

On the vicissitudes of health appraisal

Little consensus exists for a definition of health. Economic and other forces are pushing health professionals to develop not only a definition of health consistent with the prevalent construct, holism, but also a means of quantifying health. One approach, which was used as part of a study to explore perceived health status among middle-aged women, was to select measures of specific dimensions of health and to sum scores on each. Factor analysis revealed validity to this approach when Perceived Health Status was operationally defined as the sum of scores on the Health Perceptions Questionnaire, the Affect Balance Scale, and the Life Satisfaction Index.

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NURSES PROMOTE the health of clients, but there is no consensus on what that means. This problem became evident during a study exploring aspects of how women experience menopause. Menopause is the only natural event still to be called a disease and the last to be researched.¹ Yet 51% of all Americans are women, and all women who reach middle age will experience this transition. Over the past three decades women have brought about a revolution in how another, normal reproductive event, pregnancy, is viewed in this society, but the menstrual cycle is yet to be divested of negative value.² It is clear that in this society, and particularly within the health care establishment, the menstrual cycle is largely viewed from a disease orientation.³

An investigation was undertaken to assess the experience of menopause through measurement of a variable labeled

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Perceived Health Status (PHS). Predictor variables included menopausal stage; current life change; attitude toward women's roles; educational and economic status; perception of sexual partner's attitude toward menopause; recollection of mother's menopause experience; perceived timing of menopause as on time, early, or late; and score on the Menopause Symptom Checklist.⁴

DEFINITIONS OF HEALTH

Nightingale^{5(pp9-10)} wrote, "The same laws of health or of nursing, for they are in reality the same, obtain among the well as among the sick. The breaking of them produces only a less violent consequence among the former than among the latter, and this sometimes, not always." Nightingale projected a view of health as a natural balance; nurses were instructed to care for ill patients by manipulating their environment in such a way that nature could restore balance.

Nightingale's view was advanced for its time. She was a contemporary of Louis Pasteur and saw the propagation of his germ theory. Indeed, her successes at Crimea in reducing mortality rates among the wounded indicate that she ascribed to and promoted the theory. Concurrent with the rise of the germ theory was the emergence of the medical model in health care, reflecting the dominance of structuralism in Western thought. That Nightingale resisted such a circumscribed approach and projected views of humanity, nature, and health, which are still timely, is remarkable and is one reason for its hallmark status.

The concept of health as natural balance

is growing in acceptance through the holistic health movement. Yet that is but one perspective of health. King^{6(p5)} noted that health is a cultural value that she defined as "dynamic life experiences of a human being, which implies continuous adjustment to stressors in the internal and external environment through optimum use of one's resources to achieve maximum potential for daily living." Others, such as Laing⁷ and Illich,⁸ have described the dark side of the problem of defining health in their grim accounts of social control in the name of curing.

That health is a social value is of particular significance for women. Western cultures have been described as pronatalist, that is, having as a societal norm the view that women should seek to reproduce as their primary responsibility.⁹ Developmental theorists have traditionally described normal attainment of adulthood in terms of parenthood, especially for women.^{10,11} Human behavior in general has been studied from a male perspective, and criteria of health or normalcy have been developed using male samples.¹² Behavioral attributes differ for men and for women, and studies of social desirability of these attributes show that "typical male attributes" are preferred by both.^{13,14} Deviation from prescribed social roles has often resulted in deliverance of women into the hands of the health care establishment for control.¹⁵ Thus the way health is defined has profound implications for the overall social order.

In addition to promoting greater humanism in dealing with clients, health professionals are taking greater interest in defining health in terms that are measurable. The catalysts for this effort have been

the movements to institute national health insurance and to reduce health care costs. The federal government is interested in knowing what makes people decide they need health care in order to determine whether it can afford to support health care, as well as what level of health is adequate.¹⁶

Progress has been slow. Beckstrand¹⁷ observed that health indicators rarely measure that for which they are intended. This reflects the problem that the definition of health remains elusive and controversial.

The healthy life has been described as a dynamic process, directive, open to all input, with freedom of choice.¹⁸ According to this view, healthy persons interpret reality free from distortion and listen to emerging meanings from within; they see themselves as a unity.

Health as an ideal has been a prevalent notion. The World Health Organization (WHO) defined health as a "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."^{19(p52)} Antonovsky^{19(pp52-53)} criticized this broad definition for its use of undefined terms, for its failure to incorporate a dynamic view of health, and for its authorization of political structures to exercise all-encompassing societal control. Though WHO has promulgated an idealized conception of health, its program to bring about "health for all by the year 2000" focuses on such pragmatic criteria as access to adequate calories, deep well water, village health workers, and immunizations for all the peoples of the world.²⁰ While these are appropriate areas on which to focus, they fall short of the idealized notion of health that is sweeping the American middle class. Clearly, the unmet

human needs of developing countries fall at a lower level, hierarchically, than the needs of the United States. This raises, even before a definition is achieved, the issue of adequacy of health.

Some authors have equated well-being, life satisfaction, and happiness with health.^{21,22} While these are related concepts, they may not be synonymous with health. Rather, well-being subsumes health. As Antonovsky¹⁹ pointed out, when health is defined all-encompassingly, it becomes impossible to study.

Perhaps the most useful conception of the meaning of health is that proposed by Smith,²³ in which four main viewpoints are identified and described hierarchically. At the most primitive level, the medical model defines health as the absence of pathology. At the next level, drawing on work by Talcott Parsons, health is viewed as the ability to carry out one's role functions. At the next higher level, based on work by Dubos, health is seen as the ability to adapt. At the highest level, health is viewed as self-actualization, according to Maslow. Depending on the purpose, the conception of health can be drawn from any of these levels.

APPRAISAL OF HEALTH

What people presume about an experience is likely to alter their perception of it. For example, the National Council on the Aging²⁴ found that a younger survey sample had a more negative view of what it is like to be elderly than did elderly persons themselves. Neugarten and associates²⁵ observed that young women have a more negative view of menopause than menopausal women.

Lerner²⁶ described the problem in constructing a measure or operational definition of health as being the very fact that it is a multi-dimensional, qualitative characteristic. Impairment may set limits on an individual, but that individual may have the capacity to minimize or transcend the impairment. Thus, the meaning of the condition is unique to the individual.

The concept that no one can know an individual as that person knows self is referred to among existentialists as the problem of "embodiment." According to Zaner,²⁷ embodiment refers to the locus of one's self in one's mind, brain, and body. Only the self can feel or sense, and give meaning to feelings or sensations. Sartre posited that "each of us exists in interiority—which in principle prohibits all knowledge of the other as he knows himself, that is, as he *is*."^{27(p74)} Consciousness and self-awareness are embodied. The person's body is not an object; rather, it is lived, or experienced.

According to Straus,²⁸ one of humankind's most important characteristics as living beings is the lived moment. That is to say that an individual lives always in the present and experiences the presence in its entirety, not as distinct from the individual. A person cannot be an objective observer of the situation, but experiences the situation in a way unlike any other person who might be sharing the moment. No one else will experience the moment in the same way; no one else understands the sensations or thoughts associated with the situation. Because of this, Straus^{28(pp118-133)} views efforts to study human experience in an objective manner as stripping reality of its most essential aspects. Others in the humanistic and consciousness schools of

psychology state that knowledge exists only from the perspective of the knower.^{29,30} Self-knowledge is only valid from the perspective of the self. Otherwise it is knowledge of a construction of that self. Such views are congruent with the assumption of holism and the idea that every individual is an open system in interaction with the world in which each lives.⁶

Evaluation of the health of others may be based on self-appraisal, on objective assessment, or on some combination thereof. Parse³¹ and Nicholson¹⁸ have both asserted that health can be determined only by the individual's personal description. The meaning that a person gives the pattern of his or her interrelationship with the environment determines the meaning and value of health. In conducting research in the area of health appraisal, the appropriateness of self-assessment of health is an important and controversial issue. Several studies³²⁻³⁴ demonstrated significant and meaningful relationships between self-ratings of health and such indicators as subsequent length of life, medical prognosis, chronic conditions, social relationships, and peer ratings. Thus the use of self-appraisal has philosophical, as well as some empirical, justification. In general, individuals may be assumed to know how healthy they are and how they feel.

DIMENSIONS OF HEALTH

That each person is a holistic being is well accepted among nursing theorists today.³⁵ That is to say that the individual is a total integrated being, interacting continually with the world in which he or she lives. While facets of the person or of human nature may be identified for study,

16

the nature of the whole being will not be understood through that endeavor. As Rogers stated, "Human beings are more than and different from the sum of their parts."^{36(p46)}

The implication of this postulate is that the nature of the individual or the state of his or her well-being cannot be induced accurately by extracting one or several facets for study, even if all the facets of human nature were known. This problem is interrelated with the difficulty in defining health, and after definition, with its operationalization and measurement.

The major contribution of WHO's definition of health is its recognition of health's multifaceted nature. That health is comprised of physical, psychological, and social dimensions is a viewpoint that has been endorsed by scholars in the field since the WHO definition was written.^{37,38} The conception of the individual as holistic stipulates that human nature can be understood only when examined in toto. This may be best illustrated by the frustration that the researcher experiences when reviewing the literature on relevant human variables for there are hundreds of papers on dozens of variables, each described in relative isolation from the others.

The problem in defining health lies in the inability to assess complete well-being of the organism, even when the need to do so is understood. Not all of the facets of humankind have been identified, let alone

quantified. Tillich^{39(p93)} most nearly captured the problem when he said, "The multidimensional unity of life in man calls for a multidimensional concept of health, of disease and of healing, but in such a way that it becomes obvious that in each dimension all the others are present." Globally speaking, the physical, psychological, and social dimensions identified by WHO probably serve to cover the total human experience. Other dimensions have been suggested, notably that of spirituality.

Based on the above considerations, Perceived Health Status (PHS) was defined as the respondent's self-evaluation on at least three dimensions associated with global well-being—physical, psychological, and social. Operationally, PHS was defined as the sum of scores on the Health Perceptions Questionnaire (HPQ),¹⁶ the Affect Balance Scale (ABS),⁴⁰ and the Life Satisfaction Index (LSI),²¹ with full recognition of the inconsistencies inherent in a dimensional approach to a holistic phenomenon.

HEALTH ASSESSMENT METHODOLOGY

Ware's 32-item HPQ¹⁶ assesses people's perceptions about their own health with emphasis on the physical dimensions, incorporating items about behaviors and attitudes. Dr. Sally Miller of New York University and Dr. Mary P. Scilken of Pace University, who undertook projects developing measures of holistic health, corroborated this author's assessment of the content validity of the Ware HPQ, which emphasizes physical well-being. Depending on degree of agreement, items are rated from 1 to 5. The tool was developed using

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a sample of 5,000 adults in six nationally distributed test sites. Internal reliability was estimated at .89 or .90, with test-retest reliability after one year ($N = 1,200$) reaching .88. Of the validity factors identified from the literature review, those demonstrating significant correlations with the HPQ included telephone contacts; subsequent use of outpatient services; self-perception of chronic, physical, or role limitations; strenuous exercise; general exercise; anxiety, depression, emotional ties; positive well-being, mental health index score; prior treatment for acute symptoms; and current life events score.

One assessment of health is whether an individual is a functioning member of the community.⁴¹ Social health has to do with one's ability to live up to the standards of a particular society, to be gainfully occupied, and to maintain family and organizational relationships. A widely used measure of social health has been number of personal contacts with family and friends in a recent period of time.^{40,41} However, contacts may not be satisfying, or they may represent an unwholesome escape from other aspects of life.

It appears more appropriate to assess satisfaction with social linkages. Campbell, Converse, and Rodgers²¹ developed this realm of appraisal as part of their study of the quality of American life, involving 2,164 adults in 48 states. Satisfaction scores on individual domains were correlated with one another and with a single global life satisfaction item. Seven of these domain items, each scored on a Likert-type scale from 1 to 5, comprise a widely used Life Satisfaction Index (LSI). Campbell⁴² reports a test-retest reliability greater than .70. Item-total correlations were at least .70,

and the global item demonstrated a correlation of .57 with the total LSI score.

Morale, happiness, and psychological well-being have been equated throughout much of the literature. Bradburn⁴⁰ found two independent dimensions, positive affect and negative affect, related to overall affect. To assess these, he developed a ten-item, two-dimensional scale, the sum of which is termed the affect balance score. Each item is answered "yes" or "no," and the total score ranges from -5 to $+5$. This instrument has been widely used in clinical settings and in research.^{43,44}

Bradburn studied 2,006 adults in 14 areas around the country. A test-retest reliability coefficient of .76 was obtained after three months ($N = 200$). Correlations ranging from .61 to .90 have been obtained between the ABS and other morale measures.^{43,44}

In the investigation of middle-aged women, the Menopause Symptom Checklist (MSC)⁴ was included. Though there is strong evidence that this tool is invalid,^{4,45} and though reliability data have never been published, it is still widely used in research and in clinical practice. In fact, the problems with this tool were the very reasons for its inclusion in the study. Twenty-eight items are scored from 1 to 4 on the basis of symptom frequency and intensity.

Respondents were asked, on the Personal Data Form, to respond to seven Likert-type items containing the following statements:

- In general, my health is very (good/poor).
- My outlook on life is very (negative/positive).
- I get along with the people in my life very (poorly/well).

- (If finished with menopause or am in it now) My experience with menopause or the change of life has been very (negative/positive).

Study participants

The HPQ, ABS, LSI and MSC instruments were included as part of a battery administered to 249 women in the area in and around a medium-sized, mid-Atlantic city from September 1982 to March 1983. Participants were solicited from a wide variety of settings, including shopping malls, churches, flea-markets, community groups, employee groups and university-related groups. Institutional procedures for the protection of human rights were followed. Questionnaires were distributed to participants with directions to return the completed tools by mail.

Criteria for participation in the study were that the women be between the ages of 40 and 55; that they not have achieved menopause artificially; that they not have undergone hysterectomy, oophorectomy, or mastectomy; that they not have experienced past mental breakdown; that they not presently perceive themselves to be ill or disabled; that they not be pregnant; that they be educated through at least the eighth grade; and that they be born in the United States or to American parents overseas. Presumably these were well women who were experiencing a natural transition.

Statistical treatment

Routines from the Statistical Package for the Social Sciences (SPSS) were used in analyzing data. The Pearson product-moment correlation coefficients among

scores on HPO, ABS, and LSI were calculated. Additionally, the correlations between each tool and the summed score on all three tools, PHS, were calculated. The relationship between the Menopause Symptom Checklist score and the PHS was determined using hierarchical regression.

A factor analysis was performed to assess the validity of the original assumption that PHS could best be measured by summing the scores on three individual, dimension-specific instruments. Finally, scores on the separate tools were correlated with responses on ratings on the Likert-type statements above.

RESULTS

Pearson correlations among scores on PHS, HPQ, ABS and LSI are depicted in Table 1. Correlations of HPQ with ABS, HPQ with LSI, and ABS with LSI are all highly significant, though small to moderate in size. Correlations of PHS with HPQ, ABS, and LSI are all highly significant and moderate to large in size, though that with PHS and HPQ is largest. This probably reflects the length and thus the greater weight of the HPQ.

A Pearson correlation coefficient of $-.5094$ ($p < .001$, $N = 249$) was calculated

Table 1. Pearson correlation coefficients among PHS, HPQ, ABS, and LSI*

Instrument	PHS	HPQ	ABS	LSI
PHS	1.00	.93†	.59†	.67†
HPQ		1.00	.34†	.38†
ABS			1.00	.65†
LSI				1.00

* $N = 249$; † $p < .001$.

for the score on the MSC on PHS. When the MSC score was entered into a hierarchical regression analysis after the variables of primary interest in this research, including age, menopausal stage, current life change score, attitude toward women's roles score, and cross-product vectors related to those scores, the variance explained solely by MSC score was 24.1 percent ($F = 86.41, p < .0001, df 1, 241$). A strong inverse relationship is suggested between the score on the MSC and the PHS. Only 1.2% of the sample indicated that they found hot flashes severe and worrisome in the last year. This observation differs markedly from the findings of Voda (unpublished manuscript, 1980). Other symptoms that bothered a majority of respondents during the past year were not associated with any particular menopausal stage.

Subjects' mean scores with standard deviations on these instruments are depicted in Table 2. To give the item scores on the ABS comparability with those of the other two scales comprising PHS, +3 was added to the LSI and the HPQ. The neutral responses on all three scales were then equivalent. Three factors were extracted, and since it was assumed

that dimensions of health would be interrelated, oblique rotation of the factor matrix was performed. Items that demonstrated factor loadings of at least .40 onto one of the factors were identified as contributing to that factor. Items demonstrating loadings greater than .40 with two factors were included in the factor with which they had the strongest relationship.

The factors that emerged were identified as Present Physical Health (Factor 1), Morale (Factor 2), and Vulnerability to Future Illness (Factor 3). Intercorrelations among the factors were all moderate in size. Table 3 depicts Pearson correlations among PHS, its component scales, and the three newly identified factors of PHS.

All intercorrelations were significant beyond the level of $p = .001$, and all relationships were direct. Of particular note was the strong relationship between HPQ and Factor 1 ($r = .8738$). The ABS and LSI demonstrated large relationships to Factor 2, and the LSI was most strongly related to Factor 3. All factors were significantly related to MSC, and these relationships were moderate in size.

The purpose of the single, Likert-type items which asked general questions with the same focus as each instrument was to assess whether the instruments fulfilled the investigator's intent. The question, "In general my health is," was significantly correlated with PHS score ($r = .6468, p < .001, N = 249$), and with the HPQ component ($r = .6563, p < .001, N = 249$). The question, "My outlook on life is," was significantly related to score on the ABS ($r = .4587, p < .001, N = 249$), while the question, "I get along with the people in my life," was significantly correlated with the score on the LSI ($r = .4434, p < .001$,

Table 2. Mean scores and standard deviations on study instruments*

Instrument	Mean	SD
PHS	152.47	15.47
HPQ	122.02	12.01
ABS	2.59	2.09
LSI	27.86	4.41
MSC	41.39	9.09

* $N = 249$.

Table 3. Intercorrelations among PHS, HPQ, ABS, LSI and factors 1, 2, and 3 of PHS*

Item	PHS	HPQ	ABS	LSI	Factor		
					1	2	3
PHS	1.00	.93	.68	.67	.81	.69	.60
HPQ		1.00	.36	.38	.87	.40	.22
ABS			1.00	.66	.36	.76	.26
LSI				1.00	.40	.98	.48
Factor 1					1.00	.42	.29
Factor 2						1.00	.29
Factor 3							1.00

*N = 249; all relationships were significant beyond the level of $p = .001$.

N = 248). The question, "My experience of menopause or the Change of Life has been," was significantly correlated with the score on the MSC ($r = -.3499$, $p < .001$, N = 119), which was moderate in size.

DISCUSSION

At the outset of this project, it was clear that measurement of health or health perception had been fraught with difficulty. Beckstrand^{17(p6)} observed that "a measure is an indicator when numbers are associated with the properties of a phenomenon in such a way that at least one of these properties is faithfully represented as a numerical property." Furthermore, she observed that when indicators are composed of subscales, each subscale represents some empirical property of an attribute. The relationships of subscales with the overall scale reflect relationships of attributes with the overall phenomenon of interest. Attributes can be viewed together as a composite. Indeed, they *must* be so viewed in order to approach the assumption of holism. In reviewing selected health

indicators, Beckstrand concluded that, in most cases, they are based on primitive definitions of the construct health, because of lack of consensus. For this reason, they generally do not measure the concepts for which they were intended.

There does exist a fair degree of consensus that health is comprised of multiple dimensions even when differing dimensions are identified.^{19,26,38,41,46} Factor analysis of PHS has lent support to the need to sum scores on dimension-specific measures in order to assess total health. It is not clear that the instruments used in this investigation are to be preferred or that the dimensions selected for assessment are the best choices. What is clear is that much work remains in defining health and in developing health indicators, as well as in ascertaining the reasons why this is so. Further efforts should be directed toward validation of this measure with others, and toward inclusion of stronger, more valid items.

Subjects were aware that their perceived health status was being measured. In the future, what this *means* to subjects might

be asked. That Factor 1 is more strongly correlated with PHS than Factors 2 or 3 reflects that HPQ, the component scale with which it is most strongly correlated, was the longest of the three PHS component scales. On the other hand, this finding probably lends support to Smith's²³ opinion that people operationally define health as the ability to carry out role-related functions or as physical well-being.

The large variance in PHS explained by the MSC score lends further support to that view. This finding was surprising in light of transcultural research that demonstrates little or no relationship between menopause and the experience of symptoms.^{47,48} Two explanations for this finding are posited. Women may define health as the absence of symptoms or discomforts and thus cognitively interpret the presence of symptoms as indicative of diminished health or of aging. Alternatively, they may actually be discomforted by the presence of symptoms. Transcultural research lends support to the former position.

These findings suggest that in this culture the MSC may have some relevance in describing how women experience menopause because it relates to how individuals, probably of any life stage, perceive their health status. In the future, this instrument might be administered to men and women of varied life stages along with some measure of perceived health.

King^(p4) viewed health as the way in which individuals deal with the stresses of growth and development while functioning within their cultural patterns. Culture is continually evolving, and so must standards of health. The appraisal of symptoms was of particular interest in examining the

normal transition through menopause, since that transition is still widely regarded as pathological or as a sign of overall deterioration. Yet only three decades ago, birth, another normal transition, was widely viewed from the same perspective. An additional area of interest in future work is the relationship of healthy appraisal to symptom experience in pregnant and postpartum women. That transition has come, in our society, to be widely viewed as normal and healthy.

This investigation has elucidated many of the problems inherent in health-indicators research to date. Because health is a complex, multidimensional, subjective quality, considerable effort must still be expended to identify the critical dimensions. This work did provide further evidence that multiple dimensions need to be considered in conceptualizing health. Additionally, it is likely that health status must be appraised differently depending on life-stage. It is unreasonable to use the same standards or measures for young adults as for elderly adults, yet dimensions or adequacy of health by life-stage have yet to be identified. This is a compelling area for nursing research. It is ever more critical that the nursing profession understands the construct health in order to explicate what it is that nurses do and to evaluate client responses to nursing actions. More broadly, since the focus of nursing is on the person throughout the life-span, increased understanding of normal life processes such as health is the essence of nursing theory development.⁴⁹

It could be assumed that such consensus will never be achieved on what the nature of health is and on when it is deficient.

Definitions and determinations of adequacy of health probably vary widely among individuals, among cultures, and among social strata. Nonetheless, con-

tinuing work in this area is needed for research, for evaluation of outcomes of health interventions, and for public policy decisionmaking.

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