
Several aspects of social psychological science shed light on how unexamined racial/ethnic biases contribute to health care disparities. Biases are complex but systematic, differing by racial/ethnic group and not limited to love–hate polarities. Group images on the universal social cognitive dimensions of competence and warmth determine the content of each group’s overall stereotype, distinct emotional prejudices (pity, envy, disgust, pride), and discriminatory tendencies. These biases are often unconscious and occur despite the best intentions.

Such ambivalent and automatic biases can influence medical decisions and interactions, systematically producing discrimination in health care and ultimately disparities in health. Understanding how these processes may contribute to bias in health care can help guide interventions to address racial and ethnic disparities in health. (Am J Public Health, 2012; 102:945–952. doi:10.2105/AJPH.2011.300601)

IN THE UNITED STATES, BLACKS, Latinos, and American Indians report and have more health problems than do Whites.1 Minorities also suffer much higher mortality rates than do Whites for many conditions. The mortality rate is 50% higher for Blacks than for Whites for strokes, prostate cancer, and cervical cancer.2 Moreover, the gap in mortality rates between Blacks and Whites for several illnesses (heart disease, female breast cancer, and diabetes) has significantly widened in recent years.3

Explanations for group health disparities often focus on structural factors, such as differences in socioeconomic status and access to health care.4 Although these and other factors contribute to health disparities, bias among health care providers also exerts an independent influence.5 In addition, patients’ responses to bias (e.g., mistrust6) or patients’ own biases may inhibit them from seeking medical care or reducing adherence to physicians’ recommendations.7 Biases can operate in unexamined but systematic ways—even among people committed by professional and personal values to helping others—to adversely affect medical decision-making, clinical interactions, and the responsiveness of patients.

Recent theoretical developments concerning the complex and subtle nature of racial and ethnic bias offer insights into current disparities in health care.8–10 Overall, racial/ethnic minorities receive poorer quality health care than do Whites in the United States,5 but disparities in health care are manifested in various ways. For example, Black patients are less likely than White patients to be recommended for surgery for oral cancers,11 and Latinos and Chinese women are less likely than are White women to receive adjuvant hormonal therapy, which decreases the risk for recurrence of breast cancer.12 Racial and ethnic minority patients are also more likely than are White patients to be recommended for and to undergo unnecessary surgeries.13,14 In addition, for some conditions (e.g., prostate cancer for Asians and coronary heart disease for Latinos) minorities fare better than Whites.2

Psychologists have traditionally focused on processes common to bias toward various groups, but emerging trends emphasize important distinctions. In particular, the content of stereotypes differs systematically across groups, and consequently people’s emotional prejudices and behavioral responses vary across social groups.15 Moreover, prejudice and stereotypes do not have to be consciously endorsed to produce discrimination; people often respond automatically—frequently without awareness—to others’ race or ethnicity, activating stereotypical beliefs, emotional prejudices, and discriminatory tendencies (Figure 1).

These developments in social psychology have implications for understanding health care disparities and combating bias in health care.
that camouflage in specific ways into behavior generally and into the context of health care. The expectations and experiences of patients also influence the effectiveness of medical encounters.

**THE MULTIDIMENSIONAL NATURE OF BIAS**

Biases come in distinct types that camouflage their detection and their effects. Biases are not uniformly negative or positive, but often mixed and ambivalent.

Whenever anyone first encounters another person, 2 adaptive questions arise. First, does this person intend to cooperate or not? If the other is cooperative, then the person seems warm; if resistant, then the other is cold. Second, the perceivers needs to decide whether the other can enact those good or ill intentions. If the other is high status, people infer competence; otherwise they do not. Extensive evidence shows that these 2 dimensions—generally representing warmth and competence—centrally determine how people respond to individuals and groups.

The dimensions of perceived warmth and competence are continuous. How people respond to individuals and groups thus reflects gradations along both dimensions. The Stereotype Content Model (SCM) maps groups that initial respondents report most spontaneously. Later respondent ratings then situate the groups on the warmth and competence dimensions. Table 1 represents a simplified 2 x 2 cognitive space, identifying groups that consistently fall into different quadrants. For illustration, we list representative groups within each quadrant, but we note that empirically, groups vary continuously along the 2 dimensions even within each quadrant, and thus stereotypical reactions may be similar but not entirely identical. Additional dimensions also acknowledge considerable variability in reactions to individual members within a group. For example, Blacks who are darker skinned or who have more typically African facial features experience greater bias, as do Asians and Latinos with stronger accents.

SCM’s mental mapping affects even people who do not individually endorse these beliefs, because it represents where different groups stand in the larger cultural context. Thus, both health care providers and patients are potentially influenced by these stereotypes. Although they are trained to be rational rather than emotional, health care providers, particularly when they are under time pressure and have other demands on their cognitive resources, are likely subject to the same biases that exist among the general population.

### TABLE 1—Stereotype Content Model Quadrants Illustrating Implicit Biases and Discrimination Arising From Group Stereotypes

<table>
<thead>
<tr>
<th>Stereotype Contents</th>
<th>Low Competence/Status</th>
<th>High Competence/Status</th>
<th>Type of Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>High warmth/cooperation</td>
<td>Irish immigrants, Italian immigrants, older people, disabled people, effeminate gay men, housewives (pity, sympathy)</td>
<td>Middle-class Whites, Christians, heterosexuals, Canadian immigrants, third-generation immigrants, closeted gay men (pride, admiration)</td>
<td>Active help/protect</td>
</tr>
<tr>
<td>Low warmth/cooperation</td>
<td>Poor Blacks, undocumented immigrants, Latinos, poor Whites, homeless people, drug addicts, rough-trade gay men (disgust, contempt)</td>
<td>Black professionals, Asian immigrants, Jewish Americans, outsider entrepreneurs, lesbians, professional women, gay male professionals (envy, jealousy)</td>
<td>Active harm/attack</td>
</tr>
</tbody>
</table>

Note. Row (warmth) and column (competence) headers indicate the stereotype content reported for societal groups listed. Perceived cooperation predicts warmth, and perceived status predicts competence. Placement of groups derived from cluster analyses of surveys of how adults view groups in society. Emotions in parentheses are most commonly reported as directed toward those groups. Behavioral tendencies directed toward each quadrant appear at the end of each row and column, creating mixed behavior in the bottom right and top left quadrants. Source. Fiske et al., Cuddy et al., Clausell and Fiske, Harris and Fiske, and Russell and Fiske.
Stereotypes, Emotional Prejudices, Discrimination

Representative surveys, responses from convenience samples, laboratory experiments, neuroimaging data, and cross-cultural comparisons reveal basic principles of intergroup reactions as a function of perceived warmth and competence for distinct social groups. Of course, individuals have multiple identities and may belong to various combinations of these groups. Indeed, many of the groups represented in Table 1 possess subgroup or intersectional identities (e.g., poor Blacks and professional Blacks). When people have multiple social identities or encounter others who can be classified in multiple ways, they respond to the category (broad or intersectional) that is most salient in those circumstances. Understanding how groups are perceived in terms of warmth and competence can illuminate a broad range of reactions.

Stereotypically high-warmth, low-competence out-groups. In SCM research, Irish and Italian immigrants, older people, and people with either mental or physical disabilities are stereotyped as high on warmth but low on competence. These groups are viewed as low status but well meaning in their own inferential way. People report pity and sympathy toward these groups. These reactions are not completely benign, however. Paternalistic emotions, such as pity, feel subjectively benign but disrespect their target. Pity elicits both passive neglect and social isolation, simultaneously with active caregiving and help. This paradoxical combination may appear in institutionalized settings, such as extended care units within hospitals or some nursing homes, where inhabitants may receive complete health care but remain socially isolated.

Stereotypically high-warmth, low-competence out-groups. In SCM research, another ambivalent combination is groups seen as competent but cold: Black professionals, Asian immigrants, Jewish Americans, professional women, and gay professionals. These groups are acknowledged to be high status and successful, but they are viewed as potentially exploitative and untrustworthy. They elicit envy and jealousy. In addition, people respond to the misfortunes of these groups with schadenfreude, pleasure at the suffering of others, which also predicts harm. Specifically, when witnessing the misfortunes of members of these groups, people show activation of neural reward centers and display just barely detectable smiles (measured electromyographically from their zygomaticus [smile] muscles). People respond to these high-status but unsympathetic outsiders with passive help (going along) but active harm (backlash). That is, people will engage in obligatory contact as needed, but when conditions permit enacting their resentment, they may harm envied group members. Examples include individual sabotage in the workplace and group violence under political breakdown. In health care, potential indicators might include less active intervention or unnecessary invasive technological procedures.

Stereotypically low-warmth, low-competence out-groups. In SCM studies, poor Blacks, undocumented immigrants, Latinos, and poor Whites are seen as low in both warmth and competence Groups perceived as low warmth, low competence elicit more contempt and disgust than do other groups. These are particularly dehumanizing emotions, and neuroimaging data on responses to other groups in this quadrant (homeless people and drug addicts) fit the pattern of disgusted, dehumanizing responses.

Emotions, in turn, predict behavior. The negative emotions of disgust and contempt predict a vicious combination of discriminatory behavior: both passive harm (neglect, demean) and active harm (attack, fight). Clearly, most people do not actually attack people stereotyped as low warmth, low competence, but passive disregard is reflected in participants’ reports of actively avoiding such persons. All these groups become, at a minimum, invisible and at worst, harmed with impunity.

In health care research, indicators of contemptuous prejudices could appear in inferior treatment, passive neglect, and even unnecessarily active-aggressive last-ditch treatments (e.g., limb amputations in patients with diabetes). Health-related policies have been proposed that exclude undocumented immigrants, Latinos, and poor Whites, who can be classiﬁed in multiple ways, respond to the category (broad or intersectional) that is most salient in those circumstances. Understanding how groups are perceived in terms of warmth and competence can illuminate a broad range of reactions. Stereotypically low-warmth, low-competence out-groups. In SCM research, Irish and Italian immigrants, older people, and people with either mental or physical disabilities are stereotyped as high on warmth but low on competence. These groups are viewed as low status but well meaning in their own inferential way. People report pity and sympathy toward these groups. These reactions are not completely benign, however. Paternalistic emotions, such as pity, feel subjectively benign but disrespect their target. Pity elicits both passive neglect and social isolation, simultaneously with active caregiving and help. This paradoxical combination may appear in institutionalized settings, such as extended care units within hospitals or some nursing homes, where inhabitants may receive complete health care but remain socially isolated.

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Health Care Implications of Distinct Biases

We are not aware of research that has applied SCM directly to understanding patterns of racial and ethnic disparities in health care. Nevertheless, knowing the principles of the model may enhance understanding of bias in health care and suggest directions for research.

The model offers specific predictions about the types of biases in health care that members of different groups might experience. We hypothesize, for example, that compared with high-warmth, high-competence groups (e.g., Whites),

- Stereotypically high-warmth, low-competence groups (e.g., people with disabilities) are overrecommended for institutionalized care and receive low levels of emotional support,
- Stereotypically low-warmth, high-competence groups (e.g., Asians) are more likely to receive unnecessary surgical procedures or invasive technological procedures (e.g., defibrillators);
- Stereotypically low-warmth, low-competence groups (e.g., undocumented immigrants, homeless people) receive less thorough care for nonemergency conditions but more...
aggressive surgical procedures for acute conditions.

**EXPLICIT AND IMPLICIT BIASES**

Traditionally, stereotypes and prejudice have been conceptualized as explicit responses—beliefs and attitudes people know they hold and can control deliberately and strategically. By contrast to these explicit processes, implicit prejudices and stereotypes involve unintentional activation, often outside personal awareness. Implicit biases are most commonly measured with response–latency techniques, but are also assessed with neuroimaging or psychophysiological reactions. Implicit biases reflect not only general evaluative (good–bad) associations with a group but also associations with competence and warmth, and with specific stereotypical characteristics.

**Explicit Bias**

Explicit bias still exists and is frequently expressed directly. Research on medical decision-making shows that physicians recommend more advanced and potentially more effective medical procedures (coronary bypass surgery) for White than for Black patients, and this disparity occurs because physicians assume that Black patients are less educated and less active.

However, explicit biases are becoming much less common and are less prevalent among Whites with more education and higher socioeconomic status. Members of the medical community frequently assert that prejudice and stereotyping are rare in practice. Even when physicians acknowledge that patients may be treated unfairly because of their race/ethnicity generally, they report that they do not discriminate in the care they personally provide.

**Implicit Bias**

By contrast to fading overt racial/ethnic biases, implicit biases persist. These biases occur across educational and socioeconomic levels because they represent overlearned cultural associations with a strong affective basis that are difficult to completely overwrite with more recent experiences or acquired values. Implicit and explicit biases, which are only weakly related, often independently predict discriminatory actions.

Most Whites currently disavow racial/ethnic prejudice and stereotypes and inhibit blatant discrimination. However, they often subtly express their implicit biases, for instance, by discriminating against Blacks when the guidelines for making a decision are not well specified. Racial/ethnic disparities in medical treatment also appear to be more pronounced when guidelines for treatment are not well defined (e.g., in treatment of pain). In addition, Whites who possess egalitarian conscious beliefs but who harbor implicit prejudice (termed aversive racists) tend to convey mixed messages—positive in content but undermined by negative, distancing nonverbal behaviors in intergroup interactions. Members of traditionally stigmatized groups, who may be vigilant for cues of bias, readily detect these signs.

Even though those in helping professions typically see themselves as unbiased, White physicians display strong implicit preferences for Whites over Blacks. For instance, White physicians who reported they believed Black patients were more adherent than White patients showed the opposite on an implicit measure. The distinction between explicit and implicit prejudice may be especially relevant to understanding biases in (1) medical decision-making and clinical communication by physicians and (2) patient perceptions of bias in medical encounters.

**Physician Decision-Making and Behavior**

Medical decision-making is obviously complex, and in decision-making, physicians rely heavily on information about differences in the incidence of conditions across patients sharing common characteristics, including race and ethnicity. The line between basing decisions on these group differences and basing them on overgeneralized expectations and assumptions in unfair, stereotypical ways is thin, and physicians (and other medical personnel) sometimes make stereotypical inferences (beyond what is warranted by data) derived from a patient’s race or ethnicity. Also, medical decision-making frequently occurs when providers are burdened or fatigued, limiting cognitive control for inhibiting bias and thus increasing the influence of implicit relative to explicit forms of bias.

Despite evidence in the psychological literature that implicit biases systematically predict discrimination—often better than explicit attitudes—only limited evidence directly documents their influence in medical contexts. In a vignette study about cardiology patients, physicians reported no explicit biases against Black relative to White patients. However, physicians had more negative implicit attitudes toward Blacks than toward Whites and stronger stereotypes of Blacks as uncooperative patients. The more negative their implicit attitudes, the less likely they were to recommend thrombolytic drugs for Black patients.

The quality of communication is lower in interracial medical interactions than in same-race encounters: the former are less patient centered and less positive. Physicians’ implicit biases likely contribute to this effect. In a recent study, Black patients perceived physicians who had more implicit bias (assessed with the Implicit Association Test) as less warm and friendly in their encounter; this effect was distinct from any effect of the physician’s level of explicit prejudice. In addition, Black patients feel less respected by the physician, like the physician less, and have less confidence in the physician regarding their medical encounters when the physician exhibits greater implicit racial bias.

**Patient Attitudes, Expectations, and Biases**

Medical interactions also have to be considered within a larger social context. Experiences of discrimination outside the clinical encounter not only relate to poorer health generally but also are associated with perceptions of bias in medical interactions.

Overall, racial/ethnic minorities are significantly more likely than Whites to believe that their race negatively affects their health care and are less trusting of their physicians. These perceptions of bias correlate with and predict Black patients’ less positive behavior in medical interactions, more negative views of their physician, and less favorable evaluations of the quality of their care. Greater mistrust of
The influence of implicit bias on providers’ racial bias may be particularly detrimental to health care interactions in a climate of distrust. The ambivalent nature of contemporary racial prejudice may create a mismatch between a physician’s positive verbal behavior (as a function of conscious egalitarian values) and negative nonverbal behavior (indicating implicit bias); this is likely to make a physician seem especially untrustworthy and duplicitous to those who are vigilant for cues of bias. Indeed, Black patients who interacted with physicians low in explicit prejudice but high in implicit prejudice (those more likely to convey mixed messages verbally and nonverbally) were less satisfied with their medical encounter than were their counterparts encountering physicians with any other combination of implicit and explicit attitudes, including those uniformly high on both explicit and implicit bias. Thus, focusing primarily on people’s intentions may not be particularly effective.

Interventions are most likely to be effective when they occur at multiple levels. First, people need to recognize that provider discrimination contributes significantly to health care disparities. Despite the epidemiological evidence, only 55% of White physicians agree that “minority patients generally receive lower quality care than White patients.” Subtle bias is much more difficult to recognize in a specific instance than when patterns are aggregated across cases, and providers may be motivated to dismiss indications of bias in their personal practice. Through systematically collecting data that could implicate the operation of subtle, distinct biases is critical for addressing the problem.

Second, once providers understand the complex nature of contemporary bias and the nuances of stereotyping and affective responses, they may be better equipped to provide higher-quality care more equitably. Medical education might also offer clinicians additional tools for counteracting the influence of potential bias. Whereas strategies directed at preventing bias by suppressing stereotypes may backfire, those aimed at promoting positive relations can inhibit the activation of implicit bias. When people focus on common group memberships (e.g., shared organizational or national identities) instead of different racial or ethnic identities, members of racial and ethnic majority and minority groups spontaneously reduce racial or ethnic bias and experience greater trust.

Although race and ethnic identity are cultural default categories psychologically, reframing of this type can change how people think about others in ways that do not activate cultural stereotypes. Interventions that lead people to think of themselves as a team reduce the activation of racial/ethnic stereotypes and, in medical contexts, produce more positive doctor–patient interactions.

Third, providers can develop new mental habits. Self-regulation of bias, with sufficient practice, can become automatic: although implicit biases may not be eliminated altogether, they may be overridden by new, incompatible implicit egalitarian motives and goals. Thus, training might involve not only the development of culturally competent skills but also direct experiences to develop effective (and potentially automatic) self-regulation to mitigate subtle bias. Because the nature of bias differs cognitively, emotionally, and behaviorally across various targets, biases toward different groups cannot be fully addressed with training and intergroup experiences involving only 1 group. More work bridging the psychological literature and medical practice may offer new theoretical insights and practical ways to combat bias in health care.

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**Contributors**

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References
THE SCIENCE OF RESEARCH ON RACIAL/ETHNIC DISCRIMINATION AND HEALTH


