ADAPTIVE HEALTH BEHAVIOR INVENTORY (AHBI)
DIAGNOSTIC ROLE OF AHBI-Q20

Frederick H. Navarro, PhD

This article discusses the diagnostic role of Q20 of the Adaptive Health Behavior Inventory (AHBI) in diagnosing causes of the "no pattern" outcome.

AHBI Measures and Adult Response

The majority of AHBI items are descriptions of health-related, goal-directed actions, behaviors, and beliefs. For example, the AHBI-12 statement, "I do not seek help from doctors unless I am very sick or injured", is a description of care-seeking in response to perception of severe illness or injury. The AHBI-5 statement, "I often play in active or competitive sports" is a description of the context of exercise behavior. The AHBI-17 statement, "Doctors often try new drugs on their patients without knowing all the effects" is a statement of belief. As each adult reads or hears that statements, they are asked to indicate their level of agreement or disagreement with it.

The accuracy of an adult's response to each AHBI statement is based on their own recognition that the statement reflects a meaning or interpretation that is consistent or inconsistent with their own actions, beliefs, or orientation. When adults have insufficient experience with any situation described by the AHBI statements, they lack a definite mental frame to judge the accuracy or inaccuracy of the statements as applied to themselves. This increases the likelihood of a neutral response or less than accurate response. As neutral responses or inaccurate responses increase, the odds of a "no pattern" outcome increase.

Diagnostic Role of AHBI-20

AHBI-Q20 is a diagnostic question used to evaluate the integrity of responses to the AHBI; that is, an indicator that subjects were attentive to the actual content of the AHBI items and replied to each statement accurately. By placing the Q20 item, "I make my own health care decisions" at the end of the AHBI, it is a good

indicator of the response behavior subjects followed for the first nineteen questions.

Response to Q20 and Rate of "No Pattern"						
	q20					
PATH	Strongly Disagree %	Somewhat Disagree %	Neutral %	Somewhat Agree %	Strongly Agree %	Total
Critically Discerning	0.1	2.2	0.5	1.4	1.1	
Health Contented	3.6	3.6	4.4	8.2	9.1	
Wisely Frugal	6.0	7.2	3.9	14.4	19.9	
Traditionalist	1.2	1.4	2.0	2.0	2.1	
Family Centered	3.6	6.5	3.7	8.0	11.1	
Family Driven	4.8	2.2	4.3	8.0	11.0	
Healthcare Driven	10.7	4.3	6.4	12.3	20.2	
Independently Health	2.4	2.2	3.7	8.3	10.9	
Naturalist	2.4	3.6	1.8	6.5	8.1	
no pattern	65.5	66.7	69.3	30.9	6.6	
Total	84	138	563	2,160	3,167	6,112

The table above shows the disagree-agree response data to Q20 taken from three recent studies against the percentage of respondents identified with one of the valid nine PATH versus “no pattern”.

Percentage of “No Pattern” by AHBI-20

The percentage of “no pattern” is dramatically influenced by the level of agreement with AHBI-20, an indicator of *perceived internal locus of control around health care decisions*.

The smallest percentage of respondents with “no pattern” (6.6%) is under the “Strongly Agree” column on the far right. This indicates that 94% adults, who perceive themselves as solely responsible for their health decisions, display the influence of one of the nine Patterns of Adapting to Health.

This is in stark contrast to “disagree” responses. Just under 4% of adults tend to answer AHBI-20 with a “strongly disagree” or “somewhat disagree” response. Among these adults, the percentage of “no pattern” can range from 65% to 67%.

There are several factors that can explain this. First, random answers to the AHBI

typically result in “no pattern”. So, if a person just randomly picked answers, a “no pattern” outcome will result. Second, too many of the same answer; for example, five or more neutral responses in a row or five or more “strongly disagree” responses in a row is a sign that respondents are not responding to the content of the AHBI statements. In effect, each person is not giving their true response to each statement like the person giving random answers. Again, the “no pattern” outcome is the result. Both reasons are related to lack of accountability to an interviewer, discussed above. The third possibility is more interesting.

Locus of Control in Health Decisions and Autonomously Motivated Involvement in Health

Locus of control in health decisions and its relationship to health-related behavior was first proposed in 1978(1). This study proposed a distinction between an individual’s internal vs. external locus of control in health decisions. AHBI-20, “*I make my own health care decisions*” can interpreted as a measure of locus of control in health decisions. Individuals with an internal locus of control see themselves as the determiners of their own health choices. Individuals with an external locus of control in health decisions see powerful others as in control of their health choices. In a 2001 study(2), it was demonstrated that as an internal locus of control in health decisions increases health proactive and health promoting behaviors do as well. Likewise, external locus of control in health decisions has been associated with a passive approach to health and diminishing health(3). The conclusion of the 2001 study was that an internal locus of control in health decisions is part of a larger autonomously motivated proactive health focus shaped by interest, personal preference, and satisfaction. Relative to responses to the AHBI, if people truly do not perceive themselves to be in control of their health care decisions, meaning they emulate an external locus of control, they are less likely to proactively adapt to health-related contexts motivated by their own preferences and needs. This lack of experience coupled with a passive approach means that such individuals have failed to develop insight into their own biases or preferences around health and health care through self-observation. As a result, they may also lack defined habits of responding to different health-related contexts due to lack of exposure and/or lack necessity to adapt. In this event, it is less likely those people would have adopted any one of

the nine PATH.

"Neutral" Response to AHBI-20. Just under 10% of adults provide a "neutral" response to Q20. Among these adults, the percentage of "no pattern" increases to 69%. Again, this suggests 1) these respondents also answered the AHBI randomly to some degree, or 2) gave too many of the same answer without attention to the content of the measures, or 3) had insufficient internal locus of control around health care decisions for one of the nine reliable PATH to have emerged. All three reasons would lead to a "no pattern" outcome.

"Somewhat Agree" Response to AHBI-20. Just over a third of adults provide a "somewhat agree" response to AHBI-20. Among these adults, the percentage of "no pattern" is about cut in half. A higher level of internal locus of control around health care decisions increases the probability that people conform to one of the nine reliable PATH. However, the rate of "no pattern" is still very high potentially due to the other reasons discussed above; random answers, non-attentiveness to the AHBI content, or lack of emergence of a dominant PATH.

Strongly Agree Response to AHBI-20. The largest percentage of adults answered "strongly agree" to AHBI-20. Among these adults, the percentage with "no pattern" drops to well-under 10%. It is fairly obvious then, that the probability of an adult having one of the nine validated PATH is strongly influenced by their perception of their own *internal locus of control around health care decisions*. This is consistent with the developmental theory of PATH formation. The more a person must make decisions and form habits of responding to broad areas of health on their own the greater the likelihood a dominant PATH will emerge. Also, the low rate of "no pattern" indicates that these adults are less likely to have answered the AHBI randomly, or without attention to the content of the AHBI measures.

To summarize, AHBI-20 is a powerful diagnostic question within the AHBI. In cases where a higher than average rate of "no pattern" occurs, it is recommended that responses to AHBI-20 are examined against the nine PATH as shown in the table above.

Solutions for High No Pattern Rates

Remove Records. Remove the records with either a "1", "2", "3", or even a "4" response to AHBI-20. This will reduce the representation of "no pattern", as well as the representation of adults with lower perceived control over health or health care decisions, and therefore less capable of responding on their own to marketing or branding appeals.

Re-interview No Pattern Adults. Generally, a high "no pattern" outcome is associated with mail survey and on-line data collection methods. For all adults identified with "no pattern" using either methodology, another solution to reduce the number with "no pattern" is to interview them again either by phone, IVR, or in-person interview.

References

1 - Wallston, S., B., & Wallston, K. A. (1978). Locus of control and health: a review of the literature. *Health Education Monographs*, 6(1), 107-117.

2 - Steptoe, A., & Wardle, J. (2001). Locus of control and health behaviour revisited: a multivariate analysis of young adults from 18 countries. *British journal of Psychology*, 92(4), 659-672.

3 - Cobb-Clark, D. A., Kassenboehmer, S. C., & Schurer, S. (2014). Healthy habits: The connection between diet, exercise, and locus of control. *Journal of Economic Behavior & Organization*, 98, 1-28.