

Race versus ethnicity: Differing for better application

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Abstract

Studies involving populations are often questioned as to the homogeneity of their samples relative to race and ethnicity. Such questioning is justified because sample heterogeneity can increase the variability of and even mask results. These two concepts (race and ethnicity) are often confused despite their subtle differences. Race includes phenotypic characteristics such as skin color, whereas ethnicity also encompasses cultural factors such as nationality, tribal affiliation, religion, language and traditions of a particular group. Despite the widespread use of the term “race”, geneticists are increasingly convinced that race is much more a social than a scientific construct.

Keywords: Ethnicity and health. Distribution by race or ethnicity. Ethnic groups.

INTRODUCTION

Although categorizing individuals according to race and ethnicity is common practice both in diagnosis and scientific research, the meanings of these words are often confused or even unknown in the academic environment.

The custom of using race as a distinguishing characteristic in populations or individuals seeking medical assistance is perfectly acceptable in the health care setting. Despite the fact that this practice is grounded in deep-rooted prejudices, its current use has been advocated as a useful means of improving diagnosis and therapy.⁷

Race classification can be used to check whether or not randomized trials have proved successful. It can also be useful for readers as a description of the population participating in a

particular study.¹² In orthodontics, the attempt to identify a racial group in a sample is, in actuality, an attempt to control the various facial features specific to certain racial groups.

The purpose of this article is twofold:

- (1) Clarify the conceptual difference between race and ethnicity.
- (2) Clarify the racial categories established by some studies.

HISTORY OF THE TERM “RACE”

The first racial classification of humans can be found in the *Nouvelle division de la terre par les différents espèces ou races qui l’habitent* (New division of land by the different species or races which inhabit it) by Francois Bernier, published in 1684.¹¹

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In 1790, the first North American census classified the population as composed of free white men, free white women and other people (Native Americans and slaves). The 1890 census, in turn, classified the population using terms such as white, black, Chinese, Japanese and Indians.³

Carolus Linnaeus (1758), creator of modern taxonomy and the term *Homo sapiens*, recognized four varieties of humans:

- 1) American (*Homo sapiens americanus*: red, ill-tempered, subduable).
- 2) European (*europaeus*: white, serious, strong).
- 3) Asian (*Homo sapiens asiaticus*: yellow, melancholy, greedy).
- 4) African (*Homo sapiens afer*: black, listless, lazy).

Linnaeus also recognized a fifth race without geographical definition, the Monster (*Homo sapiens monstrosus*), comprised of various real types (e.g., Patagonians from South America, Canadians Flatheads) and other types contrived by the imagination that did not fit into the four 'normal' categories. Linnaeus' biased classification assigned to each race specific physical and moral characteristics.¹¹

In 1775, the Linnaeus' successor, J. F. Blumenbach, recognized "four varieties of mankind":

- 1) European, East Asian, and part of North America.
- 2) Australian.
- 3) African.
- 4) The rest of the New World.

Blumenbach's vision continued to evolve and in 1795, resulted in five varieties—Caucasian, Mongolian, Ethiopian, American and Malayan—, which differed from the previous groups, whereby Eskimos began to be classified together with Eastern Asians.¹¹

In 1916, Marvin Harris described the theory of hypodescence, useful in classifying the offspring of two different races. According to his theory, this offspring would belong to a

biologically or socially inferior race: "The cross between a white and a Indian is a Indian, a cross between a white and a black is a black, a cross between a white and a Hindu is a Hindu, and the cross between a European and a Jew is a Jew." In some countries, a 1/8 or 1/16 rule was established to properly determine the racial identity of individuals born from miscegenation. Under these rules, if an individual's lines of descent is 1/8 or only 1/16 black (uniform black), such individual is also black.¹¹

IS THERE A DIFFERENCE BETWEEN "RACE" AND "ETHNICITY"?

The term race has a wide array of definitions commonly used to describe a group of people who share certain morphological characteristics. Most authors have learned that race is an unscientific term, which can only have a biological meaning when the human being is fully homogeneous or 'thoroughbred', as in some animal species. These conditions, however, are never found in humans.¹³ The human genome is composed of 25,000 genes. The most apparent differences (skin color, hair texture, shape of nose) are determined by a handful of genes. The differences between a black African and a white Nordic comprise only 0.005% of the human genome. There is widespread agreement among anthropologists and human geneticists that, from a biological standpoint, human races do not exist.¹

Historically, the word ethnicity stems from the Greek adjective *Ethnikos* and means "heathen." The adjective is derived from the noun *ethnos*, which means foreign people or nation. It is a multifaceted concept, which builds the identity of an individual through: kinship, religion, language, shared territory and nationality, and physical appearance.^{4,9}

In Brazil, indigenous peoples constitute a racial identity. However, because of different socio-cultural characteristics, groups are defined by ethnicity. In the state of Amazonas, for example,



FIGURE 1 - Indian of the Xicrin ethnicity; Kaiapó language from the Jê linguistic family; inhabitant of the Bacajá River, a tributary of the Xingu-Pará river. One of the cultural characteristics of this ethnic group is the gift of oratory exhibited by the tribesmen. The hair is shaved across the middle of the head and dyes are used by women and children.

home to more than 80,000 Indians, there are 65 ethnic (indigenous) groups.⁵ Although the concept of race is often associated with ethnicity, the terms are not synonymous. Race includes phenotypic characteristics such as skin color, whereas ethnicity also encompasses cultural factors such as nationality, tribal affiliation, religion, language and traditions of a particular group (Fig 1).⁸

ARE RACIAL CATEGORIES PROPERLY ATTRIBUTED?

One of the best known classifications to collect data on race is the U.S. Office of Management and Budget, whose guideline No. 15,

developed in the 1970's, standardized data on racial and ethnic categories.³

The U.S. census of 2000 increased the number of race categories to five: American Indians or Alaska Natives, Caucasians or whites, blacks or African-Americans, Native Hawaiians, and Asians.³

In Brazil, according to the Brazilian Institute of Geography and Statistics (IBGE), the census of 2000 surveyed the race or color of the Brazilian population through self-classification, thus: White, black, mulatto, Indian (indigenous) or yellow.⁶ Although there is a wealth of literature on racial classifications, it is inherently contradictory.

A recent study used a questionnaire to compare the accuracy of the classification of race and ethnicity through the respondents' self-report and the researchers' perception. The results showed that the researchers' perception of the respondents' race was more accurate for blacks and whites, while for other races, in many cases, researchers were often in doubt about an individual's race and classified him or her as "unknown." Thus, we concluded that the race and/or ethnicity of an individual should be obtained by self-report and not through the view of the researcher since self-reported ethno-racial classification proved more accurate.² Numerous orthodontic studies in Brazil have attempted to define the race based on skin color and terms such as leucoderms, xantoderms and melanoderms are often employed, referring to whites, Asians and blacks, respectively. Skin color does not determine even the ancestry. This is especially true of the Brazilian people owing to widespread racial interbreeding, aptly named miscegenation. A study on the genetics of the Brazilian population found that 27% of blacks in a small town in Minas Gerais state had genes which were predominantly of non-African ancestry. Meanwhile, 87% of white Brazilians have at least 10% African ancestry.¹⁰

CONCLUSIONS

The concepts of race and ethnicity belong to two different realms.

Race is related to the biological realm. In reference to humans, this term has been historically used to identify socially defined human categories. The most common differences refer to skin color, hair type, face and skull shape, and genetic ancestry. Therefore, skin color, although extensively described as a racial characteristic, is only one of the

features that define a race. Despite its frequent use in orthodontics, a new concept is beginning to take shape grounded in the belief that skin color does not determine ancestry, mainly among such racially mixed people as the Brazilian population.

Ethnicity lies within the cultural realm. An ethnic community is determined by linguistic and cultural affinities and genetic similarities. These communities often claim to have a distinct social and political structure, and a territory.

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