

HOW THE *ORGANIZATIONAL HEALTH INSTRUMENT (OHI)* BECAME A RELIABLE, VALID TOOL FOR DIAGNOSING THE CURRENT HEALTH OF AN ORGANIZATION AND PREDICTING THE SUCCESS OF ANY PLANNED CHANGE EFFORT

By Dr. Marvin Fairman

Columbia University's Dr. Matthew Miles conducted the groundbreaking research and developed the conceptual framework for the theory of organizational health. Dr. Miles hypothesized that the outputs of any organization will be impacted by the internal dynamics within the system. Furthermore, he hypothesized that the levels of health would (1) impact the quality of the output and (2) predict the success of any planned change efforts.

The data show that organizational health has greater impact on the level of student achievement than the SES of the population.

Our team, based at the University of Arkansas at the time of Matthew Miles's initial findings, contacted Miles to determine how he assessed organizational health. Simply put, we asked how he had quantified organizational health. Dr. Miles said that he had not developed a way to do so. Our team requested permission to operationally define organizational health using the ten dimensions that Miles had identified in his research. He encouraged us to do so.

The *Organizational Health Instrument (OHI)* was developed in a three-year, three phase process that culminated in a research tool that fulfilled all of the technical requirements for establishing reliability and validity. In use now for more than three decades, the research shows that the *OHI* also has predictive validity. (See data in Fairman & McLean's *Enhancing Leadership Effectiveness, Enhancing Goal Focus, and Adaptation.*)

What follows is a brief, bullet point overview of that process.

Year One: Review of literature, identification of leadership concepts, & selection of item statements

- Dr. James Hardage and Dr. Connie Showalter Lucas summarized the theoretical and research-based information from the literature for each of the ten dimensions of organizational health. Based on their thorough summary, our research team concluded that each of Miles's ten dimensions was unique and a "stand alone" concept that could be identified and measured. This established **Face validity** for each of the ten dimensions.
- A key item statement was selected from each paragraph of the summary for each of the ten dimensions. The number of initial item statements ranged from a high of 35 for one dimension to a low of 28 for another.
- A Q-sort technique using a panel of 20 experts (10 public school administrators and 10 professors) was used to establish **Construct validity**. Item statements that were placed in the proper category 80% of the time by the panel were maintained in the pool. Those item

statements with less than 80% were reexamined and modified to sharpen the focus and clarity of the statement. These revised items were submitted to another panel of experts and were only kept if they reached the 80% threshold.

- All items that achieved the level of effectiveness described above were randomly placed in a trial instrument and administered to a faculty. Following recommendations and best practices in the field of testing, 70% of the items were stated positively and 30% were inverted. This trial run with a faculty was done in order to ensure that the instructions and procedures for collecting the data were clear. Minor changes were made to the procedure based upon feedback from this exercise.
- The next step in this phase was designed to identify those item statements that could accurately differentiate between healthy schools (organizationally speaking) and less healthy schools. Two metropolitan school districts were selected to participate in this exercise. A team of central office supervisors from each district selected three schools from the upper and three schools from the lower ends of the continuum of effectiveness in dealing with change.
 - The *Organizational Health Instrument* was administered to all faculty members in the twelve schools described above.
 - A separate t-test was performed on each item and only item statements that differentiated between the six upper schools and the six lower schools at the .05 level of statistical significance remained in the pool of items.
 - Using the data gathered here, a stepwise multiple regression analysis was used to select the ten items that contributed most to the total score for each of the ten dimensions. At the end of the Phase 1, each of the ten dimensions had ten corresponding item statements.

Year Two: Establishing reliability for the Organizational Health Instrument – Form A & Form B

- Dr. Morris Holmes and I reexamined the item statements needed to operationally define each of the ten dimensions. The stepwise multiple regression analysis was used again to select the item statements for each dimension that could explain at least 95% of the variance. Ninety-five percent variance was established on or before the eighth item for each dimension was selected. Therefore, the number of items was reduced from 100 to 80. The eight item statements for each of the ten dimensions were randomly placed in the *Organizational Health Instrument*.
- Another senior member of the research department and I reexamined the 120 unselected item statements and concluded that there were a sufficient number of item statements to consider establishing a parallel form. The stepwise multiple regression analysis was used to determine if the unselected items for each of the ten dimensions could provide an equivalent measurement. Again, after the eighth item was selected for each dimension at least 95% of the variance was established. These eighty items for Form B were placed in parallel positions with those in Form A.

- Another metropolitan school district was selected by Holmes to establish **reliability** for the 80-item OHI. Half of the teachers in each of these 42 schools were randomly selected to respond to Form A and the other half responded to Form B. To provide additional objectivity, Dr. Whitcomb G. Johnstone, an independent researcher, prepared the Technical Manual for the OHI project. He stated: “*The overall split-half reliability coefficient for the OHI was .98 for the 40 item split. These high split-half reliabilities reflect the care taken in the development stage to ensure that the items were appropriate for each dimension of organizational health.*” At the end of Phase 2 **face**, **construct**, and **content validity** as well as **reliability** had been established for the Organizational Health Instrument (both Form A and Form B.)

Year Three: Establishing Predictive or Concurrent Validity

- In order to establish predictive or concurrent validity for Form A and Form B, our team searched for and identified a nationally recognized research tool that had already established reliability and validity to measure against. The *Leader Behavior Description Questionnaire (LBDQ)* was selected because it had been used extensively in public schools, the military, and business organizations.
- For this crucial phase a school district of 45 schools (previously unexposed to the OHI) agreed to participate. Every teacher in these schools was randomly selected and placed in either group A or B. One half responded to Form A and the other half responded to Form B. **Both groups** responded as well to *The Leader Behavior Description Questionnaire*.
- Our team hypothesized that the two dimensions measured by the *LBDQ* (Initiating Structure and Consideration) should correlate with the *OHI* at a statistically significant level. Based on the research data each of the following hypotheses was supported. The levels of statistical significance for these hypotheses are listed below.
 - HYPOTHESIS: The Task Centered *OHI* Dimensions of Goal Focus, Communication Adequacy, and Optimal Power Equalization will correlate with Initiating Structure component of the *LBDQ*.
 - RESULT: This hypothesis was supported at the .001 level for Goal Focus and Communication Adequacy and the .01 level for Optimal Power Equalization.
 - HYPOTHESIS: The Internal State Dimensions of Resource Utilization, Cohesiveness, and Morale will correlate with the Consideration component of the *LBDQ*.
 - RESULT: This hypothesis was supported at the .001 level for all three dimensions.
 - HYPOTHESIS: The Growth & Changefulness Dimensions of Autonomy, Innovativeness, Adaptation, and Problem Solving Adequacy, will correlate with both the Initiating Structure and Consideration components of the *LBDQ* because both are required to achieve change.
 - RESULT: The hypothesis for Consideration and the four *OHI* dimensions was supported at the .001 level. The hypothesis for Initiating Structure and *OHI*'s Adaptation and Problem Solving Adequacy were supported at the .001 level. Innovativeness and Autonomy were supported at the .01 and .05 levels respectively.

These data provide evidence that the *Organizational Health Instrument* has predictive validity.

- The Means and Standard Deviations for each of the dimensions for Form A and Form B are presented in the *OHI* Technical Manual that accompanied the completed project. Likewise, Means and Standard Deviations were produced for the two dimensions of the *LBDQ*.
 - Based on these data, a senior member of our University research department concluded that there was greater internal consistency in the Means and Standard Deviations between Form A and Form B than for the nationally recognized *LBDQ*.
 - Based on these data and other data sources, Organizational Health Diagnostic & Development Corporation established an index for converting all Form B dimensions so they will be equivalent to Form A. The two dimensions that required the largest index above and below “1” were Goal Focus (.993249) and Optimal Power Equalization (1.004383).

Year Four & Beyond

After the original three-year project, Organizational Health Diagnostic & Development Corporation continued to refine, improve, and expand on its use of the powerful *OHI* with units, campuses and districts throughout the United States. **Test-retest reliability** was established by having teachers from 33 different schools respond to the *OHI*. Two weeks later each person responded to the *OHI* again. The correlation coefficients from nine of the ten dimensions were above .90 and Resource Utilization was at .85 resulting in a .001 level of statistical significance for all ten dimensions.

Based upon decades of research data collected by OHDDC, national norms have been established for elementary, middle, junior high, high school, and alternative schools, as well as for central office units and superintendents. Additionally, norms have been established for business organizations, state agencies, financial institutions, and verticals in the utilities and manufacturing sectors.

In public school districts throughout the United States, the ten dimensions of organizational health consistently correlate with student achievement at the .001 level. These data are reported in our published volumes: *Enhancing Leadership Effectiveness*, *Enhancing Goal Focus*, and *Adaptation*. When the Socio Economic Status of the student population is factored in, the relationship between organizational health and student achievement increases. The data reported in *Adaptation* show that organizational health has greater impact on the level of student achievement than the SES of the population.

Most importantly, OHDDC has leveraged the power of the *OHI* to increase leadership capacity and improve culture on campuses and in central offices from coast to coast. Our company is built on the belief that when an organization values data, loves people, and grows leaders – it will live out its values and thrive in its mission.