fitness (e.g., biometrics) and mental wellness (e.g., stress tests) can be assessed by fitness professionals, there has been little available to them to evaluate spiritual wellness. Recognizing this gap, Dale Fletcher, founder of the Faith and Health Connection Ministry and a professional wellness coach, developed the Spiritual Fitness Assessment (SFA; Fletcher 2007a). The SFA is a 40-item self-report questionnaire designed to gather information about client's spirituality that is meant to be used as part of a holistic evaluation of personal wellness for the purposes of fitness and health programming. More specifically, the SFA was constructed to operationalize and evaluate 18 “spiritual exercises” (i.e., behaviors that actively nurture spiritual wellness) that Fletcher identified based upon his review of both the scientific literature and the Jewish and Christian scriptures as having an impact on emotional and physical health (Fletcher *nd*, 2007b, c). The exercises are grouped into three broad areas named Beliefs and Attitudes, Relationship with God, and Practice of Faith.

Created to assess spiritual fitness from an explicitly Christian perspective, the SFA appears to hold promise as a tool for use by health and fitness professionals interested in incorporating a spiritual component into their work with clients. However, to date, there have been no empirical studies done to examine its psychometric properties. In this vein, the purpose of this investigation was to complete an initial psychometric evaluation of the SFA. In particular, this study aimed to gather information about the reliability of the SFA by examining inter-item response consistency and validity. The validity of the SFA was explored by investigating (a) its factorial structure (i.e., factorial validity), (b) its correlation with conceptually similar tests (i.e., convergent validity), and (c) its correlation with aspects of functioning that would theoretically be assumed to be associated with spiritual fitness (i.e., criterion validity). For this study, convergent validity was examined by looking at the correlations of the SFA to a multidimensional taxonomic measure of spirituality called the Expressions of Spirituality Inventory (ESI; MacDonald 2000a, b) as well as to a measure of wellness called the mental, physical, and spiritual well-being scale (MPSWBS; Vella-Brodrick and Allen 1995). Criterion validity was evaluated by examining the correlations of the SFA to a measure of self-esteem (Rosenberg 1965). Finally, correlations of the SFA to demographic variables (i.e., age and sex) and a two-factor measure of socially desirable responding (i.e., the balanced inventory of desirable responding, BIDR; Paulhus 1988) were also examined as indices of discriminant validity and to determine whether the SFA scores may be influenced by these variables. In general, it was expected that evidence of satisfactory reliability and validity would be obtained. In terms of criterion validity, significant positive associations were expected between the SFA and the self-esteem measure.

Method

Participants

The sample of participants consisted of 196 students at a private Catholic university located in the Midwestern United States. The sample was composed of 139 females and 57 males with a mean age of 23.09 years ($SD = 6.91$; range 18–61 years). In terms of religious affiliation, 80 participants were Catholic, 77 participants reported membership in other Christian denominations, 8 participants indicated that they were members of a

non-Christian religion, and 31 participants reported no religion or stated that they were atheist, apostate, or agnostic.

All participants provided written consent indicating their agreement and understanding of involvement in the study, and all participants received extra credit for their participation that was applied to their final grade in their respective psychology course.

Measures

Spiritual Fitness Assessment (SFA; Fletcher 2007a, b, c, nd)

The Spiritual Fitness Assessment (SFA) is a measure created by Fletcher to examine the connection between faith and health based on his research and personal beliefs in Biblical truths. It is a 40-item questionnaire assessing 18 spiritual beliefs, attitudes, and practices called spiritual exercises. The 18 spiritual exercises are broken into three categories. The first category, called Beliefs and Attitudes, includes the exercises Believe in God, Believe God Forgives You, and Believe God's Spirit Lives in You. The second category, labeled Your Relationship with God, encompasses the exercises Read and Study the Bible, Believe In and Receive God's Love, Love God, Pray and Mediate, Obey God, Cry Out to God, Surrender to God/Let Go, Abide in God's Presence, Have Faith, and Trust in God. The third category, named How You Practice Your Faith, includes the exercises Confess Your Sins, Forgive, Attend Church/Worship with Others, Be in Community with Others, Love and Serve Others, and Think Spiritual Thoughts/Renew Your Mind (Fletcher *nd*). Of the 40 items on the test, 12 are used to measure Beliefs and Attitudes, nine are used to tap Relationship with God, and 17 are for evaluating Practice of Faith. The two remaining items (i.e., the last two on the test) are not designed to measure the spiritual exercises but rather are used to get information on religious membership and to determine if the respondent is interested in talking with a professional about how to improve their spiritual health.

For all items belonging to Beliefs and Attitudes and Relationship with God categories, a seven-point response scale ranging from Strongly Disagree to Strongly Agree is used. For items in the Practice of Faith category, eight of the items are rated using the same seven-point scale. Six of the items are rated using a seven-point scale asking about frequency of behavior (ranging from Never to More than once a week). The last three items are rated using a different seven-point behavioral frequency scale (ranging from Never to More than once a day).

Expressions of Spirituality Inventory (ESI; MacDonald 2000a, b)

The ESI is a measure of a five-dimensional taxonomic model of spirituality that was developed through the conjoint factor analyses of 19 existing measures of spirituality and associated constructs. Though initially available only in a 98-item form, a shorter 30-item version has been created from the longer test (MacDonald 2000b). The 30-item version was used in this investigation.

The dimensions of spirituality measured by the ESI include Cognitive Orientation toward Spirituality (i.e., beliefs and attitudes about the existence of spirituality and its relevance to daily functioning), Experiential/Phenomenological Dimension (i.e., spiritual experiences), Existential Well-Being (i.e., perception of self as having meaning and purpose and the capacity to handle the existential adversities of life), Paranormal Beliefs (i.e., belief in the existence of non-ordinary phenomena such as reincarnation, mind reading,

precognition), and Religiousness (i.e., intrinsic religious motivation or engaging in religious belief and practice for its own sake). The ESI uses a five-point response scale ranging from “very strongly disagree” to “very strongly agree” that respondents use to rate the extent to which they agree with the items. The ESI has been shown to have satisfactory reliability and good factorial, convergent, discriminant, and criterion validity (MacDonald 2000a, b).

Balanced Inventory of Desirable Responding (BIDR; Paulhus 1988)

The BIDR is a widely used 40-item measure of social desirability. It is made up of two subscales called Impression Management (i.e., deliberate response distortion to influence how other’s perceive the respondent) and Self-Deceptive Enhancement (i.e., unconscious response tendencies involving self-denial of negative aspects of personal functioning). It generates a total score and two subscale scores.

Mental, Physical, and Spiritual Well-Being Scale (MPSWBS; Vella-Brodrick and Allen 1995)

The MPSWBS is a 30-item scale that was developed to measure health from a holistic perspective. The items are divided across the three subscales of mental, physical, and spiritual well-being. Research has shown the subscales to have adequate reliability and validity (Friedman and MacDonald 2002).

Rosenberg Self-Esteem Scale (RSES; Rosenberg 1965)

The RSES is a widely used 10-item measure of general self-esteem. Robinson and Shaver (1973) report that it has good psychometric properties.

Demographic Form

A demographic form was also included that obtained information about participants’ sex, age, and religious affiliation.

Procedure

Participants were recruited through undergraduate psychology courses where a short presentation was given explaining the purpose of the study and the conditions of participation. Those choosing to participate were given the battery of measures along with consent forms and instructed to complete the forms on their own time and return them to the researchers when done.

Results

Item responses for the first 38 items were summed to arrive at a total SFA score. Given that the items on the SFA are also organized into Fletcher’s three categories, it was decided that items belonging to each category would be summed to produce three subscale scores—Beliefs and Attitude, Relationship to God, and Practice of Faith—so as to facilitate more

detailed analysis of the test. The last two items asking about religious denomination and whether or not the respondent is interested in talking to a professional were not included in any analyses.

Descriptive Statistics and Reliabilities

Means, standard deviations, score ranges, and reliability coefficients for the subscales and total test, respectively, are reported in Table 1. Also included in the table is the mean item correlation (i.e., the average correlation between pairs of items) for the subscales and total test.

As can be seen in the table, the SFA subscales and total scale produce very satisfactory reliabilities with alpha coefficients ranging from .92 to .95. The alpha for the total test is .97.

Mean item correlations within each subscale and for the total test also support the reliability of the measure.

Exploratory Factor Analysis

Next, to examine the internal structure of the SFA, an item level exploratory principal axis factor analysis was completed using the first 38 items. Factor extraction was based upon statistical criteria (i.e., $R > 1$, scree test), and the emergent factors were varimax rotated to facilitate interpretation. Rotated factor loadings, as well as the SFA items, can be found in Table 2.

As reported in Table 2, five factors that account for 64.55% of the variance were found. Examination of elevated loadings (i.e., loadings .30 or greater) reveal that all items produced a high loading on at least one factor, with a substantial number of items generating notable loadings on two or more factors. Factor one was found to house high loadings from 24 items cutting across all three categories (i.e., items 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 30, 32). Inspection of item content revealed that the majority of items contained explicit reference to “God” (i.e., the word “God” appears in most of the items). We consequently labeled this factor Beliefs and Attitudes Attributed to God. Factor two contained loadings from 21 items (Items: 4, 5, 6, 9, 10, 13, 14, 19, 20, 22, 23, 24, 25, 30, 31, 32, 33, 34, 35, 37, 38) that also are from each of the subscales. Examination of item content showed that most items concerned how spirituality or God impacts personal functioning. As a result, we named this factor How Belief in God is Perceived as Affecting One’s Life. Factor three is made up of loadings from 11 items from

Table 1 Descriptive statistics and reliability information for the Spirituality Fitness Assessment subscales and total test

Scale	No# Items	Mean	SD	Range	Mean Item	
					Correlation	Alpha
Beliefs/attitudes	12 (items 1–12)	66.76	14.35	22–84	.55	.94
Relation to God	9 (items 13–21)	47.24	13.50	9–63	.67	.95
Practice of faith	17 (items 22–38)	73.36	21.75	17–119	.40	.92
Total test	38	187.35	45.67	49–262	.44	.97

Note: $N = 196$. Mean item correlation reflects the average correlation observed between the correlations calculated between all pairs of items

Table 2 Principal axis factor analysis of SFA items—varimax rotated factor loadings

SFA Items	Factors					h^2
	1	2	3	4	5	
1. There is a connection between a person's spirit, mind, emotions, and body	.31	.16	.57	.09	.03	.45
2. A person's faith-related beliefs, attitudes, and practices can have a positive impact on their health	.28	.17	.69	.17	.17	.65
3. I am open to learning how faith-related beliefs, attitudes, and practices might impact in a positive way on my health	.33	.25	.51	.21	.05	.48
4. I obtain strength and comfort from my faith/spirituality	.47	.45	.58	.12	.04	.78
5. Aside from my frequency of attending worship services, I consider myself to be spiritual	.43	.40	.62	.04	−.02	.73
6. My faith gives me a strong sense of meaning and purpose	.58	.50	.49	.09	−.01	.83
7. There is a God	.77	.06	.24	.07	−.04	.66
8. God's Spirit lives in me	.73	.25	.27	.07	.01	.67
9. My spiritual beliefs affect absolutely every aspect of my life	.49	.45	.48	.17	.02	.70
10. My trust and faith in God gives me hope	.80	.33	.33	.04	.03	.86
11. God hears me when I cry out to Him	.81	.25	.23	.06	.18	.80
12. My thought patterns impact on my emotions, feelings, and associated behaviors	.12	−.04	.52	.16	.15	.33
13. My relationship with God is the foundation for how I live my life	.67	.50	.28	.13	.09	.80
14. My relationship with God gives me a strong sense of purpose and meaning	.77	.42	.29	.09	.10	.87
15. I love God in a personal way	.81	.29	.20	.13	.18	.82
16. God loves me in a personal way	.84	.26	.19	.12	.16	.85
17. I know that God forgives me	.88	.13	.15	.15	.11	.84
18. I trust in God and have faith that he will take care of me	.88	.17	.17	.14	.19	.88
19. I try my very best to understand the principles and commandments of Holy scriptures/the Bible	.64	.41	.17	.11	.23	.67
20. I am obedient to the principles and commandments of Holy scriptures/the Bible	.51	.44	.10	.16	.11	.51
21. I have forgiven God for bad things that have happened to me	.50	.06	.07	.13	−.11	.29
22. I have close relationships with others in my faith community who have influence in my life's direction	.29	.78	.09	.20	−.05	.74
23. I feel a strong sense of support from other people who are in my faith community	.30	.73	.15	.16	−.04	.67
24. I engage in healthy behaviors to care for my body as God's temple	.41	.50	.15	.31	.05	.54
25. I draw special strength/power from God's Spirit to make health-related behavior choices and changes in my life	.51	.51	.25	.21	.13	.65

Table 2 continued

SFA Items	Factors					h^2
	1	2	3	4	5	
26. I tend not to hold grudges for a long time when people hurt me	.01	.17	.12	.63	−.04	.44
27. I have forgiven myself for things that I have done wrong	.16	.16	.10	.66	.06	.50
28. I have forgiven those who have hurt me	.05	.12	.17	.79	.11	.68
29. I am not angry or bitter toward God, myself or others	.29	.14	.11	.69	.05	.60
30. I cry out to God when I need His help	.53	.30	.29	−.06	.52	.73
31. I attend religious services, activities, or Bible studies	.26	.69	.05	.10	.21	.59
32. I confess my wrongdoings/sins to God and ask for His forgiveness	.43	.49	.27	.02	.44	.69
33. I volunteer at my place of worship or in my community	.05	.53	.19	.12	.19	.37
34. I consciously surrender or “let go” of all aspects of my life to God	.29	.48	.23	.12	.39	.54
35. I engage in social interaction with others of my faith	.23	.71	.22	.18	.13	.66
36. I monitor my thinking/thought patterns as a way to influence my emotions, feelings, and associated behaviors	−.02	.21	.40	.19	.40	.40
37. Other than at mealtime, I pray, meditate, or talk with God	.28	.47	.38	.07	.36	.58
38. I read or study Holy Scriptures/the Bible privately	.08	.62	.07	.15	.52	.69
Eigen values	10.01	6.36	3.94	2.60	1.62	
%Variance explained	26.34	16.75	10.36	6.85	4.26	

Note: $N = 196$. Total variance explained across all factors = 64.55%. Items taken verbatim from the Spiritual Fitness Assessment. (Fletcher 2007a). Used here with permission of the test author

Loadings in bold are .30 or higher

the Beliefs and Attitudes and Practicing Faith categories (items 1, 2, 3, 4, 5, 6, 9, 10, 12, 36, 37). Examination of item content led us to label this factor How Spirituality Affects Physical Aspects of Life and Gives Personal Strength. The fourth factor is comprised of loadings from five items from the Practicing Faith category (items 24, 26, 27, 28, 29). Most items were seen to focus on the act of forgiveness, either of one's self, another person, or God. Resultingly, we named this factor Forgiveness. Finally, the fifth factor contained appreciable loadings from six Practicing Faith items (i.e. items 30, 32, 34, 36, 37, 38). Inspection of item content led us to generate the label Practices Related to Seeking God.

Correlational Analyses

Next, product-moment correlations were calculated between the SFA subscale and total scores and participant age, sex, and social desirability scores (see Table 3).

The SFA subscales and total score generated significant positive correlations with age and significant negative correlations with sex (in the direction indicating that females tend

Table 3 Correlations of the Spirituality Fitness Assessment with demographic variables and a measure of social desirability

	SFA Scores			
	Beliefs/Attitudes	Relation to God	Practice of Faith	Total Score
Age	.20**	.17*	.16*	.19**
Sex	-.21**	-.21**	-.17*	-.21**
Balanced inventory of desirable responding				
IM	.23**	.19**	.32***	.28***
SD	.14	.17*	.20**	.19**
Total	.23***	.22**	.33***	.29***

Note: $N = 196$ except for age for which $n = 186$. For sex, female coded as 1, male coded as 2

* $P < .05$, ** $P < .01$, *** $P < .001$

to obtain higher scores). Despite being significant, all coefficients are of modest magnitude, suggesting that these demographic characteristics do not present as an undue confound to SFA scores.

With the measure of social desirability, significant positive correlations were obtained between the SFA total score and subscales and the BIDR total score and Impression Management and Self-Deceptive Enhancement subscales in all cases except one (i.e., the coefficient between BIDR Self-Deception and SFA Beliefs and Attitudes subscale). Coefficients were of generally modest magnitude except between the SFA Practice of Faith subscale and the BIDR total score ($r = .33$, $P < .001$) and the BIDR Impression Management subscale ($r = .32$, $P < .001$) where the coefficients are of moderate strength. Notwithstanding these latter two correlations, these findings indicate that SFA scores are not markedly compromised in terms of motivated response tendencies.

Table 4 shows the correlations obtained between the SFA and the measures of spirituality, spiritual well-being, and self-esteem.

Considering first the association of the SFA to the Expressions of Spirituality Inventory (ESI), the SFA total and subscale scores produced significant strong correlations with ESI Cognitive Orientation toward Spirituality (COS; a measure of non-religious spiritual beliefs), with coefficients ranging from .66 to .82 with the subscales and the correlation with the SFA total score falling at .80 (all $P < .001$). Similarly, the SFA correlated strongly and significantly with the ESI Religiousness dimension (REL; a measure of intrinsic religious orientation). Correlations with REL ranged from .75 to .84 with the SFA subscales (all $P < .001$). The correlation with the total SFA score is .86 ($P < .001$). Also, the SFA total score and subscales scores significantly correlated with the ESI Experiential/Phenomenological Dimension (EPD; a measure of spiritual experience), though the magnitude of coefficients was only moderate rather than strong; correlations with the SFA subscales range from .31 to .40 (all $P < .001$). The correlation with the SFA total score is .40 ($P < .001$). Finally, significant but very modest correlations were found between ESI Existential Well-Being and the SFA total score ($r = .18$, $P < .05$) and the SFA subscales of Relationship to God ($r = .17$, $P < .05$) and Practice of Faith ($r = .18$, $P < .05$). ESI Paranormal Beliefs did not produce any significant correlations with the SFA.

Looking next at the correlations with spiritual well-being, the SFA total score and subscales all correlated significantly and markedly with the Mental, Physical, Spiritual Well-Being Scale (MPSWBS) Spiritual Well-Being subscale (coefficients range from .56

Table 4 Correlations of the Spirituality Fitness Assessment total and subscale scores with measures of spirituality, spiritual well-being, and self-esteem

	SFA Scores			
	Beliefs/Attitudes	Relation to God	Practice of Faith	Total Score
ESI dimensions				
COS	.82***	.66***	.73***	.80***
EPD	.40***	.31***	.38***	.40***
EWB	.13	.17*	.18*	.18*
PAR	.10	.01	.07	.07
REL	.84***	.81***	.75***	.86***
Mental, physical, spiritual well-being scale				
Mental	.20**	.08	.20**	.18*
Physical	.05	.06	-.01	.03
Spiritual	.70***	.56***	.72***	.73***
Rosenberg SES	.25***	.24***	.30***	.29***

Note: $N = 196$

ESI expressions of spirituality inventory, COS cognitive orientation toward spirituality, EPD experiential/phenomenological dimension, EWB existential well-being, PAR paranormal beliefs, REL religiousness, Rosenberg SES Rosenberg self-esteem scale

* $P < .05$, ** $P < .01$, *** $P < .001$

to .72 with SFA subscales; correlation of .73 with SFA total score, all significant at $P < .001$). With the MPSWBS Mental Well-Being subscale, significant but modest correlations were found with SFA total score ($r = .18$, $P < .05$) and the subscales of Beliefs/Attitudes and Practice of Faith (both $r = .20$, $P < .01$). No significant correlations were obtained with the MPSWBS Physical subscale.

Finally, the Rosenberg Self-Esteem Scale was found to correlate significantly and moderately with the SFA total score ($r = .29$, $P < .001$) and the three subscales (coefficients range from .24 to .30, all $P < .001$).

Discussion

The results of this investigation suggest that the SFA is a measure with generally satisfactory psychometric properties. In terms of reliability, the SFA total score and three subscales produced inter-item response consistency coefficients ranging from .92 to .97, reflecting good reliability. With respect to validity, the SFA appears to demonstrate good convergent validity, as shown with the correlations between the Expressions of Spirituality Inventory and the MPSWBS, and somewhat satisfactory criterion validity, as indicated by its moderate correlations with a measure of self-esteem. The lack of significant associations with the MPSWBS Physical Well-Being subscale raises some questions regarding Fletcher's (2007b, c) assertion that the SFA is designed to tap spiritual behaviors linked to physical health. However, this finding is in line with at least one published study which found that the impact of physical exercise on recognized domains of well-being did not have any influence on spiritual wellness (Marinelli and Plummer 1999). Evidence also indicates that the SFA total score and subscales are not unduly influenced by demographic

characteristics of respondents or by social desirability. Further, some support for discriminant validity was also found in terms of non-significant correlations between ESI Paranormal Beliefs.

Where evidence is somewhat marginal for the SFA concerns the results of the exploratory factor analysis. The analysis indicates that the measure has a complex factorial nature and does not measure one single construct. Inspection of item factor loadings reveals that the items do not clearly correspond to the three clusters of questions labeled Beliefs and Attitudes, Relationship to God, and Practice of Faith, which were treated in this investigation as subscales. Further consideration of the findings as a whole, giving particular weight to the correlations with the Expressions of Spirituality Inventory (ESI), suggests that the SFA subscales lack construct specificity; for the most part the SFA subscales produced correlations of similar magnitude to each other with ESI Cognitive Orientation toward Spirituality, Religiousness, and the Experiential/Phenomenological Dimension. If the SFA subscales were actually measuring different constructs, then it might be expected that they would associate more differentially with the concepts operationalized in the ESI and identified by MacDonald (2000a) as comprising substantive and unique components of spirituality.

Overall, the findings of this investigation indicate that the SFA is an instrument that definitely warrants additional attention from the scientific community. Our results suggest that at least three lines of future research should be pursued. First, research is needed to establish if and how SFA scores associate with physical health and well-being. The results of this study strongly indicate that the SFA is a good measure of spiritual well-being and many important aspects of spirituality. However, given Fletcher's (2007b, c) reasoning that spiritual fitness should impact physical health, it may be expected that SFA should also have some robust relation with indicators of physical wellness. Since the present investigation used self-reported physical well-being, it might be worthwhile doing a study that employs more rigorous measures of physical health (e.g., biometric measures) to rule out the possibility that our lack of a significant association was due to how health is measured.

Second, further factor analytic work is needed to establish the dimensionality of the SFA and, more importantly, to clarify what is specifically captured by each of the dimensions. This research, in turn, could be used to revise and refine the SFA so that it is a more conceptually clean measure of spiritual fitness.

Finally, future research using samples drawn from different populations (e.g., general adult population, adolescents, people undergoing rehabilitative treatment) is strongly suggested since our findings may not generalize to these groups. Such generalization research is especially warranted, since the SFA was designed for use by health and fitness professionals for developing fitness programs for clients. As such, if the instrument is to be used by such professionals with any confidence, further validation of the SFA with a sample of people obtained through health and fitness centers would seem to be a requisite next step.

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