Using identity-based motivation to improve the nation's health without breaking the bank

Neil A. Lewis, Jr., & Daphna Oyserman

abstract

For the first time in two decades, overall life expectancy in the United States is in decline. This unsettling increase in mortality is largely due to lifestyle-associated causes. It is in the national interest to address this decline. This article outlines *identity-based motivation* theory (IBM), an evidence-based behavioral science theory that provides insight and a behavioral toolset which together may help lower lifestyle-associated mortality and morbidity rates. A key place to start is the health aspiration-attainment gap: Most people aspire to live healthy lives yet often fail to sufficiently engage in behaviors necessary to achieve or maintain good health. This aspiration-attainment gap is particularly prevalent amongst people of lower socioeconomic status. We offer evidentiary insight into how IBM may be deployed by health-care providers, insurers and policymakers to help ameliorate the health aspiration-attainment gap and improve the health status of various demographic groups.

Core Findings

What is the issue?
Healthcare interventions must address the reduction in overall life expectancy in the US. Research shows that designing behavioral nudges rooted in social and psychological identities is cost-effective and can stimulate individuals to adopt healthier behaviors.

How can you act?
Selected interventions include:
1) Reimbursing medical practitioners for talking about tailored health, and documenting how demographic category information is obtained and will be used
2) Crafting public health messages that create connections between healthy behavior and important social identities (for example, being 'American')

Who should take the lead?
Medical practitioners, public health policymakers, and health insurance providers

The state of our union is unhealthy. The life expectancy of Americans has declined, largely because of diseases associated with unhealthy lifestyle choices.[1–3] The health of the U.S. population is not only worse than it used to be, it is also worse than that of the populations of other developed countries. The United States is the only developed nation to experience a decrease in life expectancy during the 21st century.[1] Compared with the other 36 developed nations, the United States ranks a lowly 26th for expected lifespan.[4] What is killing Americans? Obesity is a problem. Heart disease, diabetes, and stroke-related deaths increased from 2014 to 2015.[5] However obesity is only one part of the story; among White Americans, deaths from suicide, drug poisoning, liver cirrhosis (alcohol), and traffic fatalities have all been increasing since 1998.[1] Deaths from these causes have lowered the life expectancy of white Americans.[1]

Not all Americans are equally at risk; life expectancy among Americans differs dramatically by position in the social hierarchy.[6,7] People at the lower rungs of the hierarchy ladder are dying younger whether the rungs are defined by socioeconomic status (e.g., education, income), race or ethnicity, geographic location, national origin, or the intersections of these categories.[1,6–8] Consider education: since 1998, White Americans with low education levels (high school education or less) have had such large increases in their rates of death from suicide, liver cirrhosis, drug poisoning, and traffic fatalities that their life expectancy overall has declined.[1] Most adult Americans have low education levels so what effects life expectancy in this group influences the country at large.[1] A quarter of Americans without a high school diploma, compared with only three in 100 Americans with a graduate degree, smoke cigarettes.[9] Poverty and race matter as well. People living in poorer communities have higher death rates,[10] and Black males have the highest all-cause death rates in the United States.[3]

What is it about low social position that it is so corrosive to health? One possibility is that it reduces access to health care.[11–13] The Affordable Care Act, which vastly expanded Medicaid coverage, partly addressed the access-to-care issue, especially for working-age men, who were the least likely to be insured and were largely excluded from this benefit program in the past.[14] The importance of access to health care is not to be minimized, as it surely matters. However, access to health care is likely insufficient in and of itself to explain the full extent of health disparities; social position–linked health disparities persist even in countries with national health insurance.[15] Even after controlling for health insurance, people at the bottom of social hierarchies are still more likely than those with higher social position to experience poor health outcomes and live shorter lives.[16–19] Indeed, being at the bottom of the social hierarchy is associated with more health-undermining behaviors (for example, smoking, excessive alcohol consumption, taking illicit drugs) and fewer health-promoting behaviors (for example, keeping a regular schedule, getting enough sleep and exercise, starting preventive treatment, following treatment advice, eating a healthy diet). As we will show, each of these behaviors is identity infused. That is, people's understanding of their identities—who they are and who they might become in modern America—is an underexamined but potentially large source of social-position-linked disparities in health outcomes. We present empirical evidence for this idea, using as our organizing framework identity-based motivation theory, which articulates how the place one occupies in the social hierarchy can shape one's identity and produce health consequences over time.

Take, for example, smoking, which often begins with experimentation in adolescence.[20,21] Longitudinal analyses show that smoking, although clearly an individual action, is clustered, spreading within social networks, with adolescents both choosing friends on the basis of smoking status and being influenced by their friends to take up, refrain from, or quit smoking.[21–23] Because nicotine is addictive, teens are more "successful" at prompting their friends to take up smoking than getting them to quit.[23] Quitting smoking also moves through social networks in adulthood.[24] Currently, smoking is much more likely among the less educated and more stigmatized among the highly educated.[20] It is interesting that the overall smoking rate is lower for Black youth

than for White youth. Pricing may account for this effect, as Black and White teens are equally influenced by their friendships.[22]

Identity-Based Motivation Theory

Mirror, Mirror, on the Wall, Who's the Healthiest/Unhealthiest of Them All?

When you look in the mirror, do you see a healthy eater? A risk-taker? The person you see affects your health behaviors—whether you smoke, drink, or use drugs; what you eat; how often you exercise; and what you teach your children. But at the same time, the person you see in the mirror is not a fixed set of traits: quite the contrary. A simple way to summarize identity-based motivation theory is to say that deceptively small changes in context can change who that person seems to be, want, and care about.

Identity-based motivation theory is a social psychological theory of motivation and goal pursuit that explains when and in which situations people's identities motivate them to take action toward their goals.[25,26] Throughout this article, we use the term *identity* to refer to the traits and characteristics, social relationships, roles, and group memberships that define who a person is or might become, the combination of which defines his/her sense of self.[27] Identity-based motivation theory starts with the assumption that people prefer to act and make sense of situations in identity-congruent ways—ways consistent with what people "like me" do. Yet, at the same time, which particular identity comes to mind and what that identity implies for action and meaning is not fixed but is instead malleable. That is, the influence a salient identity has on which actions feel right depends on features of the immediate situation. The thing of interest here is not that people can change how they regard themselves after putting in sustained and conscious effort but rather that small shifts in context can have surprisingly large effects by changing how people regard themselves.

The ability to see different versions of oneself depending on contextual cues is called dynamic construction and is central to the theory of identity-based motivation. That is, how people view their identity shifts depending on circumstances and environmental cues. People's tendencies to act and understand the world in ways that fit current identities are called *action readiness* and *procedural readiness*, respectively.

Action readiness is being prepared to act in ways consistent with what "I" and "we" (my ingroup) seem to be doing. It feels right to act as "we" act; it feels like a "me" thing to do. As noted, in adolescence, smokers are not only more likely to choose other smokers as friends; they are also more likely to start smoking if their friends smoke.[20–23] Readiness to act in ways that fit an identity that is on one's mind does not fade after adolescence. For example, adults gain significant advantages when they consider themselves dieters rather than just wanting to diet.[28] Sticking to a diet or starting again after lapsing is hard. Self-considered dieters are more likely to stick to or start a lapsed diet compared with people who simply want to diet.

Procedural readiness is being prepared to make sense of situations using the lens of identity. It is a "my" or "our" group mentality. That is, it feels right to see the world as "I" and people like me ("we") see the world. Because of this, in ambiguous situations, when a particular social identity such as *friend*, *dieter*, or *mother* is cued, people use that identity to understand why something might feel easy or difficult to do. Consider a young mother whose pregnancy weight gain lingers after childbirth. She has tried to lose weight and wonders, "Why is dieting difficult for me? Does it mean that my odds of losing the weight are low so I might as well get used to the extra weight, or does the difficulty just underscore how valuable the goal of weight loss is to me?" If most mothers in her community are overweight, she might conclude that her own difficulty is a signal that the odds of losing weight are low for her. That is, just like for the other mothers she sees, weight loss is impossible for her to achieve. But if most mothers in her community are not permanently carrying their pregnancy weight gain after childbirth, she might conclude instead that her difficulty is a signal that the value of losing weight is high for her; it is important and hence worth

the effort. After all, other mothers managed to do it, so she can, too.

The three components of identity-based motivation theory—dynamic construction, action readiness, and procedural readiness—operate in tandem: activating one process activates the others. For example, getting people to act in the moment can produce effects over time if the action they took is then understood to be relevant to identity. Small nudges, like putting the salad first in a buffet, can change action: people are more likely to put salad on their plate when presented with it immediately.[29] Of course, eating the salad in one situation is not enough to change behavior in another situation. Salad eating will only occur when the nudge is repeated, and any impediment is likely to undermine the healthy choice. However, if an identity link is made, then the behavior should be more sustainable, and impediments are likely to be perceived as signals of value. So how might a nudge-induced behavior become linked to identity? This happens if the behavior (eating salad at the buffet) is perceived as a choice ("I chose salad among the various offerings") and one infers from that choice that one has a "healthy eater" identity.[30] Once one considers oneself a healthy eater, then difficulties become signals of the importance of the identity. To clarify how this works, in the next three sections, we provide a detailed outline of each component of identity-based motivation, detail what each component of identity-based motivation implies for health behavior, and how policymakers can use identity-based motivation to reduce health disparities. We end with a summarizing table linking each component of identity-based motivation to a health disparity issue and to policy recommendations targeting health care providers, public health campaigns, and health insurance providers.

The Dynamic Construction of Identity & Implications for Health & Health Policy

People often say that this or that person has not yet found himself. But the self is not something one finds, it is something one creates. —Thomas Szasz

People think of their identities as fixed entities, something that they are. (Hence the common phrases, "That's just not who I am" or "That's just not who we are.") But contrary to this popular belief, as noted by Szasz,[31] identities are neither fixed nor found; identities are created.[32] Indeed, identities can be recreated with each new circumstance.[25,33,34]

For example, a study of middle schoolers published in the journal *Contemporary Educational Psychology* demonstrated that boys can be cued to succeed in school simply by showing them data that men in their state earn more than women do. Research shows that boys across all grades underperform academically compared with girls, whether underperformance is assessed by desire to go to college, grade point average, or enrollment in advanced classes.[35,36] To determine if dynamic construction of gender identity might account for some of this underperformance, researchers randomly assigned students to one of four groups, with each group shown a graph of accurate statewide census information.[35] Groups 1 and 2 served as controls, with gender information stripped from their graphs. Group 1 saw a graph of statewide high school graduation rates and Group 2 saw a graph of average statewide earnings.

Groups 3 and 4 formed the experimental conditions with gender data included in the graphs. Group 3 saw a graph of statewide high school graduation rates for women and men (women had higher graduation rates). Group 4 saw a graph of statewide earnings for women and men (women earned less than men). All students were then asked about their expectations for themselves in the coming year and their strategies to accomplish those expectations. Additionally, each student was tasked with solving a novel math problem.[35]

Unsurprisingly,[36] the boys' responses showed that they were generally less focused on school—they were less likely to describe doing well in school as a next-year expectation, had fewer strategies to improve academically, and underperformed girls on the math task. This finding was consistent among boys who saw graphs depicting census data on income or

"In real-world settings, shifts in what an identity implies for health often occur inadvertently."

education that did not include gender-specific information (Groups 1 and 2) and among boys who saw a graph showing higher high school graduation rates for women (Group 3). Whether or not boys were subtly reminded that education is a "girl" thing, they seemed ready to act that way. Yet the boys in Group 4 who saw the graph showing men earned more than women in the workplace defied this pattern: Group 4 boys primed with "men succeed" information focused just as much on school success and came up with as many strategies to succeed in school and beyond as the girls did. Group 4 boys also performed just as well as the girls did on the math task.[35] This experiment demonstrates that what an identity such as being a boy implies for action depends on the context in which that identity is constructed—in this case, whether school appears to be a "boy" thing to focus on.

Why Does This Matter for Health?
We did not find research directly testing dynamic construction of health-related identities. However, research demonstrates that small shifts in self-perceived identity can change students' understanding of whether healthy choices are congruent with their identity, which, in turn, affects their plans for healthy action. For example, Tarrant and Butler[37] of Keele University conducted two studies. In the first study, British students were randomly assigned to focus on either their British identity or their student identity. When asked about their plans for reducing alcohol and salt intake, students focusing on their British identity were more likely to endorse healthy consumption of salt and alcohol than were those focusing on their student identity. However, the relation of being healthy to the British identity seems dependent on context. In a second study, students were assigned to focus on either their British identity in comparison to an outgroup they considered healthier (Japanese) or their British identity in comparison to an outgroup they considered less healthy (Americans). Students who compared themselves with Japanese were less likely to endorse

healthy plans for salt and alcohol consumption than were students who compared themselves with Americans.

This research focused on comparison between groups as a cue that shapes how national identity is understood in terms of which health actions feel congruent with a particular identity. In health care settings. As detailed next, health care providers can create the cues that shape how a variety of social identities are understood. In real-world settings, shifts in what an identity implies for health often occur inadvertently. For example, health care providers may ask about or focus on national, religious, racial, or ethnic origins; gender; education; and other markers of position, because these help to identify certain health risks.[38,39] However, they may also do so because, like other people, health care providers may subscribe to stereotypes about national, religious, racial, or ethnic origin groups and people on the lower rungs of the socioeconomic ladder. In medical settings, these stereotypes include being unintelligent, unmotivated, and noncompliant with instructions and treatment protocols.[10,40,41] Indeed, those lower in the social hierarchy are more likely to be given simple treatment regimens rather than the most efficacious ones and to report feeling that they have been treated unfairly, disrespected, devalued, and discriminated against when interacting with physicians.[42,43] Such feelings of unfair treatment and discrimination are associated with a lower likelihood of proper follow-up with treatment and lower adherence to physician recommendations. Lack of follow-up and adherence produces a vicious cycle: lower compliance rates may lead health care providers to feel vindicated for their choice not to offer anything more than simple treatment options.[10]

What Can Be Done?
Often health care providers ask questions pertaining to race, ethnicity, family history, or other identity markers without explanation. Health care providers should understand that questions focusing on these identity markers

26th
america's rank for life expectancy out of 36 developed nations

Who smokes?

25% of Americans without high school diplomas
3% of Americans with graduate degrees

8–11
average number of attempts to quit smoking before succeeding

might cue stereotypes and expectations in both themselves and their patients that may, in turn, undermine the quality of the interaction and affect health outcomes. This may be particularly true for historically stigmatized identity markers, including race, sex, and socioeconomic status.[10,40,41,44] When a patient is not told why a health care provider is, for example, asking about race or focusing on gender, she or he may simply assume bias is the reason and become skeptical of the interaction. The provider, noticing the patient's response, may assume that the patient will be noncompliant and devote less effort to treatment, implicitly or explicitly thinking, "Why bother, they are ____ [fill in the blank with the relevant stereotype], so this patient won't listen to me, anyway." This unfortunate cycle can lead to worse health outcomes and increased health care costs associated with noncompliance bred by lack of trust.[40,42] To avert this problem, health care providers should be clear that social category information is elicited to individuate patients, that is, to tailor the search for potential problems and courses of treatment rather than to aggregate or lump patients into an undifferentiated group.[45,46]

For example, consider diabetes. Latinos have a genetic tendency to develop insulin resistance and abdominal obesity.[47] In cardiovascular disease, the sensitivity of biological markers in predicting outcomes differs for Latino and African American patients compared with White and Chinese patients.[48] In each case, providers have to ask about racial, ethnic, and national origins because testing, test interpretation, and treatment should differ on the basis of these factors.

Sometimes important identity markers are ignored, such as education or income. Because lower educational attainment and lower income are associated with a higher rate of death from suicide, smoking, and drug and alcohol complications, health care providers should consider moving beyond questions of racial, ethnic, and national origin and also ask about high school or college graduation status.[1,49] Gender is also a factor in the health care setting. Women, as compared with men, are stereotyped as being more demanding of physician time, more

fragile, and more likely to have psychosomatic complaints not based in disease.[44] Perhaps for these reasons, they are less likely to receive kidney transplants and heart surgery than men are, even though they are actually more likely to comply with treatment.[50]

Compared to moderate income and higher education, low income and education are associated with more experiences of "unfair" treatment.[51] In addition to asking, which as noted is important, explaining why seemingly stereotype-evoking questions are asked and how the answers help care providers tailor treatment can help patients by:

- reducing the odds that a patient becomes concerned about being negatively stereotyped by the caregiver, thus avoiding the negative consequences of those concerns (for example, disengagement and lowered motivation);

- increasing the chances that a patient sees herself or himself as an active partner in care when identity risk and best options for ingroup treatment are outlined in open, honest dialogue between the patient and caregiver;

- increasing the chances that experienced difficulty maintaining healthy behaviors serves as a reminder of identity-congruent values, that is, the importance of these behaviors; and

- raising awareness among providers of their own biases, conscious or not.

If individuating and educating about individuating are helpful for reducing disparities in health outcomes, then insurance billing codes should reflect this. Providers should be reimbursed for talking about tailored health, documenting why demographic category membership information is obtained, and how it will be used. This should not take much time and could reap significant benefits. Continuing medical education (CME) courses might be offered to assist providers in appropriate conveyance methods that are likely to be successful.

Action Readiness & Implications for Health & Health Policy

People prefer to act and make sense of the world in ways that fit the identities that are on their mind. Once an identity comes to mind, actions perceived as appropriate seem to inherently follow. This action readiness is illustrated by the study showing that once boys were led to consider the possibility that men succeed, they not only had more school-focused identities, they also worked harder at the math problem they were then given.[35]

This implies that people will be more likely to pay attention to health-promoting information, adhere to recommended treatments, and reap the benefits of treatments and health messages or prompts if these actions feel congruent with important aspects of their identity. Conversely, if health prompts or treatments do not feel congruent with important aspects of identity, people may ignore the prompts, disregard treatment advice, or become nonadherent.[52] In the same way, if health-undermining behaviors feel congruent with things "people like me do," people are more likely to engage in unhealthy behaviors.[33,34,52]

What Does This Imply for Health?

Health care practitioners frequently assume that providing people with information targeted to their needs will persuade them to adopt healthy behaviors.[53] This assumption requires reconsideration.[54] Research suggests that people are less likely to pay attention to messages that advocate changing what they are currently doing than to messages that advocate staying the course.[54] This makes sense from an identity-based motivation perspective. Being asked to change current behavior implies that what one is doing now is not identity congruent and therefore should feel wrong, whereas the action-readiness component of identity-based motivation implies that whatever one is doing now must be identity congruent, the kind of thing "people like me" do—it is the "right" behavior.[10,18]

Recent experiments illustrate the connection between action readiness and health disparities. For example, guiding Latinos and African

"... messaging differences can lead minorities to disengage from healthy behaviors"

Americans to consider stereotypes about their ingroups as self-defining increased their preference for the unhealthy foods they perceived as being congruent with their cultural norms and decreased their preference for healthy foods that were not culturally normative.[55,56] The influence of identity congruence on health behavior is not, however, limited to food choice. Health conditions themselves can be identity incongruent if they imply membership in a stigmatized (negatively stereotyped) group.[10] Consider the case of HIV in the African-American community. HIV risk is higher among African Americans, substance users, and bisexual or gay individuals.[2] Yet African Americans often fail to pay attention to publicly presented HIV information unless other African Americans are also paying attention to the HIV information. When the latter situation occurs, the negative identity implication is undermined and reframed as health being something "we" attend to.[53,57–59]

What Can Be Done?

Because identity can be used to good effect (for example, information is recalled accurately when it is given in an identity-congruent fashion),[18,60] health policy and public health campaigns can create health messages and interventions that focus on tailored inclusion of ingroups. This can be applied in broader American society as well, such as was done with Michelle Obama's Let's Move campaign, which highlighted exercise and healthy diet as staples for all Americans regardless of their other social category memberships. Indeed, evidence from prior intervention research demonstrates that health messages targeting broader social category frames (for example, American rather than African American) improve outcomes and reduce disparities in engagement with healthy behaviors.[52]

Conversely, messaging differences can lead minorities to disengage from healthy behaviors.[52,55,56] One caveat: campaigns using a tailored

---

inclusion approach must carefully consider which identities come to mind in the context of particular behaviors. This is important because in the context of food choice, for example, highlighting "eating healthy" may backfire because that behavior may not be identity congruent for some groups; healthy can imply boring, tasteless food that people like "me" do not eat.[61–63]

With regard to health policy, the framing of health messaging, disease prevention, and health promotion is important. Consider two examples, in-house annual blood pressure checkups and employer promotion of healthy activity norms. These can be experienced as coercive and identity incongruent or as supportive and identity congruent, depending on how they are presented and understood. For example, without a frame, employees may feel that company leadership is trying to obtain blood pressure information to control their behavior or to protect the company's bottom line rather than caring for workers' personal well-being. In contrast, the same blood pressure checkups take on different meaning if linked to important social identities—if they are framed as "we want you to be around for the long run," blood pressure checkups become part of being a responsible parent and family member. This could create greater buy-in from people who care about their family identities and responsibilities. The same is true for employer promotion of healthy activity norms. Norm development could be fostered by the employer providing wearable technology (for example, Fitbits) to the employees or hosting competitions for the greatest number of minutes of exercise or flights of stairs climbed during the day. People are sensitive to what others seem to be doing, which is why they end up eating doughnuts if that is what is in the break room, so if others are posting their stair count, then taking the stairs may suddenly seem like an "us" thing to do.

In sum, research on action readiness implies that to reduce health disparities, practitioners could take the following steps:

• Design health messages that create connections between health behaviors (for example, balanced diet, exercise) and important social identities (for example, American).

• Normalize engaging in health behaviors as being part of good citizenship.

• Set policies that incentivize these practices.

Procedural Readiness & Implications for Health & Health Policy

The greater the difficulty, the greater the glory. —Marcus Tullius Cicero

When considering a change in health behavior, it's reasonable to question the odds of success. If the behavior change is perceived as highly difficult, then the odds of success are likely seen as low. If the odds are low, one might ask, why try at all?

In contrast, if something seems easy, the perceived odds of a successful behavior change rise. That is, this change is possible for a person like "me." Marketers use this "easy versus difficult" concept often, offering seemingly easy solutions to health problems—easy because they do not require much effort or because they are not particularly costly in other ways. However, solely focusing on experienced ease and difficulty is insufficient, because ease and difficulty can also provide information about value and importance.[64] A modern version of the Cicero quote above is the popular meme, "No pain, no gain." That is, worthwhile goals are rarely easy to attain. It is not that experienced ease or difficulty is more accurately interpreted as odds or as value but rather that which interpretation comes to mind has implications for whether the task feels like a "me" or an "us" thing to do and affects whether people will accomplish the task or make a behavior change.

Empirical evidence supports this intuition. People do think in both ways.[64,65] That is, the same person can interpret difficulty experienced while engaging in a task as implying importance (the goal is something worth fighting for) or impossibility (the goal is not attainable), although not both at the same time. For example, in one study, students were divided into two groups. One group read statements implying that difficulty represents importance. The other group read

statements implying that difficulty represents impossibility. After each statement, students were asked how much they agreed or disagreed with the statements. Then all were immediately given a set of 12 puzzles to complete, each more difficult than the preceding one. Students primed to consider difficulty to imply importance outperformed students primed to consider difficulty to imply impossibility. As the puzzles got harder, the interpretation of difficulty they were guided to consider formed the lens they used to make sense of their experience, influencing their performance. Whether they agreed with the statements they had just read did not matter for their performance. Overall, both groups tended to agree that experienced difficulty implies task importance and tended to not agree that experienced difficulty implies impossibility of success.[65] Another study showed that the positive effect of interpreting difficulty as importance was activated when this interpretation was cued. Lacking that cue, students performed as though they believed that difficulty meant impossibility.[65]

What Does This Imply for Health?

Because experienced difficulty in starting, maintaining, and returning to health regimens after failures is normal, how people interpret their experienced difficulty matters. Experienced difficulty can bolster or undermine engagement, depending on whether such difficulty implies that the regimen is identity congruent and hence important to start, sustain, and return to after failure or identity incongruent and therefore impossible to sustain. The default interpretation of experienced difficulty is often that the odds of success are low and hence success is all but impossible.[66,67] This results in procrastination in starting a healthy behavior or abandonment of goals after initial failures.[68] This also explains, in part, why losing weight and getting fit, quitting smoking, and eating a healthier diet are among the most commonly stated and most commonly broken New Year's resolutions.[69]

Important or Impossible? Thoughts Matter

Interpretation of experienced difficulty matters for health. In one study, researchers at the University of Michigan guided dieters to interpret the experienced difficulty of healthy eating as implying importance or impossibility. They found that dieters guided to interpret experienced difficulty as importance planned to eat less than did those guided to interpret experienced difficulty as impossibility.[67] In addition to researcher nudges such as these, features of people's chronic social contexts also influence their interpretations of experienced difficulty.[70] For example, less education is associated with less belief that pain means gain.[70] Being on a lower rung of the social status hierarchy, whether status is assessed by occupation, education, income, or other group memberships, may increase the chance that a task perceived as difficult is "not worth my time." This can, in turn, lower the likelihood of starting or maintaining a healthy behavior or increase the likelihood of engaging in unhealthy ones.[18]

This association of position in social hierarchy and interpretation of experienced difficulty is particularly problematic because self-control failures are moralized[71] and seen as personal failures.[72] For example, rather than consider genetic underpinnings, people often see obesity as being the result of poor self-control and blatant disregard for one's health.[73] Moralization of self-control failures is particularly likely once people are guided to consider group memberships.[71] The implication for health policy is that once social class or racial or ethnic identities are on one's mind, obesity is more likely to be stigmatized as a personal failing in oneself as well as in others.

What Can Be Done?

A number of policy solutions can combat self-undermining interpretations of experienced difficulty. Because interpreting experienced difficulty as signaling importance (high value) rather than impossibility (low odds of success and hence a hopeless endeavor) often has positive effects, one policy strategy might focus on developing public health campaigns and interventions for health care practitioners to nudge them to highlight to patients that experienced difficulty is a natural concomitant of any important health goal. In fact, they can frame experienced difficulty as a badge of honor, such as in the "no pain, no gain" meme. The U.S. Marine Corps has done this by describing pain experienced during boot camp as the feeling of "weakness leaving the body." This illustration highlights the critical

"health should be framed as a difficult but important journey full of roadblocks (obstacles) and forks in the road (choices), not as a destination attained with ease"

lesson that making progress toward an important goal likely will involve experiencing difficulty. In the domain of health, patients and practitioners should endorse the notion that setbacks and difficulties, far from being moral indictments, are evidence of task importance.

A Practitioner's Guide to Positive Messaging of Hard = Worth

Using this formulation for health care settings requires a multipronged approach—one with documented success.[33,66] Experienced difficulty itself should be framed as implying importance and portrayed as identity congruent. It should also be stressed that difficulties, roadblocks, and failures experienced along the way to a worthy goal are normal and can be overcome.[33,66] Health should be framed as a difficult but important journey full of roadblocks (obstacles) and forks in the road (choices), not as a destination attained with ease.[52,66] Inevitably, everyone will stumble at times on this journey. Stumbles are not failures but opportunities for a fresh start.[74,75]

Additionally, poor habits and health regime failures should not be misinterpreted as implying a lack of moral character. To avoid this misinterpretation, health care providers and patients alike can be educated about the implicit and explicit connection of poor health to morality, in such a way as to reduce the invidious results of the stereotypes. The methods outlined above can be useful tools for reducing the negative health impact of stereotypes and for promoting healthy and health partnership identities. Insurance providers should incentivize not only outcomes (such as weight loss or smoking cessation) but also starts and restarts of healthy behaviors. Failures are steps toward progress. Most people who succeed at adopting a healthy behavior change failed on their first attempt; for example, smokers average between eight and 11 attempts before successfully quitting.[76]

Implications for Policymakers & Health Care Providers

This article highlights the need for health practitioners and policymakers to take the dynamic construction of identity, particularly social identity, into account to understand the policy implications of health disparities that undermine the whole of the nation's health. We used identity-based motivation theory to articulate how dynamic construction of identity works to influence action readiness and procedural readiness. We highlighted challenges to assumptions about the stability of identities and outlined underconsidered sources of failures to attain health goals. We offered policy initiatives that would address problems and advance solutions. Given the drop in American longevity, there is an urgency to take up the low-cost social science recommendations suggested by identity-based motivation theory. Pretending that these problems do not exist will not make them go away.

Table 1, next page, summarizes each element; describes concrete links to health outcomes; and provides policy recommendations for health care providers, public health initiatives, and insurance providers. These are recommendations, not foolproof solutions. Instead, they offer specific, testable intervention strategies and a useful lens through which to consider how policymakers can improve overall U.S. health with relatively small and likely inexpensive solutions. We welcome the possibility of future researchers testing each element in real-world health contexts so that progress can be made both in real-world population health and in the understanding of how contexts shape identities and identities shape health outcomes. As a final note, health disparities linked to one's place in the social hierarchy exist in all countries, and identity-based motivation is not a culture-specific theoretical frame. Hence, although we focused on the American context, we expect that our recommendations are broadly useful.

Table 1. Translating identity-based motivation to policy solutions

Identity-based motivation principle	Connection to health disparities	Example policy recommendation for health care providers	Example policy recommendation for public health initiatives	Example policy recommendation for insurance providers
People experience identity as stable, but it is dynamically constructed in context.	Health care settings cue identity-relevant social category information (for example, stereotypes).	Teach practitioners to explain to patients why category information is being obtained and what this implies for treatment. Make practitioners aware of the potential for their own biases about category information to influence treatment.	Inform the public about how stereotypes can have consequences in two ways. Inform and reframe. For example, use irony so that what was once a threat is now funny, as in the "throw like a girl" advertising campaign.	Include billing codes for provider communications about why category information is obtained and what it implies for treatment. Incentivize patients to participate in activities that decouple stereotypes about their identities from health-undermining activities (in the way smoking cessation is incentivized).
People are motivated to engage in identity-congruent behaviors.	Healthy and risky health behaviors may cue unwanted identities.	Make practitioners aware of the potential for their own biases about category information to influence treatment.	Create public health campaigns that tailor inclusion in the broader category *American*.	Incentivize ingroup-based health (for example, public annual health screenings) to create the belief that being healthy is normative.
People can interpret experienced difficulty starting or sustaining goal engagement as implying importance ("this is for me") or impossibility ("who was I kidding?").	Low position in the social hierarchy increases everyday experiences of difficulty, implying that the odds of success are low.	Educate health care providers about implicit and explicit connections between poor health and morality so that poor health is not seen as an indicator of lack of moral character.	Design health messages that normalize the experience of difficulty and highlight its value as a signal of importance.	Incentivize not only outcomes (for example, smoking cessation) but also starts and restarts, explaining that these are a normal part of goal attainment.

author affiliation

Lewis, Department of Psychology, Institute for Social Research, Research Center for Group Dynamics, University of Michigan; Oyserman, Departments of Psychology, Education, and Communication and Dornsife Center for the Mind and Society, University of Southern California. Corresponding author e-mail: oyserman@usc.edu

references

1. Case, A., & Deaton, A. (2015). Rising morbidity and mortality in midlife among White non-Hispanic Americans in the 21st century. *Proceedings of the National Academy of Sciences, USA, 112,* 15078–15083.

2. USA Life Expectancy. (2013). *USA causes of death by age and gender* [Table]. Retrieved from http://www.worldlifeexpectancy.com/usa-cause-of-death-by-age-and-gender

3. Xu, J., Murphy, S. L., Kochanek, K. D., & Arias, E. (2016). *Mortality in the United States, 2015* (NCHS Data Brief No. 267). Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

4. Organisation for Economic Cooperation and Development. (2013). *Health at a glance 2013: OECD indicators.* Retrieved from http://dx.doi.org/10.1787/health_glance-2013-en

5. Bernstein, L. (2016, December 8). U.S. life expectancy declines for the first time since 1993. *Washington Post.* Retrieved from https://www.washingtonpost.com

6. USA Life Expectancy. (2009). *Life expectancy county map* [Interactive map]. Retrieved from http://www.worldlifeexpectancy.com/usa/life-expectancy-by-county

7. Institute for Health Metrics and Evaluation. (2015). *US health map* [Interactive map]. Retrieved from http://vizhub.healthdata.org/us-health-map/

8. Center for Disease Control and Prevention. (2011). Eliminating health disparities in chronic disease. Retrieved from http://www.cdc.gov/program/performance/fy2000plan/2000xvchronic.htm

9. Center for Disease Control and Prevention. (2016). Current cigarette smoking among adults in the United States. Retrieved from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/

10. Oyserman, D., & Fisher, O. (in press). Identity-based motivation, stigma and health disparities. In B. Major, J. F. Dovidio, & B. G. Link (Eds.), *Oxford handbook of discrimination and health.* New York, NY: Oxford University Press.

11. Cooper, L. A., Hill, M. N., & Powe, N. R. (2002). Designing and evaluating interventions to eliminate racial and ethnic disparities in health care. *Journal of General Internal Medicine, 17,* 477–486.

12. University of California at San Francisco–Stanford University Evidence-Based Practice Center. (2001). *Making health care safer: A critical analysis of patient safety practices* (AHRQ Publication 01-EO58). Retrieved from https://archive.ahrq.gov/clinic/ptsafety/pdf/ptsafety.pdf

13. Ward, E., Jemal, A., Cokkinides, V., Singh, G. K., Cardinez, C., Ghafor, A., & Thun, M. (2004). Cancer disparities by race/ethnicity and socioeconomic status. *CA: A Cancer Journal for Clinicians, 54,* 78–93.

14. Furman, J., & Fiedler, M. (2015, September 22). New data show slow health care cost growth is continuing [Blog post]. Retrieved from https://obamawhitehouse.archives.gov/blog/2015/09/22/new-data-show-slow-health-care-cost-growth-continuing

15. Mackenbach, J. P., Stirbu, I., Roskam, A. J., Schaap, M. M., Menvielle, G., Leinsalu, M., & Kunst, A. E. (2008). Socioeconomic inequalities in health in 22 European countries. *New England Journal of Medicine, 358,* 2468–2481.

16. Adler, N. E., & Rehkopf, D. H. (2008). U.S. disparities in health: Descriptions, causes, and mechanisms. *Annual Review of Public Health, 29,* 235–252.

17. Hatzenbuehler, M. L., Phelan, J. C., & Link, B. G. (2013). Stigma as a fundamental cause of population health inequalities. *American Journal of Public Health, 103,* 813–821.

18. Oyserman, D., Smith, G. C., & Elmore, K. (2014). Identity-based motivation: Implications for health and health disparities. *Journal of Social Issues, 70,* 206–225.

19. Williams, D. R., & Jackson, P. (2005). Social sources of racial disparities in health. *Health Affairs, 24,* 325–334.

20. Ho, J. Y., & Fenelon, A. (2015). The contribution of smoking to educational gradients in US life expectancy. *Journal of Health and Social Behavior, 56,* 307–322.

21. Mercken, L., Snijders, T. A. B., Steglich, C., Vartiainen, E., & de Vries, H. (2010). Dynamics of adolescent friendship networks and smoking behavior. *Social Networks, 32,* 72–81. doi:10.1016/j.socnet.2009.02.005

22. Gilleskie, D. B., & Zhang, Y. S. (2010). *Friendship formation and smoking initiation among teens.* Retrieved from http://www.unc.edu/~dgill/links/courses/Econ850/papers/GilleskieZhang-restat.pdf

23. Haas, S. A., & Schaefer, D. R. (2014). With a little help from my friends? Asymmetrical social influence on adolescent smoking initiation and cessation. *Journal of Health and Social Behavior, 55,* 126–143.

24. Christakis, N. A., & Fowler, J. H. (2008). The collective dynamics of smoking in a large social network. *New England Journal of Medicine, 358,* 2249–2258.

25. Oyserman, D. (2007). Social identity and self-regulation. In A. Kruglanski & T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (2nd ed., pp. 432–453). New York, NY: Guilford Press.

26. Oyserman, D. (2009). Identity-based motivation and consumer behavior. *Journal of Consumer Psychology, 19,* 276–279.

27. Oyserman, D., Elmore, K., & Smith, G. (2012). Self, self-concept, and identity. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (2nd ed., pp. 69–104). New York, NY: Guilford Press.

28. Kendzierski, D., & Whitaker, D. J. (1997). The role of self-schema in linking intentions with behavior. *Personality and Social Psychology Bulletin, 23,* 139–147.

29. Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness.* New Haven, CT: Yale University Press.

30. Bem, D. J. (1972). Self-perception theory. *Advances in Experimental Social Psychology, 6,* 1–62.

31. Szasz, T. (1973). *Ideology and insanity.* London, England: Calder Boyers.

32. Quoidbach, J., Gilbert, D. T., & Wilson, T. D. (2013, January 4). The end of history illusion. *Science, 339,* 96–98.

33. Oyserman, D. (2015). *Pathways to success through identity-based motivation.* New York, NY: Oxford University Press.

34. Oyserman, D. (2015). Identity-based motivation. In R. Scott & S. Kosslyn (Eds.), *Emerging trends in the behavioral and social sciences: An interdisciplinary, searchable, and linkable resource.* doi:10.1002/9781118900772.etrds0171

35. Elmore, K., & Oyserman, D. (2012). If 'we' can succeed, 'I' can too: Identity-based motivation and gender in the classroom. *Contemporary Educational Psychology, 37,* 176–185.

36. Fortin, N. M., Oreopoulos, P., & Phipps, S. (2015). Leaving boys behind: Gender disparities in high academic achievement. *Journal of Human Resources, 50,* 549–579.

37. Tarrant, M., & Butler, K. (2011). Effects of self-categorization on orientation

towards health. *British Journal of Social Psychology, 50,* 121–139.

38. Langreth, R., & Waldholz, M. (1999). New era of personalized medicine targeting drugs for each unique genetic profile. *The Oncologist, 4,* 426–427.

39. Napolitano, M. A., & Marcus, B. H. (2002). Targeting and tailoring physical activity information using print and information technologies. *Exercise and Sport Sciences Reviews, 30,* 122–128.

40. Burgess, D. J., Warren, J., Phelan, S., Dovidio, J., & Van Ryn, M. (2010). Stereotype threat and health disparities: What medical educators and future physicians need to know. *Journal of General Internal Medicine, 25,* 169–177.

41. Lewis, N. A., Jr., & Sekaquaptewa, D. (2016). Beyond test performance: A broader view of stereotype threat. *Current Opinion in Psychology, 11,* 40–43.

42. Penner, L., Dovido, J. F., & Albrecht, T. (in press). Patient stigma, medical interactions, and healthcare disparities: A selective review. In B. Major, J. F. Dovidio, & B. G. Link (Eds.), *Oxford handbook of discrimination, stigma and health.* New York, NY: Oxford University Press.

43. Penner, L. A., Gaertner, S., Dovidio, J. F., Hagiwara, N., Porcerelli, J., Markova, T., & Albrecht, T. L. (2013). A social psychological approach to improving the outcomes of racially discordant medical interactions. *Journal of General Internal Medicine, 28,* 1143–1149.

44. Bernstein, B., & Kane, R. (1981). Physicians' attitudes toward female patients. *Medical Care, 19,* 600–608.

45. Mayer, K. H., Bradford, J. B., Makadon, H. J., Stall, R., Goldhammer, H., & Landers, S. (2008). Sexual and gender minority health: What we know and what needs to be done. *American Journal of Public Health, 98,* 989–995.

46. Stone, J., Moskowtiz, G., & Zescott, C. (2016). Testing a brief active learning workshop for reducing active bias among medical students. In L. Rivera & I. Blair (Chairs), *Stigma and ethnic-racial health disparities: New directions in understanding social cognitive mechanisms.* Symposium conducted at the meeting of the Society for Personality and Social Psychology, San Diego, CA.

47. Caballero, A. E. (2007). Type 2 diabetes in the Hispanic or Latino population: Challenges and opportunities. *Current Opinion in Endocrinology, Diabetes and Obesity, 14,* 151–157.

48. Robinson-Cohen, C., Hoofnagle, A. N., Ix, J. H., Sachs, M. C., Tracy, R. P., Siscovick, D. S., . . . De Boer, I. H. (2013). Racial differences in the association of serum 25-hydroxyvitamin D concentration with coronary heart disease events. *JAMA, 310,* 179–188.

49. Martikainen, P., Mäkelä, P., Peltonen, R., & Myrskylä, M. (2014). Income differences in life expectancy: The changing contribution of harmful consumption of alcohol and smoking. *Epidemiology, 25,* 182–190.

50. Jindal, R. M., Ryan, J. J., Sajjad, I., Murthy, M. H., & Baines, L. S. (2005). Kidney transplantation and gender disparity. *American Journal of Nephrology, 25,* 474–483.

51. Williams, D. R., John, D. A., Oyserman, D., Sonnega, J., Mohammed, S. A., & Jackson, J. S. (2012). Research on discrimination and health: an exploratory study of unresolved conceptual and measurement issues. *American Journal of Public Health, 102*(5), 975-978.

52. Oyserman, D., Fryberg, S., & Yoder, N. (2007). Identity-based motivation and health. *Journal of Personality and Social Psychology, 93,* 1011–1027.

53. Derricks, V., & Earl, A. (2016). *Too close for comfort: The impact of information targeting on attention and interpersonal trust.* Manuscript submitted for publication.

54. Earl, A., & Nisson, C. (2015). Applications of selective exposure and attention to information for understanding health and health disparities. In R. Scott & S. Kosslyn (Eds.), *Emerging trends in the social and behavioral sciences: An interdisciplinary, searchable, and linkable resource.* doi:10.1002/9781118900772.etrds0013

55. Rivera, L. M. (2016). Ethnic-racial stigma can shape physical health: The role of self-stereotyping in food preferences and obesity. In L. Rivera & I. Blair (Chairs), *Stigma and ethnic-racial health disparities: New directions in understanding social cognitive mechanisms.* Symposium conducted at the meeting of the Society for Personality and Social Psychology, San Diego, CA.

56. Rivera, L. M., & Paredez, S. M. (2014). Stereotypes can "get under the skin": Testing a self-stereotyping and psychological resource model of overweight and obesity. *Journal of Social Issues, 70,* 226–240.

57. Earl, A., Crause, C., Vaid, A., & Albarracín, D. (2015). Disparities in attention to HIV-prevention information. *AIDS Care, 28,* 79–86.

58. Earl, A., Nisson, C. A., & Albarracín, D. (2015). Stigma cues increase self-conscious emotions and decrease likelihood of attention to information about preventing stigmatized health issues. *Acta De Investigación Psicológica, 5,* 1860–1871.

59. Lewis, N. A., Jr., Kougias, D. G., & Earl, A. (2017). *African American patients' attention to health information is influenced by in-group peers in health clinics.* Manuscript submitted for publication.

60. Symons, C. S., & Johnson, B. T. (1997). The self-reference effect in memory: A meta-analysis. *Psychological Bulletin, 121,* 371–394.

61. Gomez, P., & Torelli, C. J. (2015). It's not just numbers: Cultural identities influence how nutrition information influences the valuation of foods. *Journal of Consumer Psychology, 25,* 404–415.

62. Nisson, C., Gearhardt, A., Lewis, N. A., Jr., & Earl, A. (2017). *Appetitive, not healthiness, ratings predict food choice.* Manuscript submitted for publication.

63. Williams, J. D., Crockett, D., Harrison, R. L., & Thomas, K. D. (2012). The role of food culture and marketing activity in health disparities. *Preventive Medicine, 55,* 382–386.

64. Fisher, O., & Oyserman, D. (2017). *Interpretation of experienced ease and difficulty as motivational constructs.* Manuscript submitted for publication.

65. Oyserman, D., Novin, S., Smith, G. C., Elmore, K., & Nurra, C. (2017). *From difficulty to importance: Interpretation of difficulty matters for identity, motivation and performances.* Manuscript submitted for publication.

66. Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology, 91,* 188–204.

67. Lewis, N. A., Jr., & Earl, A. (2017). *Seeing more and eating less: Effects of information granularity on the perception and regulation of food consumption.* Manuscript submitted for publication.

68. Sherwood, N. E., & Jeffrey, R. W. (2000). The behavioral determinants of exercise: Implications for physical activity interventions. *Annual Review of Nutrition, 20,* 21–44.

69. Norcross, J. C., Mrykalo, M. S., & Blagys, M. D. (2002). Auld lang syne: Success predictors, change processes, and self-reported outcomes of New Year's resolvers and nonresolvers. *Journal of Clinical Psychology, 58,* 397–405.

70. Aelenei, C., Lewis, N. A., Jr., & Oyserman, D. (2017). No pain, no gain? Social demographic correlates and identity consequences of interpreting experienced difficulty as importance. *Contemporary Educational Psychology, 48*, 43–55. doi:10.1016/j.cedpsych.2016.08.004

71. Mooijman, M., Meindl, P., Oyserman, D., Dehghani, M., Monterosso, J., Doris, J. M., & Graham, J. (2017). *Resisting temptation for the good of the group: Binding moral values and the moralization of self-control.* Manuscript submitted for publication.

72. Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry, 7,* 1–15.

73. Meindl, P., Johnson, K. M., & Graham, J. (2016). The immoral assumption effect: Moralization drives negative trait attributions. *Personality and Social Psychology Bulletin, 42,* 540–553.

74. Schultz, A., Price, L., & Coulter, R. (2015). Can a "fresh start" help consumers achieve their goals? In K. Diehl & C. Yoon (Eds.), *Advances in consumer research* (Vol. 43, pp. 191–196). Duluth, MN: Association for Consumer Research.

75. Schultz, A., Price, L., & Coulter, R. (2014, April). Embracing a "fresh start": How consumers engage to change their lives. In M. Jacob (Ed.), *23rd annual Robert Mittelstaedt Doctoral Symposium proceedings* (pp. 221–246). Retrieved from https://cba.unl.edu/academic-programs/departments/marketing/about/robert-mittelstaedt-doctoral-symposium/docs/2014_SymposiumProceedings.pdf

76. WorkSHIFTS. (2011). *Nicotine dependence, relapse and quitting smoking* [Fact sheet]. Retrieved from http://publichealthlawcenter.org/sites/default/files/Nicotine%20Dependence,%20Relapse%20and%20Quitting%20Smoking.pdf