

Hurdles to Health Behavior: External, Internal, or Somewhere In Between?

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Abstract: While the social gradient of health has been widely discussed for decades, less attention has been given to quantifying the influence of health behaviors, which include both illness and preventative behaviors exhibited by patients. However, evidence seems to suggest that along with differences in health outcomes between social classes, there are also significant gaps in health behaviors, offering a potential mechanism for the growing health gradient. This begs an even greater question: why do we see these differences in health behaviors? While external barriers, such as healthcare costs and access to health services, appear to play a significant role, I explore the potential existence of internal barriers, or attitudes and beliefs that deter certain actions. Furthermore, Triandis' theory of behavior illustrates how internal factors, such as attitudes and self-concept, work in tandem with one's facilitating conditions to influence behavior. Based on John Rawls's conception of Fair Equality of Opportunity, we ought to treat internal and external barriers as morally analogous. Furthermore, we have a moral responsibility to address these barriers – whether they are external, internal, or complexly both – to more effectively promote our shared ideal of equal opportunity. Finally, while I acknowledge that external and internal barriers are inextricable, I show how my distinction is useful in both policy implications as well as enhancing our understanding of health behavior as a whole.

Introduction

After practicing in internal medicine and infectious disease for forty-three years, Doctor Livingston tells me he has “seen it all.” His clinic is located in downtown Bessemer, Alabama, an area with one of the highest crime rates in the nation, reported in 2015 to have a crime index of 966 compared to the nation’s average of 280 (“Crime Rate”). Additionally, nearly 33% of Bessemer residents were found to be in poverty in 2014, compared to less than 20% of all Alabama residents (“Percent Living”). Needless to say, Dr. Livingston sees a diverse set of patients and problems – everything from gunshot wounds to a typical case of bronchitis.

However, regardless of the patient or circumstance, Dr. Livingston often runs into the same difficulties: having the patients show up in a timely manner (if they show up at all) and offering them advice they’ll fully adhere to. Patient after patient, Dr. Livingston will typically recommend a dental check-up, eye exam, pneumonia vaccine, mammogram, or colonoscopy. And patient after patient, he hears different versions of the same response: “No thanks,” “I don’t need it,” or a blatant “I don’t believe in that,” followed by little explanation. Sometimes Dr. Livingston will push, giving his two cents and describing the advantages of preventative care. But other times he drops it, explaining to me that this patient has already skipped four appointments and there is only so much that he, as their physician, can do.

While no-shows are common across all patient populations, they disproportionately occur among lower income groups. In fact, data from a 2007 International Health Policy Survey revealed that in the United States, 37% of low-income earners skip a doctor’s visit compared to only 15% of high-income earners (Wendt et al.). This helps to explain why Dr. Livingston, working in an outpatient clinic in the middle of a highly deprived community, struggles to see his patients on a regular basis and in a timely manner.

As I spent my days shadowing Dr. Livingston, many of the patients' reasons for avoiding preventative care were valid; however, some of their responses left me with questions. For example, a colonoscopy can have a fairly hefty co-pay and requires the patient to have a driver to and from the hospital (Meyer; Schimpff, 25, and 2013). A single parent with limited time and money might not see the benefits of adhering to this optional cancer screening. However, what about the flu shot – something that is free of charge and offered at a local Wal-Mart or CVS? It seems less reasonable to avoid this type of preventative care when it is not only convenient, but also highly recommended by physicians. Yet, a 2008 survey conducted on nearly 250,000 participants confirmed that influenza vaccine coverage increased with higher levels of education and household income (Linn, Guralnik, and Patel). Similarly, it has been found that higher income families show better rates of protection than lower income families when provided with free immunizations (Rosenstock, 356). When considering empirical evidence alongside Dr. Livingston's working conditions, this motivates the bigger question of *why*? Why do we continue to see discrepancies in health behaviors based on social class and income? And even more importantly: what, if anything, should we do about it?

Defining Health Behavior

Health behaviors are often divided into two subcategories: “preventative” and “illness” behaviors. The Encyclopedia of Public Health defines “preventative” health behavior as “any activity undertaken by an individual who believes himself to be healthy for the purpose of preventing or detecting illness in an asymptomatic state.” On the other hand, “illness” behaviors “occur in response to specific symptoms” and are aimed at mitigating the effects of an illness (“Preventative Health Behavior”). To put into context, obtaining a cancer screening would be considered preventative health behavior while visiting your physician to inquire about a cough or

rash would be considered illness behavior (Lauver). However, while general health behavior often encompasses both illness and preventative health behaviors, it can also extend to lifestyle behaviors such as smoking, eating nutritiously, and getting enough exercise.

Many definitions of health behavior combine concepts of illness, preventative, and health-enhancing behaviors, identifying “healthy” behavior as any action that promotes optimum wellness, recovery and rehabilitation (Cornally and McCarthy; Aue). In an attempt to further broaden the spectrum of health behaviors, the Handbook of Health Behavior Research defines them as “overt behavioral patterns, actions and habits that relate to health maintenance, health restoration and health improvement” (David S. Gochman / Springer). Under the umbrella of this definition, health behaviors could be considered anything from brushing one’s teeth to receiving a kidney transplant. Therefore, for the purpose of my paper, I have decided to narrow the definition of health behavior to include only illness and preventative health behaviors, which can be quantified through medical service usage, compliance to health recommendations, and self-directed behaviors.

Why Health Behavior Matters

A. Discrepancies in Health Outcomes

Before moving into a detailed discussion on the variations in health behavior, we should touch on the well-supported health gradient, being sure to distinguish between health behavior and health outcomes. For over 150 years, research has confirmed that “an individual’s chances of life and death are patterned according to social class: the more affluent and better educated people are, the longer and healthier their lives” (Danis, Clancy, and Churchill). The famous Whitehall studies, conducted by Michael Marmot, Professor of Epidemiology and Public Health at University College London, exposed a strong correlation between social class and all-cause

mortality among British civil servants. In fact, Marmot’s studies revealed that men in the lowest grade levels of civil service employment had a mortality rate three times higher than those in the highest grade (Marmot, Rose, et al.; Marmot, Stansfeld, et al.). These findings ultimately indicate that one’s social and economic status is directly linked to his or her mortality, introducing the concept of a social gradient in health.

The social gradient in health, henceforth referred to as “SGH,” is now acknowledged as a widespread problem and can be seen both within and between countries. The World Health Organization defines the SGH as a global phenomenon “seen in low, middle and high income countries” in which “the lower an individual’s socioeconomic position, the worse their health” (“WHO | Key Concepts”). To further examine this gradient, a recent study used national data on six different health indicators to assess how health differs based on varying income and education levels (Braveman et al.). As expected, the data exhibits strong gradient patterns, suggesting a direct correlation between economic advantage and health outcomes (Figure 1).

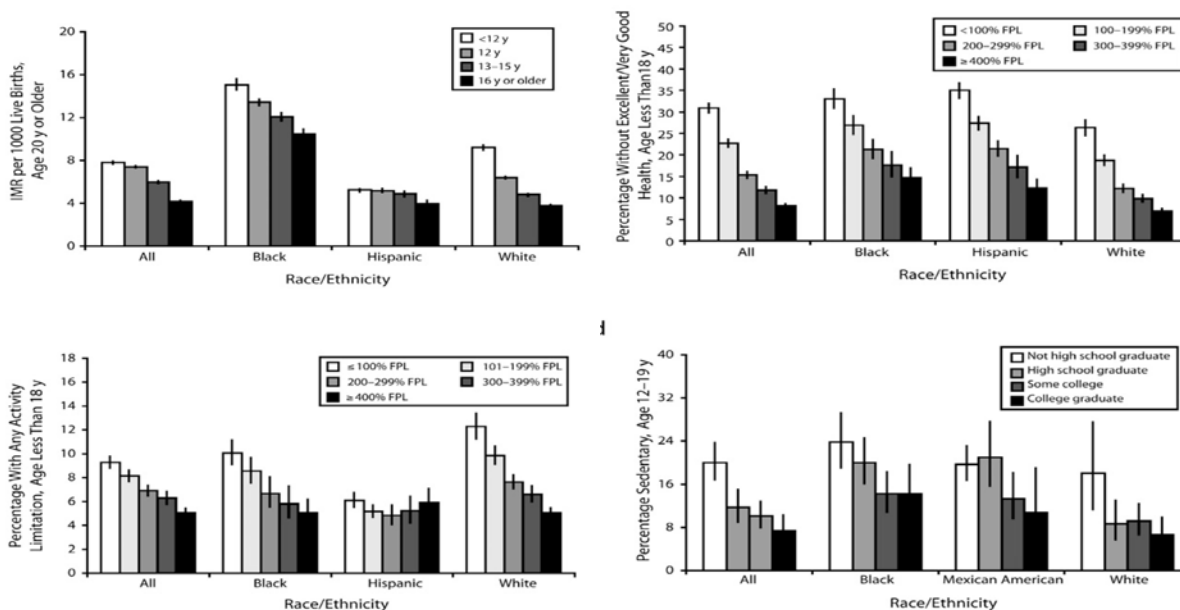


Figure 1. Income and education disparities in adult health by (a) infant mortality rate, (b) percentage without excellent/good health, (c) percentage with any activity limitation, and (d) percentage sedentary (inactive). White columns indicate lowest income and education levels while black columns indicate highest income and education

levels. Figures show that those in the lowest income bracket (white) have the highest infant mortality rate (a), highest reporting of living without “excellent/good health” (b), and highest activity limitations (c,d). Discrepancies between races are less significant and vary from a-c, whereas discrepancies between education level are consistent (Braveman et al.).

Although the existence of a SGH is broadly supported, researchers are still working to identify the central mechanisms at work. Some reasons for this gradient are more discernible than others, including poor living conditions and high costs of healthcare. Others are not as easily detectable, and many researchers continue to ask questions surrounding the relationship between mental and physical well-being, the impacts of stress on one’s health, and how these factors work in tandem to predict health outcomes. While these are complex issues, I am advocating that we re-shift our focus to health behaviors. One potential flaw with this approach is that health behaviors are not always a reliable indicator for health outcomes; even if someone seeks out dental care, he or she may have limited access to quality clinics, inflexible work hours, or simply no dental insurance. However, this should not deter us from exploring how discrepancies in health behaviors may play a significant role in the continuation of the SGH. Therefore, I am first asking the following: if health outcomes appear to correlate with income, will health behaviors exhibit a similar trend?

B. Discrepancies in Health Behaviors

Although social scientists have recently begun to delve into the concept of health behavior, its definition continues to expand along with society’s conception of what constitutes “health.” Health behavior has been classically defined by its three categories of preventative, illness, and sick-role behaviors; however, “the lines between these three categories have blurred somewhat over time” as more categories arise “that warrant [their own] specific definitions” (“Behavior, Health-Related”). That being said, health behavior is especially difficult to quantify, and while many are interested in the causes and effects of varying health behaviors, there is

currently little research that reliably answers these questions. However, by assessing a compilation of studies that focus on different areas of health behavior, we can likely gage a clearer idea of how poverty affects one's actions and to what degree health behavior mimics health outcomes.

Using cross-sectional data from the 2003 National Survey of Children's Health, a generalized study revealed a gradient in illness behaviors based on socioeconomic status (SES), which is conceptualized as the social standing or class of an individual or group ("Education and Socioeconomic Status Factsheet"). In this analysis, researchers Kandyce Larson and Neal Halfon looked to the survey results of over 100,000 participants and examined a set of 32 health indicators. When looking specifically at healthcare access and utilization, children with lower family incomes were much less likely to use medical, well-child, or oral health services when compared to those from more affluent backgrounds. Even more concerning, data revealed that it was two and a half times more likely for low-income children to have unmet needs and no regular provider (Larson and Halfon). These findings suggest noticeable differences in illness behaviors between social classes, indicating that lower income families and children seek out regular care less frequently, regardless of their symptomatic state. While these findings suggest that SES, or social class, can be a predictor of illness behavior in younger populations, we must also look to other forms of health behavior among a broader sample of participants.

In addition to Larson and Halfon's investigation, sociologists David M. Cutler and Adriana Lleras-Muney recently compiled information from six national data sets to explore the effects of education on health behaviors. While education is not a perfect indicator of income, data from the U.S. Census Bureau confirms that higher education levels are equivocated to higher salaries (Strauss); therefore, this study offers insight into the potential relationship

between income and health behavior. With sample sizes up to 23,000, Cutler and Lleras-Muney found that “better educated people engage in more preventative and risk control behavior,” including mammograms, pap smears, colorectal screening, and flu shots. Even more interestingly, controlling for the receipt of health insurance did not significantly affect their findings, signifying that health behavior is influenced by more than just costs (Cutler and Lleras-Muney). Therefore, this study suggests a strong correlation between higher education, which often translates to higher income, and increased engagement in preventative health behaviors, offering one viable mechanism for the SGH.

A third study placed a similar focus on preventative health behaviors, looking at the effects of SES on sigmoidoscopy (FS) screening for colorectal cancer, the second leading cause of death from cancer in the United States. The study focused on three different indicators predicting health behaviors: the likelihood that respondents returned a screening questionnaire, the probability they accepted the offer for a free screening, and whether or not they chose to attend the screening (McCaffery et al.). With an original sample of over 25,000 participants, the final data revealed that people of higher deprivation were less likely to return the screening interest questionnaire. Furthermore, “if they returned [the questionnaire], they were less likely to express interest in having the test, and even if they had expressed interest, they were less likely to attend” (McCaffery et al.). These findings imply that low SES is not only associated with a decreased expression of preventative behavior, but also a decreased interest in engaging in preventative behavior. Moreover, considering the screening was offered free of charge, this study further implies that cost is not the only deterrent of preventative health behavior.

External Versus Internal Barriers to Health Behavior

When hypothesizing reasons for the differences we see in health behaviors, many of us immediately consider financial and environmental barriers such as healthcare costs, lack of transportation, or limited access to quality care. Furthermore, an extensive amount of research has focused on the idea of social determinants of health, which the World Health Organization defines as “conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life” (“WHO | Social Determinants of Health”). These social determinants include economic stability, neighborhood and physical environment, the health care system, education, food, and social networks; in other words, social determinants encompass both physical and social barriers to health (04, Heiman, and Artiga). Based on a meta-analysis of almost fifty studies, researchers determined that about a third of the total deaths in the year 2000 could be attributed to social factors (Galea et al.). However, more recent studies extend beyond this finding, specifying five key domains that influence one’s health: genetics, social circumstances, environmental exposures, behavioral patterns, and health care (Figure 2). Surprisingly, among these domains, behavioral patterns are hypothesized to have the greatest influence on the likelihood of premature death (Schroeder; McGinnis, Williams-Russo, and Knickman). In fact, Steven Schroeder, Professor of Health and Health Care at the University of California, San Francisco (UCSF), makes the bold claim that “even if the entire U.S. population had access to excellent medical care – which it does not – only a small fraction of these deaths could be prevented. The single greatest opportunity to improve health and reduce premature deaths lies in personal behavior.” While we cannot assume that these determinants are weighed equally across all populations and individuals, it is still necessary to acknowledge different driving forces behind health behaviors.

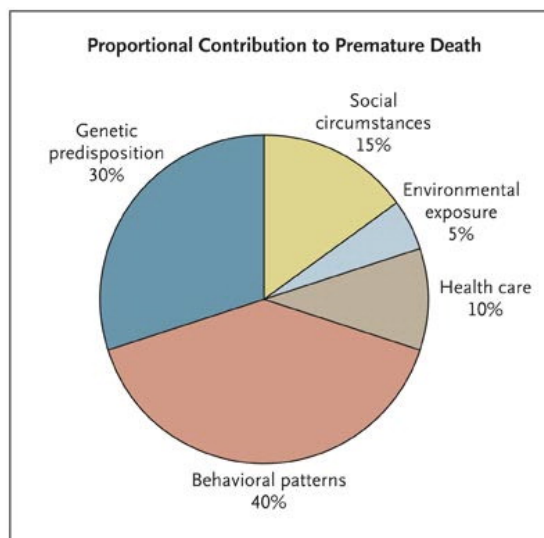


Figure 2. Determinants of health and their proportional contribution to premature death (Schroeder; McGinnis, Williams-Russo, and Knickman).

To more clearly identify the reasons for varying health behaviors, I will distinguish between “internal” and “external” barriers to health. While there is a discrepancy in the health field of how to discuss these barriers to action, the categorization of “internal” and “external” is not remarkably new. In fact, it has been discussed in the context of career development by Psychology Professor Peter A. Creed and his colleagues, who identified internal barriers as things “such as a lack of confidence or low motivation,” while external barriers might include “lack of access to education and poverty” (Bartrum, Creed, and Patton). Furthermore, *Bridging the Gap*, a health inequalities learning resource, has distinguished between “internal barriers [that] can be psychological, emotional and/or perceptual in nature” and “external factors that affect access to and experiences of services” (“Internal Barriers”).

In addition to the phrases internal and external, many professionals have also categorized these barriers as “personal” and “environmental.” For example, Nancy Borkowski, Professor in the Department of Health Services Administration at the University of Alabama at Birmingham,

discusses these barriers with regard to communication in health care, identifying environmental barriers as obstacles such as competition for time and social hierarchies. Personal barriers, on the other hand, might include frame of reference, values, and prejudices (Borkowski). In addition to Borkowski's analysis, a study led by Abby C. King, Professor of Health Research and Policy, focused on the environmental and personal factors associated with physical inactivity. In this analysis, King et al. acknowledged environmental barriers to be one's "surrounding environment, availability of appropriate programs, and cost issues" whereas personal barriers included feelings of self-consciousness and discouragement among many others (King et al.). Therefore, while there remains some discrepancy in terminology (i.e., personal/environmental versus internal/external barriers), the distinction between these barriers is not novel. In an attempt to focus more specifically on limitations to health behavior, I will now introduce modified definitions of "external" and "internal" barriers.

For my purposes, external barriers can be considered as outside forces that influence one's health decisions; this includes anything from hospital bills to peer influence. Internal barriers, on the other hand, are attitudes or values that lead one to engage in seemingly irrational behaviors. To give an example, if someone only has five dollars to spend at the store for the entire day and chooses to buy a pack of Lay's potato chips rather than something more sustaining, this may indicate the presence of an internal barrier. I want to clarify that I am not equivocating internal barriers to poor decision-making; instead, these barriers reflect peoples' varying beliefs that are often shaped by external conditions. Furthermore, I do not believe that internal and external barriers are easily extricable. In fact, I acknowledge that internal barriers are oftentimes – if not always – shaped by external barriers and conditional factors. However, my goal in distinguishing between the two sets of obstacles is to put more emphasis on the

potential significance of internal barriers, which have received less attention from scholars and scientists alike. In other words, if we were to hypothetically remove all external barriers from the equation, offering free access to health care, unlimited transportation, and positive social networks among many other things, would we still see discrepancies in health behavior? And if so, why?

A. Evidence for External Barriers

The first and foremost external barrier that comes to mind is that of cost – if someone can't afford health insurance or copayments (copays), how can we expect them to regularly engage in health-seeking and preventative behaviors? Although we cannot assume that the entire uninsured population is economically deprived, this is often the case; in fact, studies within the past year reveal that nearly half of uninsured people cite the high cost of insurance as their reason for not having coverage. Additionally, it is estimated that over eight out of ten uninsured individuals are from low or moderate-income families, meaning their income falls below four hundred percent of the poverty line (29 and 2016). Therefore, because insurance status is often a predictor of income level, it is necessary to look to the effects of coverage on health behaviors.

One of the more widely recognized social experiments was the Oregon Health Insurance Experiment of 2008, which was a controlled study that expanded Medicaid coverage based on a lottery system (“The Oregon Health Insurance Experiment”). Two years after the lottery experiment, American economist Katherine Baicker and her colleagues obtained quantitative data from adults who were either chosen or not chosen by the lottery system. Surprisingly, Baicker et al. found that within the first two years of receiving free coverage, the adults on Medicaid did not exhibit any improvements in measured health outcomes such as blood pressure, cholesterol, and hemoglobin levels. However, they did notice a significant increase in the use of

health services, a heightened rate of diabetes detection and management, lower levels of depression, and decreased reporting of financial strain (Baicker et al.). Taken together, this evidence suggests that while an expansion in Medicaid coverage did not show drastic effects in health outcomes after two years, there did appear to be a shift in health behaviors. Not only does this confirm that there is a distinction between health outcomes and health behaviors, but it also indicates that the high cost of insurance limits peoples' illness and preventative behaviors.

Similar to the Oregon Health Insurance Experiment, we can look to tangible effects of the Affordable Care Act (ACA) of 2010 in an effort to evaluate how external barriers influence health behaviors. An analysis of the Gallup-Healthways Well-Being Indexes from 2012 to 2015 provided data on over 500,000 participants and included the following self-reported measures: "being uninsured, not having a personal physician, whether it is 'easy to get' medications, difficulties affording needed medical care [...], overall health status, and percentage of days in the past month in which activities were limited by poor health" (Sommers et al.). These measures allowed researchers to quantify the effects of external barriers by assessing peoples' access to medical services as well as their ability to pay for these services. Looking to the survey data, Benjamin Sommers, an American physician and health economist, and his colleagues first compared adults falling below 138% of the poverty level in Medicaid expansion states to those in nonexpansion states. Not surprisingly, the results revealed "low-income adults in states that expanded Medicaid reported significant gains in insurance coverage and access compared with adults in states that did not expand Medicaid" (Sommers et al.). Through a longitudinal analysis, Sommers et al. found that the ACA's first two open enrollment periods (2013-2015), when compared to pre-ACA data, displayed significantly improved trends in self-reported coverage, access to primary care and medications, affordability, and overall health (Sommers et al.).

Therefore, in comparing Medicaid expansion and nonexpansion states while also considering longitudinal data, Sommers and his fellow researchers were able to confirm ACA's positive effects on both the affordability and accessibility of medical services. The improvements seen under the enactment of the ACA further suggest that external barriers play a role in peoples' frequency and ability to access medical assistance.

Moving beyond insurance coverage, we can also assess the effects of cost-sharing (i.e., premiums, deductibles, co-insurance, and copays) on health behavior, evaluating how increasing out-of-pocket costs influences illness and preventative behavior among low income groups. Leighton Ku, a Senior Fellow at the Center on Budget and Policy Priorities, discusses the consequences of cost-sharing in Medicaid, specifically on lower-income households. Ku cites a survey where more than half of the low-income participants "reported that they had been unable to get their prescriptions at least once in the last six months because of copayments of \$3 for brand name drugs or \$1 for generic drugs," suggesting how even small costs can be limiting (Ku). Additionally, the RAND Health Insurance Experiment revealed that copayments led to a much larger reduction in the use of medical services among low-income populations compared to higher income families (Newhouse and Group). In fact, cost-sharing not only led to a decrease in "inappropriate or unnecessary" medical care, but also in "appropriate or needed" care, suggesting that increasing costs may have consequential effects on one's health. Therefore, by identifying cost-sharing as an external barrier, these studies seem to suggest that external obstacles can directly influence health behaviors, which in turn may affect health outcomes.

Looking to the effects of insurance coverage and cost-sharing on the use of medical and preventative services, it seems reasonable to conclude that external barriers play a limiting role in one's health behaviors. While the previously mentioned studies do not take into account every

possible external barrier (i.e., transportation, inflexible work hours), they still effectively demonstrate how cost and accessibility influence health behavior. Unfortunately, it is unrealistic to eliminate all potential external barriers that may influence health decisions; instead, we must focus on those that hold the most weight. Furthermore, external barriers vary between individuals and communities – while someone who is unemployed might be more limited by costs but have plenty of free time, a working mother might be able to afford copays but cannot find enough time to visit her physician. Keeping this in mind, my focus is on the external barriers of cost and accessibility, which appear to significantly affect health behaviors as well as offer the most reliable research-based findings. However, despite the clear evidence that suggests a correlation between external barriers and health behaviors, we must also investigate whether or not internal barriers play a hand in one's health decisions.

B. Evidence for Internal Barriers

Internal barriers, which I define as attitudes or values that prevent ostensibly rational behavior, are not only difficult to identify, but are especially difficult to quantify. One method of measuring internal barriers could be self-reporting; however, self-reporting is often considered too subjective and somewhat unreliable. Therefore, I propose a different approach: by looking to evidence that suggests external barriers do *not* significantly alter health behaviors, we can begin to explore alternative explanations. More simply put, if some studies indicate that lowering costs or increasing accessibility still do not improve health behaviors among the impoverished population, this suggests two possibilities: first, there might be “invisible” external barriers that are being overlooked, such as inflexible work hours or lack of affordable childcare. The second possibility is that internal barriers of some sort are influencing and limiting health behaviors. However, while it is plausible that such internal barriers exist, it is important to keep in mind

how difficult it is to discern between external and internal barriers, especially in trying to predict why people behave in certain ways.

In my previous discussion of external barriers, I emphasized the importance of cost and accessibility; however, one study that sought to mitigate these two barriers still found a gradient in health behaviors, suggesting there are additional factors at play. Jane Wardle, Professor of clinical psychology, and her fellow researchers sent out a bowel cancer screening questionnaire to nearly 11,000 participants in an effort to “compare psychological and cognitive models as explanations for the SES gradient in intention to attend for screening” (Wardle et al.). The cancer screening was publicized identically to all social groups, offered free of charge, at an easily accessible location, and at the time of the participants choosing; in doing this, the researchers hoped to mitigate external barriers including cost, transportation difficulties, and limiting schedules. However, despite their attempts to equalize external barriers, Wardle and her colleagues still saw a gradient among health behaviors. Even when controlling for potential confounding variables (age, gender, work status, perceived health, etc.), the researchers determined that participants in the highest SES group were 2.6 times more likely to express interest in the cancer screening than those among the lowest SES group (Wardle et al.). Moreover, in looking to responses on participants’ beliefs and expectations, Wardle et al. found a linear trend in which high SES participants’ “perceived benefits of screening were higher, while perceived barriers, fear, and fatalism were lower” (Wardle et al.). In other words, higher SES groups express greater levels of motivation along with lower levels of fear when it comes to preventative care, suggesting that health perceptions and expectations may differ between social classes. While beliefs do not translate perfectly to behavior, this study helps to illustrate how low and high income populations differ in their opinions of health services, even when external

barriers are minimized. This seems to suggest that regardless of how successful we might be in equalizing costs and access to health care, a discrepancy in attitudes surrounding health services may still exist.

Moving beyond differences in peoples' beliefs and expectations of health services, we can look to health behaviors in other countries with more equally accessible and affordable forms of health care. One example is Canada, where "insurance coverage is uniform and universal and requires virtually no patient-cost sharing" (Katz, Zemencuk, and Hofer). However, regardless of Canada's socialized health insurance plans, research indicates that there are still significant disparities in mammography screening across social class. Moreover, there appears to be no significant difference in screening rates between U.S. and Canada, suggesting that universal access to health care along with the elimination of cost-sharing will not necessarily provoke patients to seek out preventative care (Katz, Zemencuk, and Hofer). While equalizing the costs of health insurance does not account for all external barriers, it can still be considered a main driver of behavior. Therefore, the similar health behavior gradient seen between American and Canadian populations is an indicator that citizens' health behaviors are not solely based on costs, but instead may be attributable to differences in perceptions and expectations of the medical system.

A second means of comparison, the Netherlands, more closely resembles the U. S. healthcare system by requiring citizens to buy private health insurance while offering subsidies to those with lower incomes. However, unlike the similarities seen between U.S. and Canada, there are some striking differences between U.S. and Dutch patient behaviors, further indicating that costs are not the only predictor of behavior. For example, in the Netherlands, "the poorer the child, the more likely they will get frequent outpatient care" (Guo; Figure 3). Additionally, while

the richest children in the U.S. visit the dentist nearly twice a year (compared to the poorest who go barely once a year), all kids in the Netherlands visit the dentist an average of twice a year (Guo). Therefore, this begs the question: why do such discrepancies exist between countries with similar health care models and costs? Even though the Netherlands health-care system corresponds to the U.S. system, we do not see as severe of a health behavior gradient. This seems to imply that mitigating healthcare costs alone will not fully eliminate the problem at hand; therefore, we ought to continue exploring potential evidence for the existence of internal barriers that will help us better shape policy recommendations for the future.

Annual Doctor Contacts By Children And Adolescents (Ages 0-19) In The United States (2012) And The Netherlands (2010-12), By Income Quintile

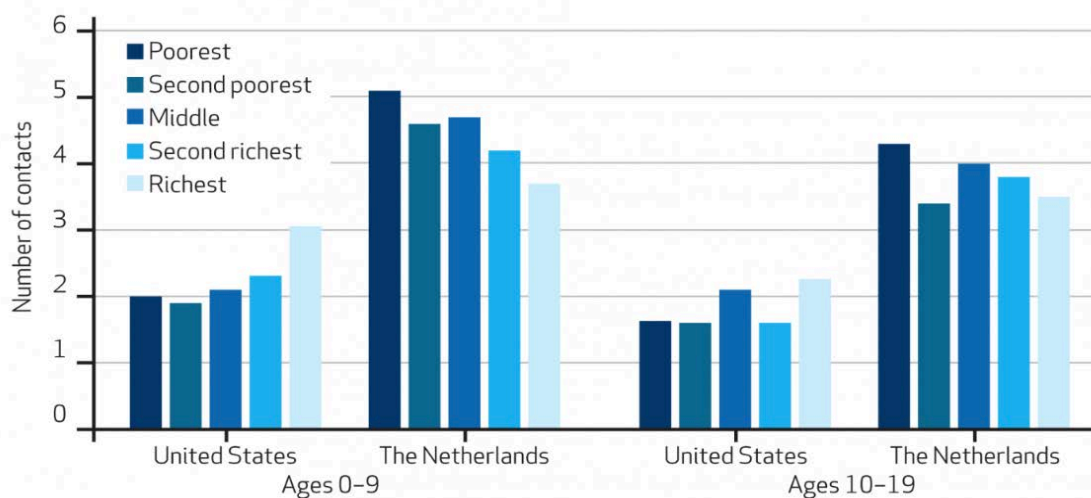


Figure 3. Based on data from the U.S. Medical Expenditure Panel Survey (2012) and the Netherlands Health Interview Survey (Guo).

While these studies offer limited information regarding the existence of internal barriers, they provide an interesting contrast to previously mentioned experiments that highlighted cost and accessibility as key components to predicting health behaviors. Before moving forward, it is important to remind ourselves that internal barriers are not easily extrapolated from external

barriers. Furthermore, many studies have revealed the significance of external barriers in one's decision-making process, showing how decreasing costs and increasing accessibility help to improve health behaviors among the impoverished population. However, there seems to be more to the story than simply the limitations of cost and accessibility. And while these findings may be explained by "invisible" external barriers that have been overlooked, they may also be an indication of internal barriers. In an attempt to continue exploring the potential existence of internal barriers, I will now delve in to previously published literature that illustrates how living in poverty might affect one's perceptions, decision-making abilities, and attitudes.

Why Internal Barriers Might Differ Between Social Classes

In addition to looking at empirical studies and comparing health systems between countries, it is helpful to analyze internal barriers through a sociological lens, exploring why and how peoples' beliefs might differ based on their social and economic standing. Rather than discussing psychological barriers rooted in biology, such as untreated depression, I aim to explore how poverty itself may lead to differences in attitudes and behaviors. In other words, I am investigating how external circumstances shape peoples' priorities and perceptions of the world around them. In doing this, it is essential to keep in mind the unavoidable interconnectedness of external and internal barriers; while I am drawing a distinction between the two, I am not claiming they are completely separate. Instead, I am asking that if external barriers were to be removed or mitigated, would internal barriers still deter certain health behaviors? Therefore, it is important to look to how poverty shapes one's beliefs and attitudes, and how these beliefs and attitudes may ultimately lead to engagement in seemingly irrational behaviors.

Melvin L. Kohn, an American sociologist and former president of the American Sociological Association, has conducted a broad array of research on how social class affects one's orientation and values. The overarching thesis of his work is that "social class is significant for human behavior because it embodies systematically-differentiated conditions of life that profoundly affect men's views of social reality" (Kohn). Furthermore, he draws a distinction between self-direction and conformity, claiming that those in higher social classes are typically more self-directed, possessing a greater consciousness of long-term implications associated with their decisions (Kohn and Schooler). When comparing mental orientations between low and high SES groups, Kohn claims, "the essence of higher class position is the expectation that one's decisions and actions can be consequential; the essence of lower class position is the belief that one is at the mercy of forces [...] beyond one's control." To put in simpler terms, Kohn's research seems to indicate that those with more resources and social capital typically have a greater sense of self-orientation, meaning they express the belief that they have power over their own life outcomes. In contrast, poverty has been found to create negative affective states "which in turn may lead to short-sighted and risk-averse decision-making, possibly by limiting attention and favoring habitual behaviors at the expense of goal-directed ones" (Haushofer and Fehr).

Extending beyond self-orientation, we can also look to the effects of poverty on one's self-efficacy, defined as "the judgments that individuals make about their capability to accomplish tasks and succeed in activities" ("Self-Efficacy"). Similar to Kohn's findings on self-orientation, a compilation of studies suggests that poverty significantly lowers one's self-efficacy, in turn lowering their sense of accomplishment and motivation ("It's Not a Lack of Self-Control That Keeps People Poor"; Callander and Schofield; Jurecska et al.). When translated to health behaviors, it is not difficult to imagine that those with low self-efficacy,

lacking confidence and doubting their ability to succeed, will be less likely to engage in illness and preventative behaviors. However, in considering these differences in self-orientation and self-efficacy between social classes, we must ask ourselves why and how they emerge. In other words, in what ways do the external circumstances of poverty shape one's perceptions?

When considering mechanisms by which external circumstances might impact internal processing, we must also take into account how deprivation creates a sense of immediacy, sometimes shifting one's priorities and values. Sendhil Mullainathan, Professor of Economics at Harvard University, worked alongside Eldar Shafir, an American behavioral scientist, to explain how living in scarcity often leads people to make seemingly illogical decisions. A major contention within their work, *Scarcity*, is that those living in deprivation "will generate their own internal scale" based on pressing needs and immediate costs (Mullainathan and Shafir). For example, if someone's tire goes flat and they are already struggling to pay the bills, he or she might opt for a cheap patch rather than investing in a new tire. Even if the individual understands that the patch is a less safe alternative, it might be the case that the extra money is needed for something more pressing, such as rent or groceries. Therefore, although the behavior may seem irrational from an outside standpoint, it is sometimes the most logical decision when considering other confounding factors.

Mullainathan and Shafir emphasize the distinction between short-term and long-term thinking to illustrate how scarcity forces us to focus on immediate problems rather than those looming in the future. They explain how scarcity "yields a tunneling tax and makes us act myopic," blinding us from the consequences we may have to face down the road (Mullainathan and Shafir). When translating this theory unto health behaviors, Mullainathan and Shafir expound, "No one forgets to take painkillers: the pain is a constant reminder. Diseases such as

diabetes, though, are ‘silent’; their consequences are not immediately felt” (Mullainathan and Shafir). In line with Mullainathan and Shafir’s hypothesis, a separate study has shown that increased health-related hassles, most being unique to low-income populations, are associated with an increased likelihood to delay needed care (Jacob et al.). This seems to make intuitive sense – if people are concerned about eating three meals a day or avoiding crime in their neighborhood, they’re much less likely to visit the doctor’s office with a fever or heart burn. This does not mean that those in poverty care less about their health or make poor decisions; instead, their daily experiences of deprivation limit their choices and ultimately shift their priorities. Therefore, in considering how scarcity realigns peoples’ priorities based on their short-term needs, Mullainathan and Shafir further confirm the difficulty in separating internal from external barriers to behavior.

Although it seems reasonable that people living in scarcity will develop different attitudes based on their deprived circumstances, we cannot assume that these attitudes align perfectly with behavior. In other words, if someone does not show up for his doctor’s appointment, it would be naïve to jump to the conclusion that he does not value or prioritize his health, simply because there may be mitigating factors we have not yet considered. Despite these limitations, we should still acknowledge that behaviors oftentimes provide insight into one’s beliefs, and vice versa. As sociologist Kohn explains, although “behavior is almost always responsive to situational and institutional restraints [...], there is always some (and often great) latitude for differential perception of the elements of a given situation, differential evaluation of these elements, differential choice, and differential action” (Kohn). Therefore, while the context of one’s situation can limit or motivate certain behaviors, this does not exclude the significance of personal beliefs. To establish a more legitimate framework for how peoples’ perceptions work in

tandem with their environmental conditions to drive behaviors, we can look to widely acclaimed social models that more clearly elucidate the decision-making process.

Health Behavior Models

Many comparable theoretical models of health behavior have been developed over time in an effort to explain what drives actions and why behaviors tend to differ between populations. While the Health Belief Model and Theory of Planned Behavior have been widely accepted in the past, I will argue that Triandis' theory of behavior is the most effective means of predicting and analyzing health behaviors.

Irwin M. Rosenstock, former Professor of Public Health Administration and Chair of the Department of Health Behavior and Education, developed the Health Belief Model to look at both preventative and illness behaviors. More specifically, the Health Belief Model identifies a few key concepts that help predict peoples' likelihood to prevent or control for an illness, including: susceptibility, severity, benefits and barriers to the behavior, cues to action, and self-efficacy or motivation (Glanz, Rimer, and Viswanath; Figure 4). However, the Health Belief Model does not incorporate the emotional component of behavior, such as mistrust or fear of health services, but instead takes a strictly cognitive approach (Glanz, Rimer, and Viswanath; Lauver). Therefore, before accepting the Health Belief Model as an accurate predictor of illness and preventative behaviors, we must acknowledge its limitations and explore alternative models.

A second widely accepted behavior model is the Theory of Planned Behavior, developed in the early 1990's by Professor of Psychology Icek Ajzen, who aimed to explain how one's intentions predict his or her voluntary behavior. This theory was a revised version of the Theory of Reasoned Action and explored how one's perceived behavioral control, in addition to attitudes and social norms, may work to predict intention and ultimately guide behavior (Ajzen).

However, the Theory of Planned Behavior is dependent upon volitional control and assumes that all individuals have equal command over their behaviors (Glanz, Rimer, and Viswanath).

Consequently, this theory is somewhat limited in its explanation of health behaviors, simply because many people are financially or socially restricted in their ability to exercise complete volition over their actions. Therefore, to more effectively understand health behaviors, we ought to adopt a theory that combines the Health Belief Model and the Theory of Planned Behavior, while also taking into account emotional influences and discrepancies in volitional control.

Triandis' theory of behavior takes a more holistic approach to explaining health behaviors by accounting for affect, or one's direct emotional response, as well as facilitating conditions, or the environmental conditions that allow one to engage in certain behaviors. In addition to affect and conditions, Triandis' theory identifies the following as key factors in decision-making and behavioral processes: perceived consequences, social factors, habits, and physiological arousal (Triandis, "Values, Attitudes, and Interpersonal Behavior"; Triandis, "A Model of Choice in Marketing"). More simply put, one's attitudes, emotional responses, and social conditions are all thought to influence intention, which then works with environmental conditions and personal habits to predict behavior (Figure 6). Triandis' framework will be adopted for our discussion of health behaviors because it incorporates the cognitive element of the Health Behavior Model while also emphasizing the intentional component of the Theory of Planned Behavior. Furthermore, it considers that health behaviors are not solely a reflection of individual preferences, but also of environmental, economic, and personal constraints.

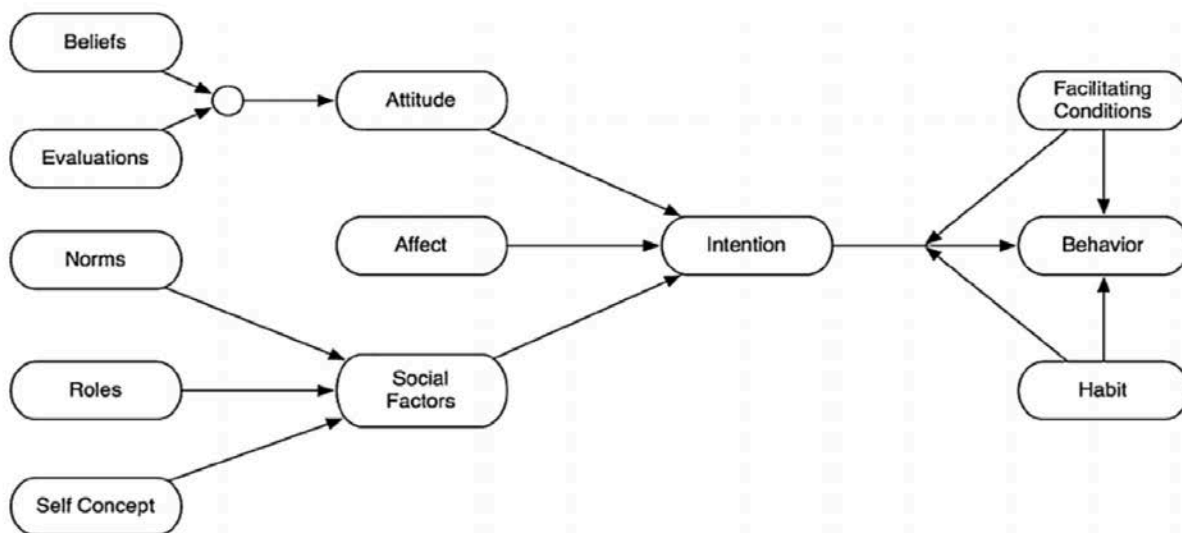


Figure 6. Components of the Triandis' Theory of Interpersonal Behavior ("Summary of the Theory of Interpersonal Behavior. Adapted From... - Figure 1 of 3").

Ethical Obligations

Combining empirical evidence with Triandis' theory of behavior, it seems that while internal and external barriers are not easily distinguished from one another, their effects are even more difficult to isolate. Considering the interconnectedness of internal and external factors, many scholars may argue that internal barriers are irrelevant when it comes to policy implications; why should we aim to fix something that is internally derived? Shouldn't that be the responsibility of the individual? And while internal barriers are considered intangible beliefs that prevent certain behaviors, this does not imply that they exist from the moment we are born. In fact, evidence seems to suggest the opposite – internal barriers appear to be shaped by time, experience, and external circumstances. Both external and internal barriers are essentially beyond one's control; just as people cannot influence the costs of healthcare, they are also not purposefully shaping their perceptions surrounding health services. Therefore, because both sets

of barriers are beyond the control of the individual, they ought to be treated as morally analogous.

Now that we have recognized the influence of external barriers on health behaviors as well as the potential existence of internal barriers, we have to ask ourselves: why should we care? In considering the question at hand, we first must acknowledge the potential causal link between poverty, external and internal restraints on health behavior, and health outcomes. As we have seen, high costs of health care and limited accessibility to medical services act as external barriers to peoples' engagement in health behaviors (Wendt et al.; Rosenstock; Linn, Guralnik, and Patel). Similarly, living in scarcity is associated with the tendency to make short-term decisions, and unfortunately, proximal choices can have distal effects on one's health (Mullainathan and Shafir; Jacob et al.; Haushofer and Fehr). Furthermore, the less people seek out medical care (whether it is illness or preventative care), the more likely they are to have health deficits in the future; therefore, differences in health behaviors between social classes likely contribute to the overall SGH.

In line with this causal chain, we can apply John Rawls's normative framework to examine why we, as a society, should strive to mitigate any barriers – whether they happen to be external, internal, or complexly both – that contribute to an unjust healthcare system. Rawls, an American moral and political philosopher, bases much of his normative argument on the concept of fair equality of opportunity (FEO), which “requires that citizens with the same talents and willingness to use them have the same educational and economic opportunities regardless of whether they were born rich or poor” (Wenar). In other words, your income should not be a determinant of your opportunities; instead, every individual should have equal opportunities to promote what Rawls believes to be fairness.

Philosophers such as Rawls are not the sole advocates of FEO; in fact, citizens, communities, and politicians alike seem to recognize the widespread value of opportunity. In his 2014 speech titled “Expanding Opportunity in America,” current Speaker of the House Paul Ryan exclaimed, “we have an obligation to expand opportunity in America – to deliver real change, real solutions, and real results” (“Expanding Opportunity in America”). This ideal of equal opportunity is shared across many political spheres, shaping policy and incentivizing change. In addition to Paul Ryan’s moving statement, we can look to advocates such as the AEI-Brookings Group on Poverty and Opportunity, composed of thinkers who range in profession and political affiliation. However, despite their diverse credentials, each member of the AEI-Brookings Working Group “share[s] an intense belief that poverty and opportunity are profoundly consequential” to our nation’s future prosperity. Furthermore, they concede that “the concept of ‘opportunity’ draws nearly universal support among Americans [and is] the core concept of the American Dream” (“Opportunity, Responsibility, and Security | Brookings Institution”). When considering the shared significance of opportunity, extending across many political and social sectors, it seems to be a critical piece to maintaining a fair and just society. In an attempt to uphold and promote the common ideal of opportunity, we ought to apply Rawls’s conception of FEO to discrepancies in health behavior.

When looking to discrepancies in health behaviors through a Rawlsian lens, there is an important distinction that must be made: if external or internal barriers disproportionately influence one’s health behaviors, this would be a breach of his or her FEO. However, if one’s health behaviors are an accurate reflection of his or her beliefs and autonomy, we cannot deem the system as “unjust.” For example, if someone does not receive a vaccination because the nearest hospital is an hour away and leaving work early may cause him to lose his job, he is not

able to take full advantage of his opportunities. However, if he chooses to watch the last fifteen minutes of a basketball game instead of making it to the hospital before closing time, he has actively decided to not engage in a certain health behavior. Therefore, while Rawls seeks to equalize capabilities through FEO, he is not advocating that we prioritize beneficence over autonomy. Instead, he is saying that each person should be given equal opportunities – then, it is up to the individual to decide whether or not he or she wants to take advantage of the opportunities presented.

In striving towards Rawls's normative ideal, we ought to shape health policies to best address any external and internal barriers that might undermine one's FEO. Part of Rawls's principle "requires robust measures aimed at mitigating the effects of socioeconomic inequalities and other social contingencies on opportunity," including barriers to health behaviors (Daniels, Kennedy, and Kawachi). Therefore, any external and internal barriers that may deter health behavior – behavior that someone would actively choose to engage in– ought to be minimized as we attempt to pave a path to a more equal, just society. Now, looking through a Rawlsian lens, we ought to extend our discussion to policies that will most effectively mitigate the external and internal barriers that lead to disproportional health behaviors and outcomes.

Policy Implications and Conclusion

Though some preexisting policies seek to address external and internal barriers to health behaviors, their effectiveness lies not in the policies or programs themselves, but in the simultaneity of them. Taking us back to one of my original questions, I asked: if we were to eliminate external barriers from the equation, would we still see discrepancies in health behaviors between social classes? And if so, does this imply the existence of some sort of internal barrier? While it is difficult to identify and quantify internal barriers, scientists and

sociologists alike seem to agree that people in poverty express different beliefs and intentions based on their scarce resources. These beliefs combined with external conditions often translate to behavior, seen through Triandis' theory of behavior. Therefore, to employ policies that effectively target differences in health behaviors, we ought to acknowledge that behaviors are shaped via internal and external mechanisms.

First, in considering policies that address external barriers to health behavior, we should focus on both the affordability and accessibility of health services. In terms of cost, other than the highly controversial proposal for universal access to health care, one step could be reducing cost-sharing and copays. It has been shown that copays, even at very small costs, significantly reduce peoples' use of medical services (Ku, Deschamps, and Hilman). Therefore, when deciding where to invest, policy-makers ought to consider cutting the costs of copays, especially for necessary medications and procedures that patients opt out of due to financial restrictions.

Looking to accessibility, we must consider barriers such as hours of operation, geographic location, long wait times, and acceptance of Medicaid (Sederstrom). Many healthcare experts propose that other highly trained medical professionals, such as physician assistants and nurse practitioners, should begin broadening their practice in order to take some of the burden off of physicians – this would help to decrease wait times and expand quality care into more rural areas (Sederstrom). Another plausible solution would be to extend physician hours; while this does not initially seem ideal, many practices could create partnerships in order to more effectively meet their patients' needs through a collaborative, flexible schedule. Many innovative approaches can help to reduce costs and increase accessibility without considerably burdening taxpayers; however, as we seek to mitigate external barriers that influence health behaviors, we must also keep in mind the potential significance of internal barriers.

When considering how best to mitigate internal barriers, we ought to devise strategies that aim at shifting perceptions, increasing intention, and emphasizing the value of health. Ultimately, some of the more effective ways to make people care about their health is through education and improved physician communication. Many studies confirm that low SES populations have a poorer understanding of illness prevention and healthy behavior (Breitkopf, Pearson, and Breitkopf; Wardle et al.). Additionally, it has been consistently shown that health education can have sustained health benefits, ultimately improving one's attitudes and behaviors (Lorig, Mazonson, and Holman; Bieri et al.; Tones, Robinson, and Tilford). However, we cannot ignore the limitations to health education programs; unfortunately, they are only effective to the extent that knowledge translates unto behavior. Despite this drawback, health education still has the potential to increase awareness, reframe attitudes, and challenge misperceptions. Therefore, through more health education programs in local facilities and schools, the poor population may become more cognizant of their health options as well as the benefits to engaging in illness and preventative health behaviors.

In addition to increased health education, we ought to emphasize the importance of communication between medical staff and patients. According to the Institute for Healthcare Communication, much evidence "indicates that there are strong positive relationships between a healthcare team member's communication skills and a patient's capacity to follow through with medical recommendations, self-manage a chronic medical condition, and adopt preventative health behaviors" ("Impact of Communication in Healthcare | Institute for Healthcare Communication"). Therefore, policies that aim to improve communication between providers and patients, especially in low-income and rural areas, may be beneficial in increasing and

improving health behaviors among the poor by mitigating internal barriers such as mistrust or fear.

Although I have only begun to touch on policy recommendations and proposals aimed at mitigating external and internal barriers to health behavior, this begins to highlight the practical usefulness of my distinction. Many people, one being Dr. Livingston, become distracted in the “how”: How do I help? However, before answering the “how,” it is imperative to address the “what” and the “why.” In other words, first we must ask: *what* is causing discrepancies in health behaviors among social classes? While external barriers such as cost and accessibility seem to be a clear answer, this does not eliminate the possibility of internal barriers. In fact, much evidence supports the idea that internal barriers, or attitudes and beliefs that deter behaviors, play a role in peoples’ health decisions. Next, we ask ourselves: *why* should we care? Looking to Rawls’s conception of fairness, we ought to strive to provide everyone with FEO. With regard to health behavior, this means we ought to mitigate barriers that prevent people from pursuing opportunities such as physician check-ups or cancer screenings. We have now come to the final question: *how* can we practically mitigate these barriers to health behaviors? Having distinguished between internal and external mechanisms, we can more effectively devise policies that target the impoverished population’s barriers to engaging in healthful behaviors. While mitigating costs might appear to be a quick fix, the interventions required to redress internal barriers will be much different. Before taking a step forward and formulating policies that we believe will be successful, we must take a step back and investigate *where* and *how* the problems evolved; that way, we can begin to enact effective, efficient, and meaningful change.

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