

Optimal Living Profile : An Inventory to Assess Health and Wellness

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Objective: To develop an instrument to assess environmental, emotional, spiritual, physical, social, and intellectual health and wellness. **Methods:** Reliability was assessed using 102 respondents who completed the OLP on 2 occasions. Concurrent validity was assessed using a second sample of 34 respondents and a panel of 6 experts. **Results:** Most

items had high test-retest correlation coefficients. Each dimension had high internal consistency (ie, high Cronbach Alphas). Independence of items in each dimension suggested good divergent and convergent validity. **Conclusions:** The OLP is a reliable and valid instrument for assessing dimensions of the Total Person Concept.

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Established in 1979, Canyon Ranch is a private commercial organization that markets programs de-

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signed to improve personal health and wellness. Although there are many wellness programs offered by Canyon Ranch, the impetus for the current work emanated from a desire to evaluate and improve the experience of clients attending the weeklong Life Enhancement Program (LEP).

The LEP is an organized, in-depth education in healthy living. The focus is on self-discovery, preventive care, and developing lifelong healthy lifestyle habits. The week consists of a lively and engaging schedule including daily exercise, physical activity (eg, walks), hands-on classes, workshops, group discussions, professional consultations with physicians and other staff professionals, and medical evaluations — all created to give a better understanding of an individual's health and wellness status and potential.

The theoretical model utilized by Canyon Ranch as the basis for its programming is the *Total Person Concept* (TPC).¹⁻⁶

Wellness embodies a way of living that encourages individuals to seek a balance in their lifestyle designed to improve the quality of life.

When focusing on the human being as a whole, a person should be viewed from every possible perspective, taking into account every available concept and skill for the person's growth toward harmony and balance. Canyon Ranch's definition of the TPC includes the intellectual, emotional, social, spiritual, physical, as well as environmental health^A of a human being. It should be noted that other researchers have offered similar conceptualizations of health and wellness^{B,8-11} or have suggested that the TPC be reconceptualized.¹²

The LEP is based on the premise that wellness represents the optimum state of well-being that each individual is capable of achieving, given his or her own set of circumstances. It begins when an individual sees himself or herself as a growing, changing person. To achieve high-level wellness, individuals must care for their physical selves, use their minds constructively, channel stress energies positively, express emotions effectively, become creatively involved with others, be sensitive to their daily spiritual needs, and interact effectively with their environment. Wellness embodies a way of living that encourages individuals to seek a balance in their lifestyle designed to improve the quality of life.

In 1996 Canyon Ranch asked the University of Arizona Prevention Center to identify an instrument that could assess the TPC and wellness as they have envisioned. The purpose of identifying such an instrument was threefold.

1. To act as a catalyst in *motivating* people to make changes to improve

their personal health and wellness.

2. To serve as a *clinical* tool.
3. To *evaluate* the LEP program.

It was hoped that being able to identify the relative strength of different dimensions of health and how these scores compared to others might act as an impetus for making changes to improve personal health and wellness. Clients could complete the instrument prior to attending the LEP, and the results could then be used to help the professional staff identify potential problematic areas that could be the focus of the client's weeklong stay. There is a desire on the part of Canyon Ranch to employ the LEP model to other programs. Before extrapolating the model to other programs, however, Canyon Ranch staff felt it necessary to document what aspects of the LEP program are successful. Results from such an evaluation could be used to assess those aspects of the program that were meeting their goals and those that needed refinement.

A university working group (UWG) was formed. The UWG conducted a review of the literature and presented various instruments to a second working group at Canyon Ranch (CRWG) for consideration.¹³⁻¹⁸ After much consideration, it was decided that no one instrument adequately captured the TPC and wellness philosophy as defined by Canyon Ranch. It was therefore decided to develop such an inventory. This paper describes the process by which the Optimal Living Profile (OLP) was developed and reports on our success at developing a psychometrically sound inventory.

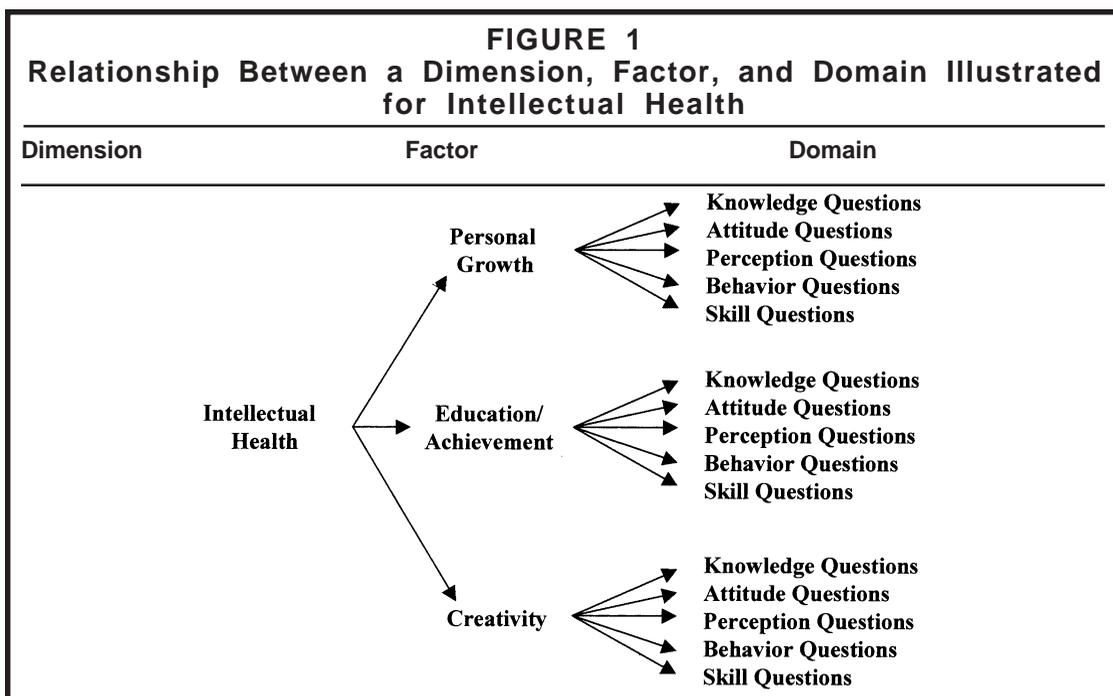
METHOD

Development of Item Pool

The development of the instrument began by first defining each of the 6 dimensions of health and wellness (hereinafter simply referred to as dimensions) of the total person concept (TPC) as defined by Canyon Ranch. In formulating definitions, the UWG was sensitive to capturing the complexity of each dimension. A broad and comprehensive approach was adopted to reduce the risk of too narrowly defining a dimension. This broad approach led to the identification of subcom-

A Health is defined as "a state of complete physical, mental, and social well being and not merely the absence of disease" (Who, 1948).

B Wellness is defined as "intentional choice of a lifestyle characterized by personal responsibility, balance, and maximum enhancement of physical, mental, and spiritual health."⁷



ponents, or factors, that captured the breadth of each dimension. The UWG was also sensitive to the extensive literature relating knowledge, attitudes, perceptions, and skills to behavior change and felt it important that the OLP assess these aspects of each factor. The 5 areas of knowledge, attitudes, perceptions, skills, and behaviors were defined as domains. The initial goal then was to develop an item pool that tapped each of these domains for each factor, for each dimension. The relationship between a dimension, factor, and domain is shown in Figure 1.

The UWG then went about the task of identifying and defining the possible factors of each dimension. Each member of the UWG assumed the responsibility for one dimension. Once each member had identified potential factors, they were presented to the entire UWG for discussion and consensus. The consensus list of factors is shown in Table 1.

Once agreement had been obtained

regarding the factors composing each dimension, the process of developing an item pool began. The UWG provided the CRWG with the list of dimensions and factors. The CRWG formed 6 focus groups, one for each dimension of the OLP, consisting of individuals with content expertise^c in that area. Each focus group was asked to develop a pool of items that would tap the 5 domains for each factor. This was done by examining existing instruments^d for ideas and by generating items based on the experience of focus group members.

The initial pool of items from each of the CRWG focus group was then presented to the UWG, who were blinded as to the factor and the domain the item was intended to assess. Members of the UWG were asked to identify the factor and domain they felt the item was intended to assess. Further, they were then asked to rate the potential utility of each item on a simple 3-point scale: 1=best, 2=fair, and 3=omit.

C An expert was defined as an individual who had advanced training in a particular area or field, and by reason of this training and experience in working in that area that individual's judgment and opinions were trusted and valued.

D Those interested in obtaining a complete bibliography can do so by contacting the first author.

TABLE 1
Summary of Initial Number of Items in
Each Dimension, Factor, and Domain

Dimension	Factor	Domain					Total
		Kno	Att	Per	Beh	Ski*	
Emotional (n=26)	Anxiety	0	3	2	2	0	5
	Depression	0	4	0	2	0	6
	Well-being	0	10	7	6	1	13
	Self-control	0	1	1	1	0	2
	Optimism	0	5	0	1	0	5
Environmental (n=36)	Home/Work Environment impact on individual	0	2	1	7	1	9
	Individual impact on home/work environment	2	16	15	12	0	21
	Interaction	0	6	6	11	1	16
Intellectual (n=24)	Personal growth	1	8	3	15	2	21
	Education/Achievement	1	3	0	7	1	7
	Creativity	0	1	0	5	0	5
Physical (n=88)	Fitness	0	6	8	13	0	24
	Nutrition	0	8	15	18	8	29
	Avoidance of harmful behavior	0	0	0	8	1	7
	Prevention	2	9	9	18	4	31
	Early recognition	0	1	5	5	0	10
Social (n=41)	Getting along with others	0	16	2	11	14	31
	People react to person answering	0	1	2	6	5	8
	Person interaction with social environment	0	10	1	8	4	20
Spiritual (n=28)	Basic purpose in life	4	6	3	2	0	10
	Ability to give/receive love/joy/peace	0	2	5	1	1	6
	Pursue a fulfilling life	1	8	5	2	1	10
	Helping others	0	2	2	2	0	5

Kno=Knowledge; Att=Attitude; Per=Perception; Beh=Behavior; Ski=Skill

After completing the ratings for each item, the UWG and CRWG met on several occasions over several months to debate whether items should be considered for pilot testing or omitted. Consensus was reached for each item as to the factor and domain it was thought to assess and whether it should be included in the psychometric assessment. On several occasions it was agreed that some items could possibly assess more than one factor. The result of this can be seen in Table 1, where the sum of the number of items for each factor and domain do not sum to the total number of items for a particular dimension. As a result of the rating procedure, it also became evident that there were no items to assess some of the

domains for some of the factors. In many cases this made intuitive sense. For example, in the emotional dimension there were no items that assessed knowledge for any of the factors. One would predict that knowledge of one's self-control, optimism, and so forth would be difficult to assess.

Before a test of the psychometric properties of this initial pool of items was conducted, an external editorial review consisting of 2 phases was completed. In the first phase, the consensus list of items was provided to laypersons who did not have any prior knowledge of the project. These volunteers were asked to read each item and provide feedback regarding the wording, sentence structure, and com-

prehensibility of each item. Feedback was used to change wording, eliminate items, and modify response scales.

This narrowed item pool was then subjected to another editorial review conducted by CRWG. In addition to providing the same feedback as the layperson review, these experts were also asked to comment on whether the item tapped the dimension it was intended to measure. This review served 2 purposes: first, to improve the quality of items and, second, to improve the face validity of the instrument by involving those who would ultimately use the instrument in the development process.

Additional OLP Items

Two more sections were included for assessing self-efficacy and stages of change for each dimension. Self-efficacy is defined as the confidence a person feels about performing a particular activity and overcoming challenging situations to performing that activity.^{19,20} The stages of change are derived from Prochaska's^{21,22} transtheoretical model (TM). The TM conceives behavior change as progressing through the following stages: precontemplation, contemplation, preparation, action, maintenance, and termination. These 2 sections were added primarily to meet the needs of the Canyon Ranch staff in offering consultations to their clients (ie, to meet the second purpose of developing the OLP). These are essentially freestanding sections that can be removed for nonclinical uses of the OLP. Both self-efficacy and stages of change are considered good predictors of behavior change, and they have been widely defined and analyzed in the literature.¹⁹⁻²⁷

A single item was included for assessing self-efficacy for each dimension. Respondents are asked to answer on a 5-point Likert scale as to how confident they are about being able to improve health in each dimension. A similar format was followed for assessing stages of change. For each dimension respondents are asked to indicate where on the continuum of change they would place themselves.

Preparing for Psychometric Testing

The process of developing an item pool resulted in 243 items that were subjected to psychometric testing. In formatting the test inventory, items belonging to each dimension were grouped and sepa-

For the majority of items, respondents were asked to rate each item on a 5-point Likert scale.

rated from the other dimensions into sections. A brief statement preceded each section that described the aspects of the dimension being assessed. For example, the preamble for the environmental section read:

The following items have been designed to assess the impact of the environment on your health and wellness and your impact on the health of the environment. Please respond by circling the one response that best describes how you feel about each item.

From this example one can see that the descriptor includes the factors being assessed in each dimension. This was true for each of the statements preceding each dimension.

For the majority of items, respondents were asked to rate each item on a 5-point Likert scale. Two forms of the Likert scale were used depending on the wording of the item. One scale used the anchors *strongly agree to strongly disagree*; the other used the anchors *almost never to very frequently*. The former was used for those items soliciting an opinion; the latter, for those questioning the frequency of some behavior. In addition, there was a very small subset of items that employed a yes or no response scale. Finally, for some items, a "not applicable" response category was added. This was used for items that may not apply for all respondents (eg, items pertaining to work for those who did not work, items pertaining to driving for those who did not drive, etc).

Administering the First Draft of the Instrument

The first draft of the instrument containing the 243 items was administered to 19 college students at the University of Arizona. The purpose of this initial administration was to identify the amount of time needed to complete items assess-

TABLE 2
Test-Retest Coefficients for
the Final 135 Items

Item #	Env	Int	Spi	Emo	Soc	Phy
1	.61	.80	.62	.69	.69	.66
2	.44	.72	.69	.74	.70	.46
3	.55	.69	.64	.67	.85	.50
4	.70	.71	.70	.74	.90	.45
5	.76	.71	.68	.65	.67	.66
6	.49	.76	.73	.68	.67	.58
7	.77	.68	.72	.73	.77	.68
8	.61	.70	.63	.75	.39	.48
9	.55	.78	.58	.60	.54	.61
10	.34	.52	.61	.58	.70	.49
11	.47	.46	.64	.69	.80	.43
12	.60	.60	.63	.75	.72	.57
13	.68	.76	.50	.65	.78	.52
14	.78	.65	.58	.71	.58	.60
15	.60	.69	.68	.80	.65	.58
16	.50	.83	.74	.66	.57	.62
17	.78			.57	.63	.54
18				.75	.69	.38
19				.68	.66	.50
20				.55	.71	.50
21				.73		.81
22						.84
23						.74
24						.75
25						.78
26						.61
27						.73
28						.75
29						.74
30						.76
31						.31
32						.31
33						.34
34						.58
35						.41
36						.35
37						.60
38						.52
39						.61
40						.73
41						.73
42						.74
43						.73
44						.73
45						.92

Env=Environment; Int=Intellectual
 Spi=Spiritual; Emo=Emotional
 Soc=Social; Phy=Physical

ing each dimension, check on wording, and correct grammatical errors.

Descriptive statistics such as the mean, variance, and range were computed for each item. From these data, items were identified that had restricted ranges (eg, the same answer circled by all respondents) or had means that were too extreme from a central point (eg, mean above 4 or below 1). Each member of the UWG was provided with the descriptive statistics, and all items were then reviewed. Problem items were edited, completely rewritten, or discarded. This was done prior to administering the second draft of the instrument.

Administering the Second Draft of the Instrument

A total of 102 individuals completed the second draft version of the OLP at the Canyon Ranch facilities. The sample included 72 persons who attended the Life Enhancement Program (LEP), and 30 who did not attend the program. We refer to this latter group as the control group, although it was not our purpose to use this group in a research design sense to control for threats to internal validity. All 102 persons were selected from a pool of eligible applicants for the LEP. The OLP was administered to the same individuals 7 days after the first administration. During this 7-day period, the LEP group participated in the program at Canyon Ranch.

The control group did not partake in the LEP program, but after completing the posttest did receive some gifts, a series of wellness workshops, and a free lunch for participating.

RESULTS
Computing Scale Scores for Dimensions

For the computation of item statistics, simple average scores were computed across all the items in a dimension to produce a dimension scale score. This approach was used to be able to compute a dimension scale score even if some of the items in a particular section were left blank. A result of this methodology is that each item is weighted equally in contributing to the dimension scale score, which also facilitated the scoring of the instrument.

Eliminating Items From the Initial Pool

Using the data from the 102 respondents, several analyses were computed to remove items that did not contribute statistically to the instrument. The initial analysis involved correlating items within a dimension with their respective dimension scale score. This analysis was designed to identify particular items that shared little in common with the dimension they were intended to measure. Items that had a low correlation with their dimension scale scores were recommended for removal. For each dimension of the instrument, a minimum correlation was set as criteria such that 25% of the items falling below the cutoff would be eliminated.

The second series of analysis examined the interitem correlation coefficients of items within the same dimension to identify redundancy. For this analysis, item pairs that had a correlation of $r=.70$ (ie, 50% of shared variance) or higher correlation were flagged as potentially redundant. The UWG was presented with the items and asked if one of the redundant items could be removed. Information such as factors, number of items in a factor, the source of the item, and content coverage were considered during this process.

The third series of analysis examined the correlation coefficients between each item and all the dimension scale scores. The intent of this analysis was to identify items that correlated highly with dimensions other than the one they were designed to assess. Ideal items are those that correlate highly with their own dimension, but not with any other dimensions. This would lead to dimensions that are statistically independent from each other.

The fourth series of analysis involved computing test-retest correlation coefficients. The control group was used for this purpose, completing the full instrument twice (a week apart). The aim of this analysis was to identify items that had low stability across the one-week period. A correlation of $r=.50$ was set as the minimum for the item to be considered stable (test-retest reliability).

As a result of these analyses, the 243 initial items were narrowed to 135. Because the initial analysis removed several items from each dimension of the

TABLE 3
Test-Retest Correlation
Coefficients for the
Dimension Scale Scores

Dimension	Reliability Coefficient
Environmental Health	.61
Intellectual Health	.86
Spiritual Health	.82
Emotional Health	.81
Social Health	.82
Physical Health	.53

OLP, it was determined that the same analyses should be run again with new dimension scale scores. New average dimension scale scores were computed. The psychometric data reported below is on the final 135 items.

Reliability and Validity Testing of the OLP

1) Test-retest item stability. To assess the stability of the individual items, test-retest correlation coefficients for every item were computed using data from the persons who received no intervention (ie, the control group). Those items that demonstrated a test-retest correlation less than .50 were *recommended* for deletion from the item bank. The result of this analysis is shown in Table 2. Appendix A contains the OLP. Item numbers in Table 2 correspond directly to question numbers in each section of the OLP.

2) Test-retest dimension scale score stability. To assess the stability of the dimension scale scores across a one-week interval, data from the control group were used to calculate the test-retest correlation coefficients for scale scores for each dimension. The results are shown in Table 3.

3) Internal consistency of the dimensions. A measure of internal consistency for each dimension was computed using the baseline data from both the intervention and control groups (ie, all 102 subjects). Table 4 lists the reliability estimates (Cronbach alpha) for each dimension.

4) Evidence of content validity. The process involving the Canyon Ranch committee insured that the overall content of

TABLE 4
The Reliability Estimates
(Cronbach alpha) for Each
Dimension

Dimension	Reliability Coefficient
Environmental Health	.78
Intellectual Health	.91
Spiritual Health	.82
Emotional Health	.95
Social Health	.84
Physical Health	.89

the instrument did match with the total person concept of wellness. In addition, the instrument covers all the main aspects of the LEP offered at Canyon Ranch. A summary of the dimensions and factors in each content area is included in Table 1.^E

5) Evidence of concurrent validity. To assess concurrent validity a sample of 34 individuals were asked to complete the OLP and afterwards, complete a structured interview with experts (not part of either UWG or CRWG) in each of the 6 dimensions. Experts were provided with factors and domains that constituted each dimension and asked to develop questions that tapped these constructs. The data collected from the interviews and the instrument were correlated to look for consistency between the scores on the OLP and the ratings made on the same dimensions by the interview process. Table 5 provides the correlation coefficients between the raters' judgments and the dimension scale scores on the OLP.

6) Evidence of divergent validity. Because there are multiple dimensions in the OLP, it is important to assess whether they measure different concepts or whether they tap a single, general wellness factor. To make dimensions more independent, items were removed if they correlated higher with dimension scale scores from other dimensions than the dimension they were intended to measure. Table 6 lists the correlation coefficients between the dimension scale scores for the final version of the OLP.

TABLE 5
Correlation Coefficients
Between the Raters'
Judgement and the
Dimension Scale
Scores on the OLP

Factor	Correlation Rater & OLP
Environmental Health	.04
Intellectual Health	.57
Spiritual Health	.78
Emotional Health	.06
Social Health	.06
Physical Health	.52

DISCUSSION

A major goal of the development of the OLP was to insure exactly what the instrument measures, and how well it does so. Results of the psychometric testing indicate that the OLP is a reliable tool in assessing the 6 dimensions of the total person concept as defined by Canyon Ranch. By retaining those items for the OLP with test-retest reliability estimates of .50 or higher, the items that make up the OLP demonstrate satisfactory stability across measurements. When examining the test-retest dimension scale score stability estimates, the lowest value was found for the physical health section ($r=.53$). Four of the 6 scales had test-retest stability estimates above $r=.8$. These data provide confidence that all of dimension scale scores have excellent reliability. The final examination of reliability was the Cronbach alpha coefficients that were computed for each subscale. Cronbach alpha coefficients ranged from $r=.78$ to $r=.95$. These results indicate high internal consistency for all of the dimensions of the OLP.

Results of the psychometric testing also indicate that the OLP has good validity. Correlation coefficients between dimension scale scores did indicate that there are relationships between dimensions. However, the correlation coefficients are moderate at best, suggesting that each dimension scale score can offer unique information to the overall OLP.

^E Although the dimensions, factors, and domains are the same, it is important to note that this is not the final list of items, rather the initial pool of 243 items.

Extensive involvement of the Canyon Ranch staff ensured that the OLP covers all the main aspects of the Life Enhancement Program offered at Canyon Ranch ensuring content validity. The only notable weakness of the OLP is the test of concurrent validity. Examination of the concurrent validity results indicates that the Intellectual, Spiritual, and Physical Health sections of the OLP do show a high degree of similarity with their external raters. The remaining 3 subscales, however (Environmental, Emotional, and Social), show no relationship with those ratings made by their respective external raters. Interestingly, follow-up surveys with the experts participating in the testing of concurrent validity indicated that those who were most uncomfortable with the process (eg, felt they did not have enough time to properly assess individual) were those who had the highest agreement with the OLP. Conversely, those experts who indicated that they were most comfortable with the validation process had the poorest agreement with the OLP. This suggests that perhaps those experts who felt they needed more time were also those that attempted to be the most comprehensive.

The assessment of stages of change and self-efficacy of the 6 dimensions of health and wellness were included in the OLP to help Canyon Ranch professionals provide better clinical services. Other researchers who may not be using the OLP for clinical purposes may choose to eliminate these questions. To the authors' knowledge, however, this is the first time that the transtheoretical model has been used to formulate questions to assess a person's stage of change as it pertains to general dimensions of health and wellness. Clearly more rigorous psychometric testing is needed to determine the utility of this approach.

A normative database is currently being developed for the OLP. The database will consist of approximately 400 employees from Canyon Ranch. The authors intend to normalize these scores and then translate a person's score into a percentile rank. Arbitrary cutoffs will be employed so that a person scoring low will be below the 33rd percentile, an average score will be between the 34th and 66th percentile, and someone scoring high will be above the 67th percentile. Over time, as the normative database grows, it

TABLE 6
Correlation Coefficients
Between the Dimension Scale
Scores for the Final Version
of the OLP

	Env	Int	Spi	Emo	Soc
Environmental					
Intellectual	.55				
Spiritual	.58	.39			
Emotional	.59	.54	.40		
Social	.57	.69	.55	.75	
Physical	.63	.39	.33	.59	.43

will be possible for individuals to compare their scores on the OLP to those of similar backgrounds and with similar demographic characteristics.

The OLP is unique in that it grew from an organization's dissatisfaction with current health and wellness inventories and a desire to have an instrument that tapped health and wellness in a unique way. This uniqueness is reflected by the specific factors that compose each dimension. Some researchers may not agree with the factors that compose each dimension or believe that the OLP is comprehensive enough. It is important to remember that the OLP assesses health and wellness as defined by Canyon Ranch. To the extent that potential users of the OLP agree with this philosophy, the instrument will prove more or less useful. Canyon Ranch has decided, however, that the OLP should be made available to anyone who wishes to use it and has thus made the OLP public domain. ■

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