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The Wellness Index: Developing an instrument to assess elders' well-being. Slivinske, L. R., Fitch, V. L., & Morawski, D. P.

## The Wellness Index: Developing an Instrument to Assess Elders' Well-Being

L. R. Slivinske, PhD V. L. Fitch, PhD D. P. Morawski

**ABSTRACT.** The Wellness Index is a 79-item, self-administered scale used to measure well-being. The Wellness Index contains six independent dimensions of well-being which include physical health, morale, economic resources, ADL-IADL, religiosity, and social resources. Data for 463 older adults revealed each subscale and the Index had acceptable reliability and validity. An R factor, principle component analysis, suggested all subscales except economic resources could be combined to form a composite measure of overall level of functioning. Conceptual and methodological issues are discussed as well as implications for the future. [Article copies available from The Haworth Document Delivery Service: 1-800-342-9678.]

Social work practitioners providing services to elderly individuals are involved in ongoing client assessment. These efforts may include a variety of measures such as assessments of physical and mental health, ability to engage in ADL and IADLs, and perceived

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quality of life or sense of well-being among others. The Wellness Index discussed in this article has been designed for use by practitioners seeking to assess the well-being of elders. While there are existing scales of well-being, the effort in this project was to develop a multidimensional index that is valid and reliable from both a clinical and an empirical perspective. The index also must be usable in practice settings by professionals and elderly as a part of the helping process.

According to Larson (1978) as well as others, research regarding subjective well-being began with attempts to measure the level of adjustment of elderly individuals to external areas of their lives such as health, employment, and religion (Cavan et al., 1949; Havighurst, 1957). The appeal of well-being as an outcome measure has motivated researchers to develop a wide variety of approaches to describe and measure this concept. Various conceptualizations have included indicators such as life satisfaction (Neugarten et al., 1961; Thompson et al., 1960), morale (Kutner et al., 1956; Lawton, 1972), happiness (Havighurst & Albrecht, 1953; Kivett, 1976), longevity (Palmore & Jeffers, 1971), and overall level of functioning (Comptroller General, 1977; Pfeiffer, 1975).

This latter conceptualization, the Older Americans' Resources and Services program framework (OARS), is one of the most frequently used. A number of researchers continue to employ all or portions of this methodology for defining well-being (Arling, 1987; Beaver & Miller, 1985; Costa et al., 1987; Duffy & MacDonald, 1990; Fillenbaum & Smyer, 1981; Revicki & Mitchell, 1990). This approach has utility as it both reflects the multidimensional nature and interrelatedness of conditions of the elderly as well as provides an effective strategy for linking need, service provision, and changes in functional state (Morris et al., 1990; Pfeiffer, 1975).

Here, a modified OARS framework was utilized in developing the Wellness Index. It combines both the psychometric and rational approaches in scale construction (Jackson, 1971; Golden et al., 1984). Components of well-being were selected, based upon past research, judgements of practitioners, and empirical findings (Comptroller General, 1977; Larson, 1978; Pfeiffer, 1975; Slivinske & Fitch, 1985). As a result of this process, well-being was defined as a composite construct involving six dimensions: physical health, mo-

rale, economic resources, ability to carry out the activities of daily living (physical and instrumental), religiosity, and social resources. Recent research continues to support the efficacy of the interrelationship between well-being and these dimensions. Regarding physical health, Revicki and Mitchell (1990) found it to be the most important source of life strain among the elderly. Similarly, physical health was found to impair the ability to maintain accustomed lifestyles which often resulted in isolation, loneliness, and reduced life satisfaction (Connidis & McMullin, 1993; Duffy & MacDonald, 1990; Willits & Crider, 1988). Morale has been shown to be an important factor also. For example, Bishop et al. (1988) found that poor health, family functioning, and adjustment to retirement resulted in deficits in morale while McConatha and McConatha (1989) reported a direct association between well-being and life satisfaction. Changes in the structure of morale over time also have been noted (McCulloch, 1991). Economic resources directly relate to the ability of the elderly to sustain themselves and obtain needed services. Since the elderly experience greater inequality of income than any other age group, their health may be adversely affected (Crystal & Shea, 1990). Those lacking adequate resources often experience difficulty meeting the requirements of independent living and may experience reductions in the quality of their lives (Costa et al., 1987; Lindgren, 1994; Reschovsky & Newman. 1990: Rudkin, 1994). The ability to carry out the activities of daily living is one of the most widely used indicators of independent functioning (Spector, 1991; Stone & Murtaugh, 1990). Experiencing deficits in the ability to care for oneself (ADL) and/or not being able to successfully negotiate the presenting environment (IADL) are some of the most direct indicators of loss of functional ability (Becker, 1993; Kempen & Suurmeijer, 1990; Rudkin, 1994). The relevance of religiosity and well-being of the elderly is becoming more widely recognized (Moberg, 1990; Simon-Rusinowitz & Hofland, 1993; Walls & Zarit, 1991). Religious beliefs and activities serve as a strong source of support (Tobin et al., 1986) and influence attitudes about health and illness (Bearon & Koening, 1990). Religiosity, therefore, has a significant influence on well-being (Reker et al., 1987). Finally, the importance of social resources to well-being cannot be overstated. An absence of satisfying social relationships was found to be related to feelings of loneliness and depression (Mullins & Dugan, 1990), while those with close friends tended to be more active and experienced greater life satisfaction (Bitzan & Kruzich, 1990; Blieszner & Adams, 1992; Hong & Duff, 1994). It appears social support acts as a buffer against stress and negative life events (George, 1989; Larson, 1993; Okun et al., 1990).

The purpose of this study was to develop a clinically and empirically-based, multidimensional Wellness Index with acceptable reliability and validity. The Index also had to be relatively easy to complete, score, and interpret. It was believed this composite measure would form a positive-negative continuum of well-being which covered the entire range of functioning as defined above. The Index could be used by practitioners as a screening device or as a clinical tool to assess strengths and problem areas of the elderly and relate need to service provision. It also could be used as a planning tool or for evaluative purposes. Finally, researchers could use the Index to summarize or aggregate data and measure change in wellbeing over time.

Initial pilot work on a small sample of elderly residents of three retirement villages suggested the Index had promise. The attempt here was to test the reliability and validity of the Wellness Index on a larger sample of elderly individuals from a wider cross-section of service providers.

#### METHOD

#### Sample

Forty facilities which served the elderly in a four-county region in Ohio were randomly selected from their respective service directories. Thirty-six (90%) agreed to participate. Facilities ranged from nursing homes to senior volunteer programs. Data was gathered for 463 of their clientele aged 62 and over. Subjects on average were 73.4 years old and had an approximate annual income of \$11,750. Seventy-seven percent were female and 96% were Caucasian. Forty-two percent had worked in professional or white-collar jobs or had spouses in such occupations. Ninety-six percent were retired. Fifty-eight percent were widowed, 30% were married, while 12% were divorced or single. The demographic characteristics of the sample are summarized in Table 1.

#### Design

Clientele available at each facility during the time when administrators agreed data could be collected were asked to complete the Wellness Index. Although most agreed to participate, completion

	x	S.D.
Age	73.4	7.1
Income	\$11,750	\$3,250
	PER	CENT
Sex: Female Male	7 2:	7% 3%
Employment Status: Retired Full-time, part-time or seeking employment	9	6% 4%
Past/Current Occupational Status: Professional White collar Blue collar Other	1 3 2 3	1% 1% 1% 7%
Race: White African-American	9	6% 4%
Marital Status: Single Married Separated Divorced Widowed	3	7% 0% 0% 5% 8%

TABLE 1. Demographic Characteristics of the Sample

n = 463

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rate data was not gathered. Practitioners also conducted a professional assessment of each participant in the study.

#### Instrumentation

The initial construction of the Wellness Index began in 1982, in cooperation with the Ohio Presbyterian Retirement Services Corporation. After a review of the literature, scales used by the facilities. the OARS framework, and judgements of professional staff, six areas considered to be the most important indicators of well-being were selected. Items that represented each major component of well-being were then selected and/or developed with assistance from administrators, practitioners, and residents of three facilities of this corporation. Whenever possible, the origin of the items were noted. For example, two major groupings of items that measured morale and ADL-IADL were modified versions of scales utilized in an evaluative study of an adult foster care program (Kosberg et al., 1978). Also, a number of items representing religiosity came from an existing scale used by one facility. The author, however, was unknown. Each item was then evaluated in terms of its importance in measuring its particular component of well-being as well as its relevance for practitioners. Only relevant items that were judged to tap independent elements of each individual area were retained. The resultant index comprised of six subscales with 82 Likert-type items was read by a small number of residents for purposes of clarity. The wording of unclear items was changed.

Initial pilot work with a small sample of residents (n = 61) revealed that each subscale had acceptable reliability (alpha = .79-.91) and validity (r = .41-.69, p < .001). All items of each subscale were retained. An R factor, principal component analysis indicated all subscales could be combined to form an overall factor scale that had a Theta reliability of .85. A one-way analysis of variance suggested the Wellness Index had discriminant validity because significantly different scores were obtained when the mean scores of independent elderly were compared to mean scores of groupings of less independent elderly (F = 8.938; d.f. = 60; p < .001). The resultant factor explained over 57% of the total variation between the subscales and well-being (Slivinske & Fitch, 1985).

A professional assessment form was developed which captured

the clinical judgements of staff regarding each participants' physical health, morale, economic resources, ADL-IADL, religiosity, social resources, and overall level of functioning. A five-point Likert-style format was employed.

#### RESULTS

The reliability and validity of each dimension of well-being were analyzed using this larger sample of elderly individuals in order to determine if the resultant coefficients were acceptable. Only those dimensions that met these criteria were considered for inclusion in the final Wellness Index.

To begin, the internal consistency of each subscale was examined using Cronbach's alpha. The initial coefficients ranged from .75 to .94. Inspection of the contribution that each item made to the reliability of its respective subscale suggested that three items needed to be trimmed from the physical health subscale. The alpha reliability coefficients now ranged from .80 to .94. All other original items were retained. Table 2 contains a copy of the items that remained.

The concurrent validity of each individual subscale was studied by comparing the clinical assessments of practitioners in each respective area to the actual subscale scores. All correlations (r = .11to .38) were in the intended direction and were significant.

Ten months later, available participants (n = 192) were again asked to complete the Wellness Index. A comparison of time 1 and time 2 subscale scores revealed that all test-retest reliability coefficients (r = .41-.69) were significant. Table 3 displays the reliability and validity coefficients for each subscale, total number of items, and theoretical range of scores.

In order to examine the interrelationship between each subscale and between each subscale and the proposed composite index, zero order correlation coefficients were calculated. Inspection of the correlation matrix found in Table 4 showed that all intersubscale correlations were positive and significant as would be expected, with one exception. The correlation between economic resources and religiosity (.02) was not significant. The low to moderate intercorrelations suggested that although the subscales were associated, they were relatively independent of one another, indicating little

### TABLE 2. The Wellness Index

PHYSICAL HEALTH	MORALE	ECONOMIC RESOURCES
<ol> <li>I exercise or participate in vigor- ous activities regularly (at least three times per week).</li> <li>I need medical care or treatment beyond what I am receiving at the present time.</li> <li>I am in good health.</li> <li>I suffer from shortness of breath.</li> <li>I need supportive or prosthetic aids or devices (cane, brace, walker, etc.).</li> <li>My present state of health permits me to do the things I want to do.</li> <li>I have persistent aches and pains.</li> <li>I am well rested.</li> <li>I have major medical problems.</li> <li>I am physically strong.</li> <li>I have good nutritional (dietary) habits.</li> </ol>	<ol> <li>I am seldom lonely.</li> <li>Every day is the same to me.</li> <li>I am weak and useless.</li> <li>There are certain things that I love to do.</li> <li>I keep myself in good appearance.</li> <li>I often feel unhappy because of the actions of others toward me.</li> <li>I am old and feel it.</li> <li>I like doing new and interesting things.</li> <li>I am happy.</li> <li>I makes sense to plan ahead for next week.</li> <li>I could be much happier than I am.</li> <li>I generally am alert enough to know what is happening around me.</li> <li>I get fun out of life.</li> <li>Most people are by nature selfish.</li> <li>I am a important person.</li> <li>Sometimes I think there is no purpose in going on.</li> <li>I generally have little to do each day.</li> <li>To some people, I am an important person.</li> </ol>	<ol> <li>My financial resources are sufficient to meet my current needs.</li> <li>My financial resources are sufficient to meet most emergencies.</li> <li>I feel I have enough money to meet my needs in the future.</li> <li>I have enough money to buy those little "extras"-those small luxuries.</li> <li>My social life is affected by my lack of financial resources.</li> <li>I need financial assistance.</li> <li>There are many things I would like to buy but cannot afford.</li> <li>When I need money in an emergency, there is a place where I can get it.</li> <li>I am doing well financially.</li> <li>My financial resources take care of my needs very well.</li> </ol>

ADL-IADL	RELIGIOSITY	SOCIAL RESOURCES
<ol> <li>I am capable of doing my own shopping.</li> <li>I am capable of preparing my own meals.</li> <li>I am capable of doing my own housework.</li> <li>I am capable of taking medication without assistance.</li> <li>I am capable of managing my money.</li> <li>I am capable of eating unassisted.</li> <li>I am capable of dressing and un- dressing myself.</li> <li>I am capable of grooming myself.</li> <li>I am capable of securing transpor- tation or transporting myself.</li> <li>I am capable of getting in and out of bed without assistance.</li> <li>I am capable of getting in and out of bed without assistance.</li> <li>I am capable of bathing myself without assistance.</li> <li>I have no problems regarding toileting.</li> </ol>	<ol> <li>I lead an active prayer life.</li> <li>I read the Bible (Koran, etc.) regularly.</li> <li>I often read devotional and other religious writings.</li> <li>I have a satisfying meditation life.</li> <li>I lead a religious life (Christian, Jewish, Hindu, Buddhist, etc.).</li> <li>I strongly feel my need of God.</li> <li>I often concentrate my attention on God.</li> <li>I often participate in religious or spiritual activities.</li> <li>I am willing to endure ridicule for my beliefs and values.</li> <li>I intentionally strive to have the right relationships with others.</li> </ol>	<ol> <li>I feel lonely.</li> <li>I see people as often as I like.</li> <li>I have someone who would help me if I became sick or disabled.</li> <li>I have as many social activities as I like.</li> <li>My social activities are pleasur- able.</li> <li>I like people.</li> <li>People like me.</li> <li>I have the opportunity to develop new friendships.</li> <li>I have someone with whom I can express my true feelings.</li> <li>I can get advice if I need it.</li> <li>I have someone in whom I can trust and confide.</li> <li>I have someone who can trust and confide in me.</li> </ol>

Scoring format: SA = 5, A = 4, U = 3, D = 2, SD = 1. Reversed items; physical health (2,4,5,7,&9); morale (2,3,6,7,11,14,15,18,&19) and economic resources (5,6,&7). All rights reserved.

Subscale	Total Number Range of Items		Cronbach's Alpha (n = 463)	Validity Coefficients (n = 463)	Test-Retest Reliabilities (n = 192)	
Physical Health	12	12-60	.80'	.38***	.69***	
Morale	20	20-100	.82	.22***	.44***	
Economic Resources	10	10-50	.89	.12"	.66***	
ADL-IADL	13	13-65	.94	.30***	.50***	
Religiosity	11	11-55	.91	.11	.66***	
Social Resources	13	13-65	.87	.14"	.42***	

TABLE 3. Number of Items, Range of Scores, and Reliability and Validity Coefficients for Each Subscale

\* = p < .05; \*\* = p < .01; \*\*\* = p < .001

redundancy and overlap. The average correlation of the subscales was found to be .32. The correlations between the subscales and the total Index were all positive and significant as predicted and indicated moderate to strong associations existed (r = .52-.79). It should be noted that of all the subscales, economic resources had the lowest correlation (r = .52) with the Index.

An R factor, principle component analysis was conducted to determine if all subscales could be combined to form an overall index (factor scale). Examination of the results of the analysis suggested that one factor was emerging that would contain all of the subscales except economic resources. The original factor had an Eigenvalue of 2.70 and explained 45% of the total variation between the subscales and the factor, well-being. All initial and rotated loadings were found to be significant, with one exception. Again, the exception was the rotated loading for the economic resources subscale (.03). Alpha and Theta reliability coefficients were calculated for the original factor and were found to be, respectively, .74 and .76. The analysis was rerun deleting economic resources from the Index. One factor clearly emerged with an Eigenvalue of 2.58 which now explained 52% of the variation. The average correlation of the subscales rose to .39 while the Theta reliability

Subscale	Physical Health	Morale	Economic Resources	ADL- IADL	Religiosity	Social Resources	Wellness Index
Physical Health	1.00	.47***	.33***	.43***	.10*	.29***	.67***
Morale		1.00	.25***	.45***	.32***	.58***	.79***
Economic Resources		10 <sup>10</sup> 10	1.00	.19***	.02	.20***	.52***
ADL-IADL				1.00	.29***	.48***	.71***
Religiosity	<sup></sup>		6		1.00	.43***	.53***
Social Resources		1.				1.00	.73***
Wellness Index				., .			1.00

TABLE 4. Zero Order Correlation Matrix of the Subscales and the Wellness Index

• = p < .05; ••• = p < .001

r = .32

n = 463

coefficient increased slightly to .77. The factor score coefficients (.22-.32) were all significant. Table 5 contains the commonalities, initial and rotated loadings, and factor score coefficients for each subscale.

T-tests revealed the Wellness Index had discriminant validity as significantly different scores were obtained when the mean scores of groups of independent elderly were compared to the mean scores of groups of less independent elderly. Type of service provision and independent judgements of professional staff were the criteria used to form these divergent groupings. The mean Wellness Index score for those residing in nursing homes or receiving intensive community-based care ( $\bar{x} = 255$ ) was significantly lower than the score for those community-based elderly receiving minor service provision or who simply participated in senior center-type activities ( $\bar{x} = 271$ ).

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TABLE 5. Factor Analysis of Subscales Including Commonalities, Loadings, and Factor Score Coefficients

Subscale	Commonalities	Initial Loadings	Rotated Loadings	Factor Score Coefficients <sup>a</sup>
Physical Health	.642	.66*	.27*	.25*
Morale	.656	.81*	.66*	.32*
Economic Resources	.606	.43*	.03	
ADL-IADL	.542	.74*	.61*	.29*
Religiosity	.678	.52*	.80*	.22*
Social Resources	.687	.78*	.80*	.31*

Eigenvalue 2.70

Percent of total variance explained 45.0% Alpha = .74

Theta = .76

\*p < .001

<sup>a</sup>Factor score coefficients after economic resources subscale was deleted from the analysis. (Eigenvalue 2.58% of total variance explained 52.0%,  $\bar{r} = .39$  and Theta = .77.)

Similarly, those who were judged by professionals to have below average well-being were compared to those considered to have above average levels. The mean Wellness Index scores were respectively, 261 and 274, and were found to be significantly different.

Another form of concurrent validity was also assessed. Here the clinical judgements of professional staff regarding well-being and actual overall Wellness Index scores were compared. The correlation (r = .30) was found to be positive and significant as expected. The test-retest reliability coefficient between time 1 and time 2 Index scores ten months later was also calculated. The correlation was moderate and significant (r = .55). Table 6 summarizes these findings.

Finally, the resultant weighted factor scale scores derived from the factor score coefficients, subscale scores, means, and standard deviations were compared to the more simple summated ratings method of calculating Wellness Index scores. The correlation between the factor scale and additive index was almost perfect TABLE 6. Mean Wellness Index Scores and Standard Deviations for Groups of Independent and Less Independent Elderly, Correlation of Staff Judgements of Wellness and Wellness Index Scores, and Test-Retest Reliability

			the second se	
	x	S.D.	d.f.	t
SERVICE TYPE Nursing Home/Intensive Community- Based Care	255	26.9		
Community-Based/Minor Service Provision/Senior Center Participation	271	24.5	456	4.19*
CLINICAL JUDGEMENTS OF WELL- NESS BY PROFESSIONAL STAFF Below Average Judgement	261	25.4		~
Above Average Judgement	274	23.9	425	5.48*
		r	d	.t.
CLINICAL JUDGEMENTS OF WELL- NESS BY PROFESSIONAL STAFF AND WELLNESS INDEX SCORES	.30*		4:	25
TEST-RETEST RELIABILITY COEFFICIENT	.55*		19	90

\*p < .001

(r = .99, d.f. = 459, p < .001). Since the results were virtually identical, either method of scoring (factor scaling or summated ratings) may be employed.

#### DISCUSSION

The results indicated that each of the subscales developed to measure physical health, morale, economic resources, ADL-IADL, religiosity, and social resources had acceptable reliability and validity and could stand independently. Evidence also was provided which suggested all of these dimensions, except economic resources, could be combined to form a reliable and valid composite index of well-being that captures the relative importance of each subscale included and provides one overall measure of level of functioning. This composite measure as defined above reflects the multiple nature of problems and quantifies the entire range of functioning. Those with high scores were considered to be normal and healthy, while those with low scores were considered to be extremely impaired.

Psychometrically, the entire scale or any of the individual subscales may be used, as all were found to have acceptable reliability and validity. Since items and subscales were selected based upon their theoretical and clinical relevance, problems identified are those for which the social service delivery system often can intervene. Used in this fashion, the Index or subscales may serve as an assessment tool or screening device. They also may be used to evaluate subsequent individual or program outcomes.

To illustrate, in a previous study, interdisciplinary teams of professionals in three retirement villages used the Index as an assessment and evaluative tool to measure the well-being of elderly residents participating in their facilities' health promotion program. Wellness Index and subscale scores, combined with interviews, enabled professional staff and participants to identify and discuss lifestyle strengths and deficiencies. Based upon these scores, profiles and service plans were developed. After 20 weeks of intervention, follow-up Wellness Index and subscale scores revealed the progress that had been made by each individual. The aggregate scores also were used to demonstrate the effectiveness of the program (Slivinske & Fitch, 1987).

Practical experience with the Index demonstrated that it could be administered (25 minutes), scored (10 minutes), and interpreted (30 minutes) with minimal training and effort. The instructions on the self-administered Wellness Index are self-explanatory. Any elderly person who is able to read and is physically and mentally able can complete the questionnaire. Similarly, scoring instructions are relatively straightforward. Since the Index may be treated as a summated ratings scale, once reversed items are identified, simple addition is the only scoring skill required. For these reasons, interpretation of the scores becomes the focus, not the administration or scoring of the Index.

Regarding the interpretation of scores, this study found that the

average Wellness Index score for those living in nursing homes or receiving intensive community-based care was 255, while the typical score for those receiving minor services and/or participating in recreational-type programs was 271. Similarly, when clinical judgements of professional staff were used to determine those with below and above average well-being, the Wellness Scores were respectively, 261 and 274. Again, low scores were indicative of having more problems than those with higher scores. All the individual subscale scores followed the same pattern. The results indicate the Index is sensitive to diverse levels of functioning found in elderly service populations. Although the Index was able to successfully discriminate between independent and less independent groupings of elderly individuals, normative scores should be developed, based upon the experiences of clinicians and others in their respective settings and disciplines. Finally, the way the Index was developed permits the utilization of scores from individual items, subscales, or the entire scale, depending upon the specific needs of the user.

#### Limitations

The major limitation of the study relates to the representativeness of the sample of agencies and older adult participants. Although these results may be representative of agencies serving the elderly in this four-county region in general, they may not be generalized to those service recipients not present during the course of this study or to those elderly not known to this service community. Perhaps the relationships found in this research would have been different for these individuals. One clear limitation in this regard pertains to the extreme underrepresentation of minorities among study participants. The findings reported reflect the instrument's application to a predominantly white (96%) population. Therefore, there is no indication of its degree of cultural sensitivity or bias. Practitioners using the Wellness Index with elders from diverse cultural groups should do so with caution and temper its use with their own knowledge of the client population. A related concern has to do with the reading level required for elders completing the instrument. Prior to using the index, social work professionals should carefully examine the items to determine the instrument's utility, given the reading level of the elders with whom they work.

Another issue relates to the strength of the reliability and validity coefficients. Although Alpha and Theta reliability coefficients were strong and the discriminant and all other assessments were significant, the concurrent validity (independent judgements of staff vs. Wellness Index Scores) and test-retest reliability coefficients were not as large as expected. Perhaps a more comprehensive clinical assessment device may be needed. Also, the services being provided between the first and second administration of the Wellness Index may have influenced the findings.

Another concern is the fact that other conceptualizations of wellbeing exist. Even though 52% of the variation between the dimensions included in the scale and well-being was explained, other specifications may fit the data equally or better. In addition, although previous pilot work suggested that economic resources would scale with the other dimensions, here it just missed entering the analysis. This sample may have been unique or the assumptions upon which the scale was based need to be reexamined. Finally, other factors such as measurement error and statistical assumptions and techniques all potentially affect which items and subscales will be retained and the overall factor structure of the scale (Liang et al., 1988).

#### **Implications for Practice**

It is believed that the methods employed here have utility. The combined psychometric-rational approach used facilitated the development of a clinically- and empirically-based classification device that is both practice- and research-oriented. Here, well-being was conceptualized in an a priori fashion with the intent of seeking the most parsimonious factor solution. These results, along with the accumulated findings of other researchers, provide growing support of these dimensions of well-being.

The social service community and others may apply these findings in their settings. Although specific cohorts have been followed for relatively limited time periods (ten months), findings demonstrate the potential of the Index in assessing service needs and tracking changes in individuals and groups in both community and institutional settings. Indeed, creative practitioners may find applications of the Index throughout all phases of the helping process. In the beginning phase, its use in assessment may provide clearer evidence that their input directs the focus of practice. This may be useful in enhancing the elderly individual's early engagement in the therapeutic relationship. The Index also may prove to have utility in developing treatment plans and contracting with elders and their families. The subscale scores can be used to identify areas of strength as well as need. Although the instrument does not provide information on the relative importance of the dimensions assessed to the individual, the subscales can be used to lead discussions of treatment and service options and client preferences for meeting goals. Another practical application might involve using the Index to monitor elderly clients over time. As an evaluative tool, the Index might be used in the short term to determine response to interventions. Long-term applications might include detecting further declines or gains in functioning for the purpose of delivering followup interventions.

Finally, administrators and researchers might use the Index to monitor changes in the makeup and needs of target populations. The findings could be used to guide program planning efforts so that services and programs could change relative to the needs of elders. They also could use the Index as an evaluative tool to determine whether staff are continuing to achieve desirable outcomes or to compare the efficacy of different treatment regimens.

Although these findings have promise, further research needs to be conducted before more definitive conclusions can be drawn. The reliability, validity, and structure of the Wellness Index must be reassessed on a larger, more representative, national sample of older adults. The instrument also needs to be employed in a wide variety of settings with more diverse groupings of elderly individuals.

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