

Foundations of Health Behavior Research Revisited

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This paper revisits the issue of assumptions behind the field of health behavior research. The understanding of constituents of health behaviors and what constitutes health, reasons for placing a value on health, the utility of health behavior research, and the role of the health behavior re-

searcher are reviewed. Conscientiousness and dialectic theory are employed as concepts to provide one potential conceptual solution to participation in self-destructive behaviors.

Key words: health behavior research, assumptions, issues

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Occasionally, since the inception of health behavior research in the 1960s,¹⁻³ writers address and question some basic assumptions.³⁻⁵ The 2 assumptions that serve as the foundation in this arena are that the “health behaviors” (a) are well understood and (b) are ideals that people want or should want. The behaviors on which people in the field have tended to place a high priority are the 7 health practices.^{6,7} Not smoking, drinking alcohol only modestly, not eating too much, eating breakfast, not becoming overweight, exercising, and sleeping regularly and for a sufficient amount of time can lead to prevention of disease consequences. Other important health practices, not focused on by Belloc and Breslow, include driving safely or other accident avoidance behavior, good hygiene including dental care, stress monitoring, safe sexual practices, nonexposure to environmental hazards (the “behavior”

here would be leaving the environment or changing the environment), adaptive coping styles such as planning, adjustment to disease, and compliance with treatment regimens. All of these many health practices purportedly lead one to avoid or minimize negative consequences such as heart disease, cancer, or accidents.

Following from this first assumption, that we understand important health behaviors, there are or should be no impediments to placing a value on health behavior in mainstream lifestyles. Healthy behaviors themselves have been considered goals to maintain or pursue for their own sake, in addition to avoiding disease.⁸⁻¹⁰ Health promotion is said to maximize the quality of one’s life.

A third assumption that derives from the first 2 is that health behavior research is a laudable avenue of inquiry; that is, that there is rapidly increasing knowledge about health behavior and what causes health and ill health, that there is or should be an unlimited breadth of solutions to health issues, and that health behaviors really can be changed and maintained.^{4,5} In other words, one can uncover antecedents to health behavior and modify these antecedents that will then modify health behavior in a desirable direction.

A fourth assumption sometimes discussed is that health behavior researchers are experts in health behavior and,

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somehow, are exemplary in their own habits, or should be.⁵ An exploration of this fourth assumption, in particular, as well as an in-depth examination of the first 3, reveals that the pursuit of health becomes intertwined with issues of clarity, legality, morality, economics, and political struggles.³

This paper discusses these 4 assumptions in some detail. Following this discussion, the paper suggests that conscientiousness is a core antecedent or feature of healthy behavior and it seems to be an element of a dialectic theory of health behavior. This theory suggests that an active dialectic between individuals and the society within which they reside can point towards maximization of health.

The 4 Assumptions

Are health behaviors well understood? There are various lists of health practices. However, it is not clear when some “unhealthy” behavior is safe at some level and may enhance some people’s existence. For example, if there are safe levels of alcohol or tobacco use, if there is a safe frequency of getting drunk, if there is a certain degree of psychedelic drug use that is really minimally dangerous or even socially enhancing, then pursuit of these activities might maximize the quality of life for some people.

It may also be true that *healthy behaviors are not always safe*.⁵ People who engage in too much exercise may be at risk for injury or may suffer from addiction to exercise if it interferes with other necessary life activities. In addition, what is a healthy practice for some people may be dangerous for others. For example, safety gates for infants may be dangerous for adults (discussed at the 2004 AAHB conference). Taking vitamin supplements may be healthy for youth but dangerous for older adults. As another example, although Belloc & Breslow suggest that 8 hours of sleep is an important health practice,⁶ it is known among sleep researchers that there are both “long” and “short” sleepers. Short sleepers seem to need only 4 hours of sleep a night, and 8 hours may simply be too much for them.¹¹ Of course, *some determinations of healthy versus unhealthy practices are primarily a function of one’s life perspective*. For example, the same people who are considered healthy by some persons also may be

considered “health nuts” by others (eg, attitudes towards vegetarianism).

Further, the same *healthy practices may become unhealthy practices* over time. For example, use of cell phones at one time may have been protective on the highway, but now they are dangerous, as a function of number of cell phone users that drive cars. Conversely *unhealthy practices may eventually be considered healthy/nondisease practices* over time. Note the history of homosexuality. First, it was not a definite category of behavior; then it became categorized.³ Next it became a disease; then it became a statistical anomaly.¹² Now there are some normalization influences, albeit along with limits in status as a “citizen” (eg, attitudes toward marriage among gay people).

Fuzzy distinctions between notions of *disease and notions of normative anomalies* can lead to very different ideas on what is a disease and what is healthy (or at least not diseased). For example, generally a person who is very tall would not be considered to have a disease. However, to the extent that this person is having difficulties adjusting to ceiling heights, car seats and bed lengths and managing eye contact with most other persons, such that daily functioning might be affected, at least some persons would label that tall person as having a disease (eg, perhaps of gigantism, devoid of hormonal peculiarities).

For every anomaly, there is likely to be at least some people who view it as an example of ill-health. (Consider statistical anomalies of gender identification, physical beauty, sexual preference, lifestyle preference, temperament, and extremes of intelligence, as other examples.) A family resemblance notion of health and disease, which is generally used nowadays as opposed to an intentional (also called rule-based, or mediation-mechanism based) definition, is subject to potentially fuzzy boundaries between the disease set and the larger “anomaly” set within which it resides.^{9,13,14}

Even with behaviors that seem clearly self-destructive, not just variations in expression of lifestyle or physical characteristics, it becomes difficult to state when the person has a disease, is just struggling, or is “still healthy.” That is, researchers tend to create categories out of continua. For example, the notion of loss of control may really vary continuously among drug users, but there is a ten-

dency to categorize people into “drug user versus abuser.”¹⁴ In summary, what is healthy behavior may vary in different contexts or locations, in different periods of time, and with different individuals.

Why should we focus on health behavior: self and others? There are 2 general sources of reasons why one should focus on maximizing one’s health behavior. First there is the goal of maximizing the *self* (body, mind, or spirit). There are 4 elements of this goal. One engages in health behavior to maximize one’s functional capacity (able to do more), to think more clearly or feel better (able to do better), achieve protection from illness (resistance), and to feel “closer” to the center of life (spiritual; a sense of purpose).

Second, there is the goal of maximizing one’s relations with *others* (interconnectedness, social responsibility). There are 3 elements of this goal. As a society, one engages in healthy behavior so that societal health costs are lower (eg, cost of medical care or insurance), because it is better for the economy (maximum productivity), and because one wishes to minimize negative effects on others (ie, in terms of worry and caretaking demands).

However, self and societal goals on maximizing health tend to become exaggerated, perhaps due to some ambiguity pertaining to what it is that constitutes health. These extremes of self and other reasons to pursue health are suggested by Susan Sontag in her text, *Illness as Metaphor*.¹⁵ In her selective review of the conceptions of health and disease throughout recorded history, she writes that one pursues health to obtain *restraint* of self, obtain *silence* of the organs, and obtain *purity*, or cleanliness, goodness, or inner happiness. There are meta-religious tones to such expressions of the betterment of self. Social-level pursuit of health, in Sontag’s¹⁵ review, is aimed to keep to a social *moral* code (to be good), obtain *restraint of environment forces* (eg, reducing crowding), and demonstrate a *superior* society (also see Tesh’s³ text). This perspective of pursuing health for others suggests a fascist or patriotic perspective of health.

Even type of disease has been employed to provide a backdrop for the essence of health in “self” according to Sontag. There exists the notion of the

romantic illness in which the “victim” is portrayed as beautiful, glamorous, soulful, or interesting; and the true self shines (eg, TB and mental health are examples). One may posit a sense of pure health that springs forth from a deadly illness according to this perspective. There also is the sinful illness in which the “perpetrator” is morally contagious, evil, or being punished, and the true self is being dissolved (to a spoiled identity; eg, cancer, AIDS, and addictions). As we “think too much” in metaphor to explain things we don’t understand, we sometimes makes leaps in knowledge, as in some transdisciplinary work,¹ but sometimes we just hurt each other.^{3,15,16}

Given the limitations of fuzzy conceptual boundaries, it may or may not be a surprise to some that there is widespread consensus that health behavior research is and remains a meaningful field of inquiry. Tentatively, perhaps without too much controversy, one could take the stance that counteracting self-destruction and promoting self-construction are a reasonable definition of health, one that is laudable to pursue and is at least not too ambiguous as a starting point for continued research.

Problems in placing a value on health behavior. Assuming one is reasonably clear on what healthy behaviors are and that there is consensus that one should engage in healthy behaviors to self-construct versus self-destruct, there still are many barriers to the actualization of health. One of these barriers consists of the notion of a free (unregulated) *economy*. This barrier removes social-level restraints on the prevalence of unhealthy behavior. In a free economy, many products and services are provided that serve functions for the individual, not all of which are healthy functions (see discussion of individualism in Tesh³). For example, one might suggest that “anything goes” in the marketplace wherein one can purchase items such as foods that fall on the extremes of a healthy diet. Provision of sodas and other unhealthy foods at schools indicates a paucity of attention paid to health protection among children. The fact that cigarettes, the number #1 behavioral killer, are legal is ample testimony to the impact of a free economy on ill health.

Another one of these barriers is the use of “health” as a *political* tool. This

barrier may add consequences on conceptualizations of unhealthy and healthy behavior. First, ill-health (disease) labels can be used to discolor one's character. For example, President Bush quit using all mind-altering substances approximately 20 years ago. However, it would seem imprudent for him to say publicly that he could no longer drink or use cocaine safely, that he had a drug disorder. The public might assume that he was ready to relapse at any moment, if he admitted that fact. Use of disease labels may limit the ability of those who hold those labels to be able to pursue and demonstrate their ability to be maximally healthy — given their condition.¹⁷ Second, sometimes destruction is considered the “healthy” course to take in geopolitical situations. To kill an “evil” enemy in wartime, that consequently and arguably should save many lives, would be considered the right or healthy action. To kill a mass murderer, to protect society from extreme evil behavior, often is considered the right or healthy action. It is unclear how killing others, though, is healthy in terms of improving the overall quality of life of those who do the killing; certainly it restrains the health of those targeted. Third, and a converse perspective from the mass murderer example, sometimes behaviors that are considered healthy for the individual might also be considered unhealthy for the society within which the individual resides. For example, safe sex, which might be healthy for the individual teen in a given situation, might be considered unhealthy for a society (eg, leading to social decay, somehow). Finally, what is healthy or what should be considered “importantly healthy” at a point in time is a function of dramatic events or who is in power. With democracy and the vote, loud voices may bias one's views on health options. For example, one may be directed toward fighting heroin use to the exclusion of fighting household toxins. One may be persuaded that homosexuality is unhealthy¹² and that having children is more healthy than having no children, as additional examples, depending on the views of those that exert power.

Issues in engaging in health behavior research. Just as there are economic and political barriers on pursuing health behavior as a value, there are also many barriers to pursuing health behavior re-

search. Some of these limitations pertain to *pragmatic* barriers that are placed on doing good health behavior research. First, one needs to earn money to stay employed and one may do research in areas that fall within the priorities of Congress or President, or one's boss, as opposed to what one believes is important work. Dramatic events may determine funding streams as opposed to normative data (eg, note public attention paid to prevalence of school violence versus household accidents). Also, we work within social/moral walls. Some research arenas, which are fraught with public sensitivities, may be avoided by researchers. As a specific example, many health behavior researchers will avoid studying the arena of sex education for teens. If they do study minors, they are aware of political forces that claim one should not do research on safe sex for teens; that one should do abstinence-only programming (even though the latter programming is known to be less successful for most youth). Unfortunately, and a general rule of doing work within the confines of moral walls, one often carries around ‘taken for granted’ knowledge that health is good or moral and that risky behavior is bad or immoral.³ That is, one may mix health with morality, not think things through deeply.

There are also pragmatic barriers among those who might be recipients of programming. In particular, there are many lay beliefs that may interfere with pursuing a healthy course of action. Such beliefs include privacy protection, supernatural theories (good spirits and evil spirits), conspiracy theories, fatalism, and romantic notions of disease. All of these lay notions may interfere with health promotion as a goal.^{3,15} For example, many African Americans believe in various HIV/AIDS conspiracy theories; 53% of a sample of 500 teens and adults believe that a cure exists for HIV/AIDS, but it is being withheld from the poor.¹⁸ This same type of belief was held among the poor when cholera first came to Russia.³ Such beliefs that reflect a lack of human trust would tend to deter health efforts if perceived as being perpetrated by the rich. The unfortunate belief that those suffering from AIDS are being punished for their evil behavior is a modern supernatural notion.¹⁵ This notion also could prevent those persons who believed such

notions from following health standards that required human choice and control.

Other barriers to doing good health behavior research consist of limitations in *health behavior research knowledge*.^{4,5} Precursors of health behaviors tend to be presented as either narrow theoretical chunks (good fidelity-poor bandwidth) or as broad empirical “laundry lists” (poor fidelity-good bandwidth). There is a lack of an in-depth understanding of the precursors of health behaviors.¹⁹ There is also a great paucity of knowledge on how to change, or at least maintain behavior change, at least as a practical matter. In modern learning theory, the notion of “free operants” teaches the lesson that one must make new behaviors one is trying to instill the most reinforcing for the longest time to replace a menu of older self-destructive behaviors.²⁰ This is not an easy task.

Even if one was able to develop a program that can produce long-lasting change, such programming may fail to be disseminated. Implementation of health programming simply is not a high priority for many implementers. They need to be paid for implementing programming and supported by their workplaces for living a healthy life, themselves. More important, many potential implementers may view innovations as “fads” or short-term solutions. Dissemination is an age-old problem, and sometimes solutions to disease problems did not become disseminated for over 100 years (eg, use of several vaccinations³). That is, whether some program is a “fad” or represents a major advance may take a long time to get clarified.

Also, even if health programming is implemented and maintained, in many instances mediation of effects is not clear. In one early 20th century example, there is some question as to whether reduction in prevalence of infectious diseases was due to discoveries of bacteria and viruses or due to a rising standard of living.³ Certainly, habituation to foul odors and failure to keep pets and children from slipping or playing in street gutters played a role. As a more recent example, in tobacco prevention, it is not known whether changes in behavior are due to changes in perceived norms, numerous types of outcome expectancies, memory effects, large social climate changes, or health educator effects.²

Regarding maximizing one’s duration of life as one general goal of health behavior research, life expectancy has been increasing over the last 150 years (slope=approximately .20). However, it also is known that the probability of living past 110 years old is only about 1 over 100 million.²² Longevity declines rapidly at some point. If the maximum death age can be increased, some people may still ponder if it should, or whether the world would become too overcrowded. Mortality data, of course, sometimes are difficult to interpret and can be publicized in less than optimal ways. For example, in recent debate, what does it really mean if 25,000 or 50,000 more people per year die of smoking rather than obesity? Does this determine how much money should be spent on “fighting” smoking?²³

What might be said for the health behavior researcher’s character? It sometimes is assumed that the health behavior researcher’s character is or should be one that portrays good health. The health behavior researcher, after all, is an agent of an organization that studies and promotes good health. If a health behavior researcher reveals suffering from a form of ill health, he or she might be viewed as a hypocrite. Of course, one may be able to justify the malady or show one is healthy in coping with the malady, thereby successfully dissuading potential distain of others. Still, with the admission of a malady, one may be monitored for disease management. “I hope you are well” is a common greeting that one may hear from others, particularly if one suffers from a malady with a psychological component.

With certain disorders, such as the addictions, a health behavior researcher might give his or her power away, losing credibility by revealing past exploits. Yet, among those in recovery, revealing one’s past purportedly may assist others to recover from addictive problems, through processes of identification, empathy, and knowledge of how to surmount difficulties. Conversely, or additionally, one might become a poster child (ie, a category), to represent sufferers of the malady. Among health behavior researchers, one might become a poster child for an organization that either portrays its liberality or tolerance or its relevance to contend with the malady. If one discloses a malady, others may expect the person to do research

about that malady. For example, one with a drug addiction history might be expected to research the addictions. However, that person may be viewed as a more credible researcher of drug cessation than drug prevention because, as others may argue, if one is a good prevention researcher, one should have never become a victim.

Expectations created for the researcher who admits to suffering ill health, of course, might sensitize the individual and assist him or her with in bettering the plight of others who suffer effects of stereotyping due to their disorder. For example, a researcher may be more aware than others that some “jargon” may negatively affect the sufferer. This was well voiced by Sontag,¹⁵ a cancer sufferer who recently died from cancer and wrote that a cancer patient may not like being referred to as a “victim.”

Summary

As one examines 4 of the assumptions on which the field of health behavior research is built, the foundations may appear to have many pockets of weakness. Definitions of health may vary, values placed on health may be fraught with a variety of practical and ideological concerns, and there are numerous gaps in knowledge and perhaps leaps of faith in applying knowledge. Arguably, though, the field still is in its infancy, and insufficient information is at the helm of any new inquiry. Also, progress is being made. Health behavior research translation efforts have led to many empirically supported programs in a variety of health areas that show maintenance of effects.²⁴ Mediators of health behavioral change are being manipulated. Exactly what these mediators of change are has been somewhat of a mystery in the field,² but research on mediation is ongoing.

Dialectic Theory and Health Promotion: Conscientiousness

Elsewhere it is argued that there are 3 cognitive ingredients that promote taking self-destructive actions. First, informational distortions lead to retention of “facts” that are, in fact, not accurate (eg, marijuana improves one’s driving safety). Second, inaccurate facts may lead to the perception of belief-behavior congruence (eg, one believes in safe driving and that marijuana use can help). Finally, situ-

ational distortions may operate to maintain a sense of certainty regarding one’s information-belief-behavioral processing of one’s world (eg, bad people prosecute one for using marijuana and driving; one must go around these people to be able to drive more safely). The combination of these factors leads to one’s channeling of one’s behavior in a self-destructive direction.²⁵ What might channel self-destructive action that could counteract such a chain of rather covert cognitive events?

Conscientiousness may be one such curative cognitive structure. “Conscientiousness” refers to a propensity to follow socially prescribed norms of behavior (ie, social responsibility), to be goal directed (ie, industriousness), and to delay gratification (ie, self-constraint). In a review of a database of studies resulting from an article search consisting of conscientiousness-related terms and health-related behavior, Bogg and Roberts²⁶ located 194 studies that were quantitatively examined. Conscientiousness-related traits were negatively related to all risky health-related behaviors uncovered (eg, drug use, unhealthy eating, risky driving, risky sex, violence) and positively related to all beneficial health-related behaviors (eg, job attainment, exercise, healthy eating). Although Bogg and Roberts did not provide an overall theoretical explanation of why these relations should exist, it does appear to be the case that social responsibility beliefs, a desire to contribute to the workforce and to others, and a willingness to sacrifice immediate pleasure are consistently related to healthy and unhealthy behavior. Although Bogg and Roberts used a trait type of conceptualization, conscientiousness could be considered as a cognitive structure that is modifiable. This construct likely is modified among persons who participate in recovery and health protective/activism programs.²⁷

Tesh³ might place conscientiousness as an element of a dialectic model of health behavior change. This perspective suggests that whatever makes life better in general (eg, decent sanitation, adequate nutrition, modern medical care, regular leisure) also makes it healthier. This perspective also recognizes an interaction between the individual and the social groups and larger social contexts within which the individual functions. An emphasis is made on people living in

a context where they have power to change their environment and then operate by the rules they set up. This context would permit people to take charge of their lives and be more likely to take self-constructive action. Conscientiousness would support the importance of the value of cooperation in taking charge for a constructive environment.

Final Thoughts

The fact that certain health behaviors, such as rest, relaxation, eating fruits and vegetables, and exercise, have been considered healthy for thousands of years suggests at least some validity to a nomothetic and invariant notion of health practices.² If one agrees that there are reasonably clear health behaviors to pursue, then some importance may be placed on social or individual motivation to pursue these health behaviors, using research as a guide. According to Rokeach²⁸ human values differentiate persons in terms of pursuit of health. For example, a value on wisdom not pleasure differentiates those who pursue healthy eating or not.²⁹ There is an old saying in the recovery movement: when the light is green, go, when the light is red--learn. Perhaps, a willingness to be restrained by oneself or others long enough to learn the best ways to live out situations is what helps people to be the most healthy. In addition, through such learning, they may begin to demonstrate a willingness to nurture others; that is, to create a better lifestyle for all. ■

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