
POINT OF VIEW

The importance of placing measures of health locus of control beliefs in a theoretical context

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It has been about 15 years since Barbara Wallston, our associates and I developed the Health Locus of Control (HLC) scales and made them widely available to researchers throughout the world. In those intervening years, the HLC scales have been among the most often used and, unfortunately, misused measures of health beliefs. I contend that one of the main reasons why these instruments have been misused is that some researchers never really read carefully what we have written over the years about utilizing these scales.

We developed the HLC scales to be used in the context of Rotter's Social Learning Theory (SLT; Rotter, 1954). SLT states that the potential for a behavior (or a set of functionally related behaviors) to occur in a given psychological situation is a joint function of expectancies that the behavior(s) will lead to a particular reinforcement and the value of that reinforcement to the individual in that situation. Locus of control is an expectancy construct; the more internal (or less external) one's belief orientation, the more one supposedly expects reinforcement following one's behavior. However, according to SLT, high internality (or low externality) scores should only predict behavior potential in situations where the reinforcement (or outcome) is valued.

In our very first publications on the use of the original HLC scale (B.S. Wallston *et al.*, 1976; K.S. Wallston *et al.*, 1976), we demonstrated that selected health behaviors were not, in and of themselves, predicted by HLC scores; it was only

when subjects highly valued health (the most pertinent reinforcer, we argued, in health-related situations) that HLC beliefs were related to health behaviors. Why then have only a relatively few studies which have attempted to predict health behaviors from HLC scores bothered to include an assessment of health value (HV)?

There are a number of answers to the above question other than failure to read, or heed, our advice. Some investigators undoubtedly agree with Milton Rokeach, the developer of one popular method of measuring values, that health is such an overwhelmingly important value in our society that there is too little variance in its value to worry about. Others might feel that there exists no reliable and/or valid method for measuring HV, or that the method we have employed in our research (a variant of Rokeach's ranking technique) is too complicated for their subjects. Nevertheless, I suspect that a major reason why some investigators neglect to include an HV measure along with a HLC measure is that they do not properly understand or appreciate the theoretical underpinnings of the construct.

Even some of those who do measure HV along with HLC do not appear to comprehend what is meant by the proposition from SLT that behavior potential is a joint function of expectancies and value. It is not enough, for example, to use multiple regression to predict health behavior (the criterion) by an additive model of HLC and HV in which the predictors are treated as simple main effects. The statement that "only for those who highly value their health should HLC beliefs predict health behavior" cries out for examining the interaction of HLC and

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HV. In essence, internal health locus of control moderates the relationship between HV and health behavior. At the very least, separate analyses should be conducted for high and low HV subjects with the theoretical expectation being 'positive' results for the former group and null results for the latter subjects.

Another statement which we have often made, but which is honored more in the breach than the observation, is that it is *not* possible to account for much of the variance in health behavior from HLC beliefs and HV, even if one considers the interaction of those two constructs. We have steadfastly called for the inclusion of other important constructs (e.g. specific behavioral beliefs) in any prediction equation which attempts to explain health behavior. An individual's health behavior is multidetermined; there is no sense kidding oneself that HLC is the most important determinant.

One construct, in addition to HV, which appears to be a more potent determinant of health behavior than HLC is self-efficacy (Bandura, 1977, 1982). Self-efficacy refers to a person's belief that he/she can, in fact, carry out a specific behavior; thus it qualifies as one of those 'specific behavioral beliefs' which, we have claimed, should be used in conjunction with HLC and HV. The operative words are 'in conjunction with' *not* 'in place of'. We have speculated elsewhere, based on limited but promising evidence, that only for persons with an internal orientation toward their health do self-efficacy beliefs predict health behavior (Wallston, 1989). Thus, internality appears to also moderate the relationship between self-efficacy and health behavior.

Bandura has consistently maintained that self-efficacy beliefs only make sense when they are highly specific to the behavior(s) in question. He is probably correct, if the object is to predict only one or a small number of behaviors. However, from the perspective of Rotter's SLT (as opposed to Bandura's SLT), there is a place for a generalized self-efficacy construct in the equation predicting behavior potential. In fact, Rotter may have missed the boat by identifying locus of control as the principal indicator of 'freedom of movement' and not following up with self-efficacy or a similar construct. (In our own research, we have developed a measure of 'perceived competence' which is akin to a generalized self-

efficacy measure. This measure can be made 'specific' to health, and with HV and HLC might be a potent predictor of health behavior.)

In addition to predicting health behaviors, HLC beliefs have been related to health status. To do so, however, one needs to go beyond the major proposition of Rotter's SLT which relates principally to behavior potential. To do so is not difficult—especially if one has an internal orientation towards theorizing. The linkage between HLC beliefs and health status depends on the proposition that one's health status is determined (or mediated) by one's own health behavior. (If you believe that, you're an 'internal' by definition!) The catch, however, is that health is even more multidetermined than health behavior, so it should not be all that surprising that HLC beliefs are, at best, only very modestly predictive of measures of health status. Again, what is needed is more complex and inclusive theoretical models. It is OK for a student doing a masters thesis to conduct an investigation with only two or three variables; doctoral dissertations and other significant research projects cannot afford to be that simplistic.

In conclusion, therefore, there is a place for measures of HLC beliefs in predicting health and/or health status, but that place is squarely rooted in the context of a larger theoretical framework, what we have labeled 'Modified Social Learning Theory'; taking one construct, such as HLC, out of that context will inevitably lead to an overabundance of false negative conclusions.

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