

# ETHNICITY/RACE, ETHICS, AND EPIDEMIOLOGY

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Ethnicity/race is a much-studied variable in epidemiology. There has been little consensus about what self-reported ethnicity/race represents, but it is a measure of some combination of genetic, socioeconomic, and cultural factors. The present article will attempt to:

- 1.) Elucidate the limitations of contemporary discourse on ethnicity/race that emphasizes the genetic and socioeconomic dimensions as competing explanatory frameworks;
- 2.) Demonstrate how considerable attention to the cultural dimension facilitates understanding of race differences in health-related outcomes; and
- 3.) Discuss interpretations of disparities in health status of African Americans versus European Americans from an ethical perspective.

A major challenge to the discourse on ethnicity/race and health being limited to socioeconomic and genetic considerations is the lack of attention to the third alternative of a cultural perspective. The combined cultural ideologies of individualism and racism undermine the utility of epidemiologic research in health promotion and disease prevention campaigns aimed at reducing the racial gaps in health status.

An ethical analysis supplements the cultural perspective. Ethics converge with culture on the notion of values influencing the study of ethnicity/race in epidemiology. A cultural approach to the use of ethnicity/race in epidemiologic research addresses methodological limitations, public health traditions, and ethical imperatives. (*J Natl Med Assoc.* 2003;95:736–742.)

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Ethnicity/race is a much-studied variable in epidemiology. A review of the *American Journal of Epidemiology* for select years between 1921 and 1990 revealed that nearly half of the published papers addressed ethnicity/race.<sup>1</sup> Most of the epidemiologic literature on race differences examines health-related variables in people of African ancestry versus European ancestry.

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Although there's no question that black-white differences exist for a number of health-related conditions, the explanations for these differences have been a matter of debate. An adequate understanding of what one measures when including ethnicity/race as a design or analytic variable is necessary to resolve the controversy. To date, there has been little consensus about what measures of self-reported ethnicity/race represent.<sup>2,3</sup> It is clear, however, that self-reported ethnicity/race is a measure of some combination of genetic, socioeconomic, and cultural factors.<sup>1,2</sup>

Ethnicity/race is used here instead of simply "race," even though researchers disagree about linking ethnicity to race. Kaufman and Cooper argued that the two terms are connected in terms of their reference to a cultural dimension of identity and individuals' self-perception.<sup>3</sup> Jones distinguishes between ethnicity as a measure of "cultur-

al heritage” and race as a measure of “societally imposed identity” based on phenotype (i.e., skin color, hair texture, etc.).<sup>2</sup> Hahn views race as a construct reflecting physical and cultural dimensions, and ethnicity as a social identity.<sup>4</sup>

All of these perspectives are valid to some degree. Conceptualization of “race” as a cultural or a physical variable is acceptable, but the view of the concept as a social construct or classification externally imposed on people of African descent is also true. The complement of these divergent views is a conceptualization of culture as a contextual feature of human experiences, as well as an indication of heritage.

Psychological and sociological research has shown that when individuals are given a choice between “African American” and “black” for racial self-identification, the majority of people select the latter term.<sup>5,6</sup> Such findings are consistent with Kaufman and Cooper’s argument that race is a reflection of individuals’ self-perception, as well as Hahn’s description encompassing physical and cultural dimensions. In support of Jones’s view, there is a positive correlation between length of residence and racial identity among African immigrants in the United States.<sup>7</sup>

Thus, it is possible for the concept of race both to be passed on intergenerationally as a form of self-identification and to be ascribed to persons in a race-conscious society, because it is a cultural phenomenon. The significance of this fact will be addressed in a later section. For now, this fact serves as justification for linking ethnicity to race in this commentary.

### **Genetic vs. Socioeconomic Explanations**

I once attended a seminar in psychiatric epidemiology during which someone raised the issue about the relation between race and surrogates of socioeconomic status (SES). The presenter reported that race differences sometimes remain after controlling for SES in analyses. The question was raised as to how to interpret significant race differences under such conditions. One participant immediately responded that when race differences remain, even after controlling for major indicators of SES, the race effects must have a genetic basis.

This exchange, in my opinion, epitomizes the prevailing view of ethnicity/race in the field of epidemiology as either a proxy measure of socioeconomic

factors or an expression of genotypic differences between racial groups. When racial differences persist after stratification or adjustment by SES, regardless of how imperfect the measurement of these surrogates, researchers often conclude that a genetic factor is playing a role.<sup>8</sup> Moreover, there seems to be greater confidence in genetic explanations when socioeconomic factors are ostensibly ruled out.

What is the source of this type of reflexive, simplistic and dichotomous thinking about ethnicity/race? One contributing factor is the emphasis on the identification of risk factors at the individual level in contemporary epidemiology. Many researchers lament the current emphasis in epidemiology on individual level risk factors to the point of ignoring social conditions that impact population health.<sup>9-16</sup> Some of them propose new or different frameworks for epidemiology to address the field’s inattention to broader contextual factors.<sup>10,12,16</sup> Another facet of the individual risk factor approach is the assumption that SES and genes have some common link to ethnicity/race that can be measured in the individual.<sup>8</sup> The validity of this assumption can be challenged for several reasons.

First, scientific evidence in support of a genetic basis for ethnicity/race is extremely weak. Genetic explanations for racial disparities in health status overlook the basic fact that there is more within-group genetic variation than between-group genetic variation among different ethnic/racial groups.<sup>3,17-20</sup> U.S. mortality data for 1977 indicated that there were 80,000 excess black deaths compared to whites; but only 277 black deaths, or 0.3 percent of the total, could be attributed to sickle cell disease, which is a common fatal illness with a clear-cut racial/genetic explanation.<sup>17</sup> Genetic models have even less relevance for the complex diseases that are often the focus of observational epidemiology.<sup>3</sup> Thus, a genetic explanation is, in all probability, not a plausible alternative for situations where the control of SES variables does not eliminate racial differences in a health-related outcome.

Second, the epidemiologic study of SES as an individual risk factor is problematic. The limitations of this approach may be the reason for ethnic/racial differences in health-related outcomes remaining in designs or analyses that control for SES. The major characteristics of SES used in epidemiologic research are education, income, and occupation. Cooper and David stated that explaining race differentials in health status by SES char-

acteristics— such as education and income, is “overcontrol” in a causal sense.<sup>17</sup> Ethnicity/race is an antecedent—not a correlate or consequence—of these surrogate measures of SES.<sup>17,20</sup>

In addition, there may be differential misclassification due the lack of equivalence between racial groups in the values associated with education, income, occupation, etc.<sup>20</sup> For example, traditional measures of income understate the true magnitude of racial differences in economic resources, because national data reveal that at every income level there are large racial gaps in wealth.<sup>20</sup> Williams also pointed out that African Americans with the same level of education as European Americans tend to derive less economic and material benefit.<sup>20</sup> Occupations affect a person’s health through work conditions and through prestige associated with the job, an indirect measure of job stress.<sup>21</sup>

There may be race differences in the occupational stress for black and white persons with the same job title. Such measurement problems are compounded when composite measures of SES, instead of individual surrogates, are used. The individual-level measures of SES must be linked to the broader social context to accurately reflect their relationship to ethnicity/race.<sup>20-22</sup>

The final challenge to the discourse on ethnicity/race and health being limited to socioeconomic and genetic considerations is the lack of attention to a third alternative—the cultural perspective. The theoretical utility of a cultural framework for the study of ethnicity/race in epidemiologic research cannot be overstated, given that such a view has not received adequate attention in the epidemiologic literature. In fact, cultural values and attitudes shape the current perspective in epidemiology that overemphasize scientifically implausible genetic explanations and decontextualized SES by studying exclusively individual-level risk factors.

### **Culture, Ethnicity/Race, and Epidemiology**

There are two fundamental components to cultural processes. One is “heritage,” defined as the intergenerational transmission of values, beliefs, attitudes, and sometimes the experiences upon which they are based, to younger members of ethnic/racial groups by their elders via religion, formal and informal education, and entertainment (storytelling, songs, art, and literature).

The other component is “adaptation” to the envi-

ronment, defined as behavior patterns and coping styles developed by members of an ethnic/ racial group to survive or meet the challenges of their social and physical environment. It is important to note that these two components of culture interact with each other, as well as other environmental factors, in a dynamic process. People may have environmental challenges that they overcome or survive. They then pass on the information to the next generation, which, in turn, does not have to learn anew the strategy for survival when faced with the same challenge. This is true whether we are talking about learning how to avoid animal predators in the jungles of the Amazon or to avoid muggers and con artists in the streets of New York City.

One problem with the heritage component is that the knowledge and associated behaviors may outlive their usefulness when the environmental challenges for which they were designed disappear. Depending on the circumstances, they may be transformed into traditions or rituals that are symbolic in nature but no longer have adaptational value. Alternatively, they may be unwittingly maintained by members of an ethnic/racial group and applied in novel situations with different environmental challenges requiring a different strategy. A common example discussed by health care professionals is the use of indigenous healers by members of less industrialized cultures for diseases for which modern medicine provides better treatment.<sup>23</sup> An understanding of these cultural processes may help to advance the study of ethnicity/race in epidemiology.

Naïve researchers tend to emphasize the heritage dimension of culture, and in doing so, minimize culture’s contribution to interpretations of racial disparities in health-related outcomes. Ethnic/racial groups are often seen as having misperceptions and unhealthy behaviors learned through cultural socialization that increase their risk for adverse health outcomes.<sup>11,24</sup> The heritage dimension of culture is vulnerable to the same type of decontextualization that occurs with SES in epidemiological research. Consequently, culture, which is a more encompassing construct, is made subordinate to the risk factor approach that predominates in the field of epidemiology.

Culture is the context in which epidemiological research is performed. It then follows that cultural processes can shape both the thoughts and actions of epidemiologists, as well as those of the population under study.

The cultural ideology of “individualism” is a driving force in many western nations, including the United States.<sup>25-27</sup> The form of individualism pertinent to the current discussion involves a normative or value orientation that emphasizes individual interests over group (or societal) interests.<sup>27</sup> This ideology is pervasive in all aspects of people’s lives. Popular phrases, like “pulling yourself up by your bootstraps” and “looking out for number one,” both reflect the value of individualism inherent in U.S. culture. A recent U.S. Army ad campaign promoting the idea of soldiers as an “army of one” capitalizes on the dominant cultural ideology to attract more recruits by downplaying the social conformity of military life. It is embodied in the laws of the land by an emphasis on the protection of individual rights and civil liberties that limits the power of government. The ethical value of patient autonomy is a manifestation of this ideology in medicine. Within this cultural perspective, individual freedom and responsibility are organizing themes in health promotion and disease prevention.

The risk factor approach to epidemiology also reflects the cultural ideology of individualism. This fact can be best appreciated by a review of the history of epidemiology to address public health issues such as unsanitary conditions, which impacted the population’s health.<sup>14,15</sup> Some epidemiologists argue that the accumulation of scientific knowledge is the cause of the shift to a focus on individual-level risk factors.

There are two counterarguments to this claim. First, the notion that advances in science have been cumulative in epidemiology can be more accurately characterized as paradigm shifts, with some paradigms having more appeal than others at different points in history.<sup>28</sup> In the absence of an environmental demand for a public health approach because of the virtual elimination of infectious diseases in western countries, epidemiology naturally gravitated toward the dominant cultural ideology of individualism. Individualism promotes a decontextualized, as opposed to situation-based, reasoning style—one that suggests social information is not bound to social context.<sup>25</sup> The second counterargument is that genetic explanations for racial differences in health-related outcomes in the face of strong scientific evidence to the contrary are inconsistent with this line of reasoning.

Another cultural ideology that is dominant in the United States is the superiority-inferiority

dichotomy superimposed on the concept of ethnicity/race. Contemporary racism and racial discrimination are variants of this ideology.<sup>20</sup> The ideology was developed and promoted, in part, to legitimize the practice of chattel slavery against African people.<sup>17</sup> Although the need for such ideology has declined with improved race relations, including the abolition of slavery and the elimination of de jure segregation, the racist ideology has been maintained as a part of the heritage dimension of culture and continues to negatively influence white attitudes and behaviors toward blacks in the form of interpersonal interactions and structural barriers.

Discussion of the intellectual inferiority of African Americans, based on science fiction being portrayed as science fact, is a poignant example.<sup>8</sup> These views are also easily identifiable in epidemiology and public health discourse.<sup>8,29</sup> For example, racial disparities in the prevalence and treatment of severe mental illness can be linked to this racist ideology,<sup>30</sup> as can race differences in medical care in general.<sup>31</sup> The notion that racial disparities in various health-related outcomes are due to the genetic vulnerability of people of African ancestry is another manifestation of this cultural ideology that has a foundation in the historical view of the biological inferiority of black people.

The cultural ideologies of individualism and racism combined undermine the utility of epidemiologic research in health promotion and disease prevention campaigns aimed at reducing the racial gaps in health status. What type of individual level intervention should be employed to address “being black” as a risk factor for adverse health outcomes? The focus is more likely to be the irresponsible behavior, lack of knowledge due to low SES, or genetic vulnerability of the person of African descent instead of the sociocultural processes inherent in a racist society that maintains social disadvantage.

Indeed, Muntaner argued that epidemiology needs a theory to explain the “social mechanisms” involved in racism to understand racial disparities in health status.<sup>32</sup> Because racism is inherent in the cultural make-up and culturally transmitted behavior patterns of majority and minority groups, racist behavior inescapably contributes to the racial disparities in health.<sup>23</sup>

Moreover, for “bad habits” to dominate discussions of racial disparities in health is to impose a different cultural perspective on the experiences of ethnic/racial minority populations under the guise

of risk awareness.<sup>11</sup> As Schwartz and Carpenter pointed out, emphasis on individual-level variation in health-related outcomes has value-laden and political implications, because such analyses consider ubiquitous exposures outside of the purview of epidemiology, and are consequently unavailable for intervention.<sup>33</sup>

It is important to note that epidemiologists, like most human beings, may not necessarily be aware of the influences of the dominant cultural ideology on the way they conduct and interpret their research. Any context for human behavior that is as all-encompassing as culture is for the maturing individual is likely either to be ignored or taken for granted.<sup>34</sup> Because cultural ideologies are often expressed in, and thus transmitted by, collective patterns of behaviors and on-line or spontaneous mental processes, they are often tacit for any given individual.<sup>26</sup>

Kitayama argued, however, that all psychological mechanisms and processes are potentially available to all peoples and cultures.<sup>26</sup> Members of a given culture can be made aware of the cultural influences on their behaviors and can change accordingly. A cultural approach to understanding the use of ethnicity/race in epidemiology goes beyond the issue of more attention to the social environment advocated by some epidemiologists.<sup>10,12,13,16,21,22,32</sup>

Discourse on cultural processes also explores the realm of ideologies and values that play a central role in the practice of epidemiology. Explicit discussions of the cultural ideologies underlying the current practice of epidemiology can help to facilitate this change. The question is whether the inclusion of a cultural perspective is desirable in the field of epidemiology.

## An Ethical Perspective

An ethical analysis of the use of ethnicity/race in epidemiology supplements the cultural perspective. Ethics converge with culture on the notion of values influencing the practice of epidemiology. Many epidemiologists attempt to escape the burden of ethical responsibility to the community at large by claims of scientific objectivity and the avoidance of advocacy. For example, epidemiologic research has a key role in health-related policy, planning, and service-delivery. Yet the majority of published studies in the field of epidemiology do not include a policy recommendation of their findings.<sup>35</sup> Despite the scientific posture, the impact of epidemiologic research at all levels of society with respect to

health care issues carries an inevitable ethical obligation.<sup>11,36-40</sup> It then follows that interpretations of race differences in health-related outcomes reflect both the ethics and cultural perspective underlying the value system of the epidemiologist.

An epidemiologic study must embrace the principles of autonomy (i.e., respecting an individual's right to choose), beneficence (doing good), non-maleficence (not doing harm), and justice (fair and equitable treatment for all) for both the study population and the relevant wider population to be considered ethical.<sup>38,41</sup> These principles are the basic tenets of bioethics and clinical medicine.

Thus, the profession of epidemiology is judged by the same standard or code of ethics as traditional physicians<sup>40</sup>, and other biomedical scientists.<sup>41</sup> When physicians are unaware of the influence of the dominant cultural ideology on their practice, they sometimes violate the ethical standards of the medical profession. The Tuskegee Syphilis Study and human experimentation during the Nazi Holocaust are extreme examples of this fact.<sup>42</sup> Witzig<sup>19</sup> presented two cases of medical mismanagement involving the diagnosis of sickle cell disease resulting from the treatment of race as a genetic factor. Adherence to cultural ideologies can be, in some instances, hazardous to patients' health.

Similarly, epidemiology violates these ethical principles when it classifies ethnicity/race as an individual risk factor and treats it as a marker for genetic vulnerability in its interpretation of race differences in health-related outcomes. Risk communications that classify individuals as high-risk based on their membership in an ethnic/racial minority group like African Americans raise ethical concerns. Such communications, which are devoid of cultural context, place sole responsibility for health problems and their solutions on African Americans. These communications can stigmatize the group and may foster a sense of despair among its members.<sup>38</sup>

In addition, the high-risk ethnic/racial minority group, African Americans or some other out group, may become the target of intensive individual interventions, which are often sponsored by government agencies. The public health approach of individual risk factor modification has proved to be expensive but not very successful.<sup>13</sup> This failure has weakened public support for such health promotion campaigns. At some point, cultural beliefs consistent with dominant ideologies may emerge to sug-

gest that the high-risk ethnic/racial minority population is somehow less deserving of the basic right to a healthy life.<sup>38,42</sup> The principles of beneficence and justice are corrupted, because what was intended to be good deeds become part of the problem.

The view of race as a biological entity and independent risk factor in epidemiology has three major consequences: 1.) science does not advance; 2.) the social and cultural determinants of a disease, which are often amenable to behavioral interventions are not discovered in a timely manner; and 3.) the myth of the genetic basis of race differences is perpetuated.<sup>43</sup>

The second and third consequences represent violations of the principles of non-maleficence and justice. Epidemiologists do harm when they provide genetic explanations, explicitly or implicitly, for racial disparities in health-related outcomes. The dominant cultural ideologies of individualism and racism are also maintained. Research suggests that middle-class whites, who represent the cultural norms of the society, tend to attribute racial inequalities in health to lifestyle choices and biological differences.<sup>44</sup> These attributions reflect the cultural ideologies of individualism and racism, respectively.

Epidemiologists may participate unwittingly in the maintenance of the cultural processes that contribute to the root causes of poor health and disease among African Americans and other disadvantaged ethnic/racial groups. Ironically, the very nature of epidemiologists' approach to research may be in conflict with the goals of their research.

## CONCLUSION

I join the voices calling on epidemiology to expand its approach and return to its roots in traditional public health. Muntaner also proposed that racism be dealt with in epidemiologic studies of ethnicity/race.<sup>32,44</sup> As I stated earlier, it is not enough to address social context. Epidemiologists also should study cultural processes (values, ideologies and behaviors) that influence health and disease.

Moreover, cultural processes that bias epidemiologists' approach to the study of racial disparities must be identified and eliminated. At the very least, members of the culture who accept the status quo must acknowledge a conflict of interest. For example, interpretations of race differences in health-related outcomes should not frame the issue in terms of genetic versus SES explanations.

Instead, they must address the cultural dimension of racism and racial discrimination in the study of racial disparities in health status, particularly when SES cannot account for race differences.

Some epidemiologists may try to evade the issue by arguing that the cultural processes underlying racism are difficult to measure. Again, we can learn from epidemiology's past. "Black box" epidemiology teaches us that even without a clear understanding of the mechanism, observational studies can provide a basis to modify exposures to prevent disease.<sup>45</sup> The same logic can be applied to the study of racism with the long-term goal of uncovering the etiologic mechanisms in the culture.

Scientific objectivity must be redefined to include the ability to be free of biases associated with the dominant cultural ideology. Scientific integrity should be reconceptualized to include a willingness to report on the noxious cultural processes promoting racism, and to advocate for public health policy and interventions to alter or eliminate their adverse effects on health.

The epidemiologist's role as advocate for policies that reduce negative health effects of a noxious environment is also part of public health tradition. John Snow's removal of the handle from the Broad Street pump, based on his studies of cholera in 19th century London, reflected the clear policy implications of his work.<sup>39</sup> Epidemiologists' advocacy of changes in the environment, living conditions, housing, and so on, dates back to William Farr, one of Snow's contemporaries, whose writings included calls for improved living conditions.<sup>41</sup>

A cultural approach to the use of ethnicity/race in epidemiologic research addresses methodological limitations, public health traditions, and ethical imperatives.

## REFERENCES

1. Jones C.P., LaVeist T.A., Lillie-Blanton M., "'Race' in the Epidemiologic Literature: An Examination of the American Journal of Epidemiology, 1921-1990, *Am J Epidemiol.* 1991; 134:1079-1084.
2. Jones C.P., Invited commentary: "'Race,' racism, and the practice of epidemiology, *Am J Epidemiol.* 2001; 154:299-304.
3. Kaufman J.S., Cooper R.S., Commentary: Considerations for use of racial/ethnic classification in etiologic research. *Am J Epidemiol.* 2001; 154:291-298.
4. Hahn R.A., The state and federal health statistics on racial and ethnic groups, *JAMA.* 1992; 267:268-271.
5. Speight S.L., Vera E.M., Derrickson K.B., Racial self-designation, racial identity, and self-esteem revisited. *J Black Psychol.* 1996; 22:37-52.
6. Smith T.W., "Changing racial labels: From 'Colored' to

- 'Negro' to 'Black' to 'African American,' " *Public Opinion Q.* 1984;56:496-514.
7. Phinney J.S., Onwughalu M., Racial identity and perceptions of American ideals among African American and African students in the United States, *Int J Intercultural Rel.* 1996; 20:127-140.
  8. Muntaner C., Nieto F.J., O'Campo P., The bell curve: On race, social class, and epidemiologic research, *Am J Epidemiol.* 1996; 144:531-536.
  9. Shy C.M., The failure of academic epidemiology: Witness for the prosecution, *Am J Epidemiol.* 1997;145:479-484.
  10. Diez-Roux A.V., Bringing context back into epidemiology: variables and fallacies in multilevel analysis, *Am J Public Health.* 1998; 88:216-222.
  11. Forde O.H., Is imposing risk awareness cultural imperialism?, *Soc Sci Med.* 1998; 47:1155-1159.
  12. Krieger N., Epidemiology and the web of causation: Has anyone seen the spider? *Soc Sci Med.* 1994; 39:887-903.
  13. Lomas J., Social capital and health: implications for public health and epidemiology, *Soc Sci Med.* 1998; 47:1181-1188.
  14. Pearce N., Traditional epidemiology, modern epidemiology, and public health, *Am J Public Health.* 1996; 86:678-683.
  15. Susser M., Susser E., Choosing a future for epidemiology: I. Eras and paradigms, *Am J Public Health.* 1996;86:668-673.
  16. Susser M., Susser E., Choosing a future for epidemiology: II. From black boxes to Chinese boxes and eco-epidemiology, *Am J Public Health.* 1996;86:674-677.
  17. Cooper R., David R., The biological concept of race and its application to public health and epidemiology, *J Health Polit Policy Law.* 1986;11:97-116.
  18. Goodman A.H., Why genes don't count (for racial differences in health). *Am J Public Health.* 2000;90:1699-1702.
  19. Witzig R., The medicalization of race: Scientific legitimization of a flawed social construct, *Ann Intern Med.* 1996; 125: 675-679.
  20. Williams D.R., Race, socioeconomic status, and health: The added effects of racism and discrimination, *Ann NY Acad Sci.* 1999;896:173-188.
  21. Pappas G., Elucidating the relationship between race, socioeconomic status, and health, *Am J Public Health.* 1994;84:892-893.
  22. Lillie-Blanton M., LaVeist T., Race/ethnicity, the social environment, and health, *Soc Sci Med.* 1996;43:83-91.
  23. Heggenhougen H.K., Shore L. Cultural components of behavioural epidemiology: Implications for primary health care, *Soc Sci Med.* 1986;22:1235-1245.
  24. DiGiacomo S.M., Can there be a "cultural epidemiology"? *Med Anthropol Q.* 1999;13:436-457.
  25. Oyserman D., Coon HM, Kimmelmeier M., Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses, *Psychol Bull.* 2002;128:3-72.
  26. Kitayama S., Culture and basic psychological processes-toward a system view of culture: Comment on Oyserman et al. (2002), *Psychol Bull.* 2002;128:89-96.
  27. Kagitcibasi C., Individualism and collectivism, In: Berry J.W., Segall M.H., Kagitcibasi C., editors, *Handbook of Cross-cultural Psychology*, 2nd ed., Vol. 3, *Social Behavior and Applications*. Boston: Allyn and Bacon; 1997, pp. 3-49.
  28. Winkelstein W., Editorial: Eras, paradigms, and the future of epidemiology, *Am J Public Health.* 1996;86:621-622.
  29. Hirsch J., Race, genetics, and scientific integrity, *J Health Care for the Poor and Underserved.* 1991;2:331-334.
  30. Whaley A.L., Racism in the provision of mental health services: A social-Cognitive analysis, *Am J Orthopsychiatry.* 1998;68:47-57.
  31. van Ryn M., Research on the provider contribution to race/ethnicity disparities in medical care, *Med Care.* 2002;40 (1 Supp):140-151.
  32. Muntaner C., Invited Commentary: Social mechanisms, race, and social epidemiology, *Am J Epidemiol.* 1999;150:121-126.
  33. Schwartz S., Carpenter K.M., The right answer for the wrong question: Consequences of Type III error in public health research, *Am J Public Health.* 1999; 89:1175-1180.
  34. Seagall M.H., Lonner W.J., Berry J.W., Cross-cultural psychology as a scholarly discipline: On the flowering of culture in behavioral research, *Am Psychol.* 1998; 53:1101-1110.
  35. Jackson L.W., Lee N.L., Samet J.M., Frequency of policy recommendations in epidemiologic publications, *Am J Public Health.* 1999;89:1206-1211.
  36. Mooney G., Leeder S., Introduction to symposium on the ethics of epidemiology, *Soc Sci Med.* 1998;47:1133-1134.
  37. Little M., Assignments of meaning in epidemiology, *Soc Sci Med.* 1998;47:1135-1145.
  38. Plant A.J., Rushworth R.L., "Death by Proxy": Ethics and classification in epidemiology, *Soc Sci Med.* 1998;47:1147-1153.
  39. Gordis L., Ethical and professional issues in the changing practice of epidemiology, *J Clin Epidemiol.* 1991;44(Suppl 1):9S-13S.
  40. Higginson J., Chu F., Ethical considerations and responsibilities in communicating health risk information, *J Clin Epidemiol.* 1991;44(Suppl 1):51S-56S.
  41. Last J.M., Obligations and responsibilities of epidemiologists to research subjects, *J Clin Epidemiol.* 1991;44(Suppl 1):95S-101S.
  42. Francis C.K., The medical ethos and social responsibility in clinical medicine, *J Natl Med Assoc.* 2001;93:157-169.
  43. McDermott R., Ethics, epidemiology, and the thrifty gene: Biological determinism as a health hazard, *Soc Sci Med.* 1998;47:1189-1195.
  44. Muntaner C., Nagoshi C., Diala C., Racial ideology and explanations for health inequalities among middle-class whites, *Int J Health Serv.* 2001;31:659-668.
  45. Savitz D.A., In defense of black box epidemiology, *Epidemiology.* 1994;5:550-552.

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