HOPE INDEX SCALE: AN INSTRUMENT FOR THE OBJECTIVE ASSESSMENT OF HOPE

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Although many clinical observations suggest that Hope influences the onset, duration, prognosis, and recovery from mental and physical illnesses, a lack of direct scientific proof persists because no method exists for the objective assessment of hope. We have now constructed the Hope Index Scale, a testing instrument for the measurement of this rather elusive human attribute. Upon testing control and experimental subjects, it was found that score distribution on the Hope Index Scale correlates negatively with Beck's Hopelessness Scale (Pearson $r = -.88$, $P < .001$) and is independent of age, race, or sex. It is concluded that this tool can help identify individuals with varying degrees of psychosocial problems and that scores of 150 or below are indicative of pathologic hope deficit often associated with suicide.

Hope, the feeling that what is desired is also possible or that events may turn out for the best, is believed by many to increase an individual's overall ability to cope with stress and therefore promote health.[1-14] Proof of this assertion, however, is only empirical because no objective method exists for quantifying hope.

To facilitate well-controlled experimental research and enhance the objectivity of clinical observations into the apparent influence of hope on health, Obayuwana and Carter[7] proposed that hope can be defined as the state of mind which results from the positive outcome of ego strength, perceived human family support, religion, education, and economic assets (Figure 1). Taking advantage of this concrete concept and operational definition of hope, a 60-item questionnaire, reflecting the proposed Hope Index Scale (HIS), was constructed for the objective measurement of this hitherto unquantifiable and rather elusive human attribute.

METHODS

Construction

A 50-item questionnaire was made up according to the recommendations of Tuckman,[15] primarily to ensure clarity and face validity. Each of these 50 items was specifically constructed to assess the cognitive, affective, or motor component of ego strength, human family support, religion, education, and economic assets as operationally defined by Obayuwana and Carter.[7] The theories and concepts of hopelessness developed by Beck,[16] Melges and Bowlby,[17] Kelly,[18] Bibring,[19] and Lazarus,[20] as well as the clinical opinions or observations of many psychiatrists, hospital chaplains,

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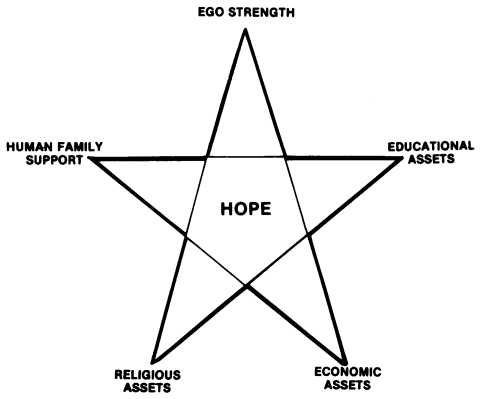

Figure 1. The Hope Pentagram

anthropologists, social workers, and physical therapists, were all used to formulate the bases for deciding upon the desirable responses to the questionnaire items. Medical and psychiatric patients of various categories also were interviewed in order to further determine the relevance of the 50 items to various life situations.

Ten additional items, derived from various sources, were added to the questionnaire for the purpose of estimating the social desirability bias of respondents. All 60 items were then arranged in a semirandom order to obtain even distribution of all types of items throughout the questionnaire.

Through pretesting and critical evaluations by patients and control subjects (including clinicians), the instrument was revised and modified into the present format, consisting of 60 yes-no items, each of which is assigned 10 points for the desirable response. Thus, the theoretical range of possible scores on HIS is from 0 to 500 since 10 of the 60 total items are used solely to estimate social desirability bias of respondents.

Testing

In the initial actual experimental testing, HIS was administered to control (n = 150) and experimental subjects (n = 150). The control group was made up of medical, graduate, and dental students and the experimental group was a predefined psychiatric population (Table 1). Additional testing was done using a random sample of university faculty, working mothers, and hospital employees (n = 186).

In administering the scale to groups or individuals, a uniform standard consisting of common written instructions was employed; there was emphasis on consent, privacy, and confidentiality. Those unable to read (for any reasons) had the questionnaire read to them by an administrator; otherwise, all participants answered the questionnaire privately in a paper-and-pencil format.

Beck's Hopelessness Scale (BHS)[24] was given concurrently to all participants immediately following or preceding HIS administration. Demographic information was requested and obtained from all participants except for 54 experimental subjects who did not furnish such information (Table 2).

RESULTS

In the over 3,000 persons tested, the lowest and highest raw scores on HIS were 120 and 460, respectively, with most of the experimental subjects scoring below 250. A mean score of 208 ± 41.2 was computed for the experimental subjects and 378 ± 34.6 for the control group. The difference was statistically significant (τ = 33.76, $P < .001$). There was also a significant difference between the mean scores of suicide attempters (n = 52) and those patients who gave the impression of depression alone, without suicidal ideation (n = 72) (Table 3).

HIS scores of the random sample of university faculty, hospital employees, working mothers, and others showed that the most frequent range of scores on HIS was 350 to 440, with a mean of 380. Of those who scored below 200 in this group, 90 percent admitted to severe psychological crises in their lives, and some were already under private psychiatric care.

Figure 2 shows that there was a continuing decrease in HIS scores when control subjects, psychiatric population, depressed patients without suicide ideation, and suicide attempters, were considered in that order. In the same order there was also a corresponding increase in Beck's hopelessness scores (Table 3).

The difference in the mean BHS scores of the

TABLE 1. CRITERIA FOR SELECTING PARTICIPANTS

Experimental subjects
Male and/or female (oriented to place, person, and time)
Any race
Employed, unemployed, students, etc
Positive psychiatric history or suicide attempt(s)
BHS score ≥ 2
Social desirability bias $\leq 20\%$
Control subjects
Male and/or female (oriented to place, person, and time)
Any race
Medical and dental students
Negative psychiatric history
BHS score ≤ 1
Social desirability bias $\leq 20\%$

Note: Participants were consenting volunteers from two metropolitan hospitals and area universities

TABLE 2. DEMOGRAPHIC DATA FOR CONTROL AND EXPERIMENTAL SUBJECTS (%)

Variable	Experimental* (n = 96)	Control (n = 150)
Sex		
Male	33	64
Female	67	36
Race		
Black	91.7	56
White	8.3	44
Occupation		
Student	8	100
Unemployed	71	
Unskilled worker	13	
Skilled worker	8	
Marital Status		
Single	50	64
Married	25	36
Separated/divorced	25	
Age (yrs)		
Mean	32.8	26.7
SD	9.4	3.8
Range	22-56	22-36
Education		
Some high school	50	0
High school diploma	25	0
Some college	16.7	12
College graduate	8.3	88
Mean	Some high school	College graduate

*Fifty-four experimental subjects who did not furnish demographic information are not included

TABLE 3. HOPE AND HOPELESSNESS MEAN SCORES FOR EXPERIMENTAL SUBJECTS

			Experimental Subgroups		
	I Control (n = 150)	II Experimental (n = 150)	III Depression (n = 74)	IV Suicide* (n = 52)	V Miscellaneous** (n = 24)
HIS	378 ± 34.6	208 ± 41.2	180 ± 40.0	150 ± 30.0	—
BHS	0.360 ± .48	11 ± 4.2	11.3	15.2	—

*Suicide ideation or attempts with or without depression
**Schizophrenics, substance abusers, borderline personalities, etc

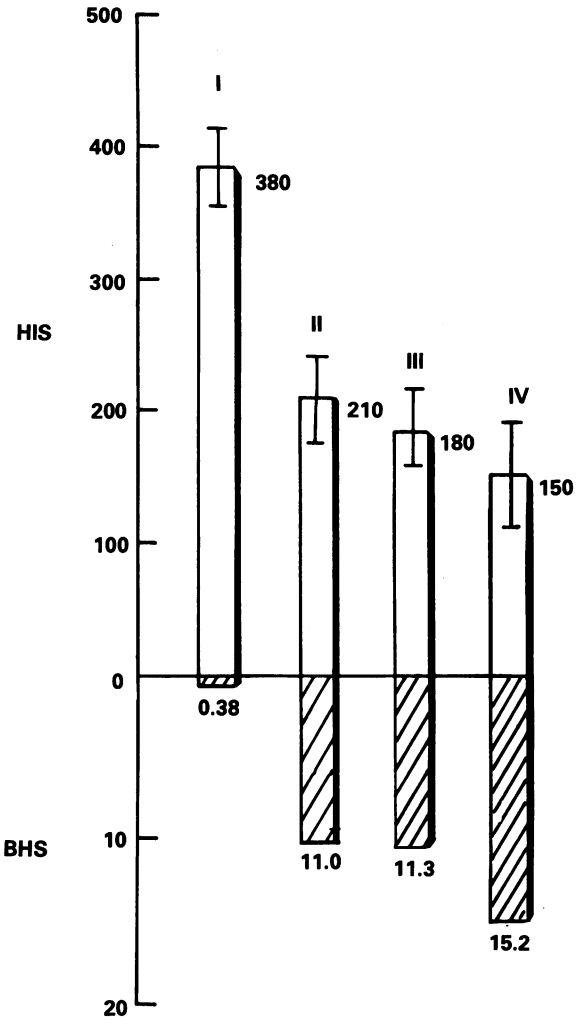

Figure 2. Concurrent hope and hopelessness scores in control (I), experimental (psychiatric) population (II), depressed patients (III), and suicide attempters (IV)

control and experimental subjects was found to be statistically significant ($\tau = 25.6$, $P < .001$, 298 *df*). Negative correlation (Pearson $r = -.88$, $P < .001$) existed between HIS and BHS as determined by concurrent scores of 486 participants. A scatter plot of HIS and BHS scores of 20 randomly selected experimental subjects is shown in Figure 3.

Kuder-Richardson's formula 20 and split-half reliability analyses show that the criterion measured by the Hope Index Scale is indeed heterogenous.[21] But with an alpha value significant at $P < .01$, this instrument also proves to be internally consistent in spite of this heterogeneity.

DISCUSSION

It is evident from the results presented that the Hope Index Scale is able to differentiate psychiatric patients and/or other persons with psychosocial crises in their lives from the normal population (ie, those with no psychiatric history and with a score lower than 2.0 on Beck's Hopelessness Scale).

In the populations tested, demographic data and score distribution fail to show that scores on HIS could be influenced by age, racial, or sexual differences.

The finding that suicide attempters score lower on the HIS but higher on the BHS than the depressed patients who have no determined suicidal intention, supports the hypothesis of Minkoff.[22] This hypothesis states that the statistical association between suicidal intent and depression may be an artifact resulting from a joint attachment to a third variable, ie, hopelessness. It maintains that

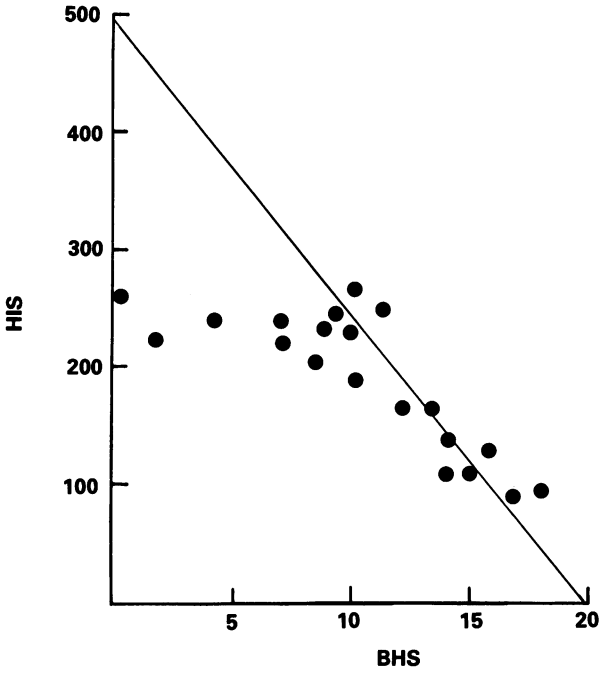

Figure 3. Scatter plot of hope (HIS) and hopelessness (BHS) scores of 20 randomly selected experimental subjects ($r = -.88$, and $P < .001$)

the seriousness of suicidal intent is more highly correlated with hopelessness than with depression.

CONCLUSION

The Hope Index Scale has undergone rigorous testing to ascertain its validity and reliability. As a testing instrument, HIS is designed to assess the attributes of hope in adult individuals without racial, sex, or socioeconomic bias. The test is a 60-item questionnaire that takes about 20 minutes to administer and is easy to score. This paper-and-pencil test may be administered individually, in groups, or verbally to those who are unable to read. All tested individuals are rated on the Hope Scale of zero to 500. The scale can be used for individualized clinical evaluation[23] or as a psychological research tool.

The authors are encouraged by the data we continue to gather in this and our other efforts to study hope.

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