Racism, xenophobia, and discrimination are harmful behaviors that impact science and society on multiple levels. Racism has a devastating impact on individuals and communities. It can lead to lower educational and employment opportunities, poor health outcomes, and increased risk of violence. It can also erode trust and social cohesion. Racism is a multifaceted issue influenced by historical, cultural, economic, and political factors, alongside individual beliefs and attitudes. It can take implicit or explicit forms, including individual, institutional, and structural racism.

Individual racism, which can be characterized as malignant racism, is often the most visible form of racism. It consists of holding negative beliefs or stereotypes about another race or ethnicity and can manifest in verbal abuse, physical violence, and discrimination in employment, housing, and education.

Institutional racism and discriminations occur when institutions or organizations discriminate against people based on their race, ethnicity, age, sex, or social attributes. This can happen through policies and practices that have a disparate impact on people from different backgrounds, such as denying them loans, jobs, or housing.

Structural racism is the way that discrimination is embedded in society’s systems as a cultural or common practice such as the criminal justice system, education system, employment sector, and housing market. This can lead to disparities in outcomes for discriminated people, such as higher rates of incarceration, lower levels of educational attainment, exclusion from employment markets, and lower wages. Both institutional and structural racisms can be categorized as forms of ignorant racism, which in turn exacerbates individual racism.

Education and racism share a strong connection that reverberates through various institutional and societal fields. In particular, medical education has a profound influence on healthcare outcomes, shaping the attitudes of future physicians and healthcare providers vis-à-vis their patients. Historically, medical instructions have been tainted by racial biases and discriminations, perpetuating stereotypes and skewed practices. Until not so long ago, some medical institutions propagated eugenic theories and harmful notions about racial superiority, contributing to injustice and disparities in healthcare facilities. This historical legacy has left lasting effects that continue to influence healthcare even today. In some countries, medical students perceive racism as a ubiquitous phenomenon that medical education should tackle more efficiently. Minorities are often underrepresented in medical schools and in the healthcare profession at large. This underrepresentation contributes to a lack of cultural competence among healthcare providers, influencing patient care in different ways.

Implicit biases and discriminations can also influence clinical decisions, diagnoses, and treatments, leading to unequal care for patients of different racial backgrounds and compromising people’s lives. Such disparities are a consequence of biased medical education. To avoid this, medical school curricula should integrate cultural competency training, encompassing an understanding of social and cultural nuances and peculiarities, to promote respect for diverse backgrounds. Students should be sensitized to the multifaceted impact of racism on health...
outcomes. Education in general and medical education in particular can play a pivotal role in addressing biases and racial disparities by the implementation of fair policies that strive for social and health equity. Recognizing and dismantling these biases is not only an ethical imperative but also crucial for producing responsible healthcare professionals who provide equitable care to patients irrespective of their racial or ethnic backgrounds or whatever discriminatory factors.

Racism doesn’t solely affect individuals who are directly discriminated against, but also it can impact those who empathize with them or witness the discrimination. Children who observe instances of racism directed at others (vicarious racism) could have an increased risk of mental health problems themselves.

Within healthcare and scientific realms more generally, racism is particularly incomprehensible and inexcusable as scientists are highly educated people who are expected to behave in a fair and rational manner. However, this is not always the case. Individuals in positions of power and influence may have an even greater damaging impact when engaging in discriminatory behaviors.

Racism is morally and humanely unacceptable and cannot be defended by any of the major factors that shape human thoughts and behaviors, including philosophy, biology, sociology, and religion.

First, from a philosophical perspective, racism violates the principles of human rights, equity and justice. All humans are born with equal dignity and worth. Discrimination is a violation of this basic rule and of any logical argumentation. The Earth belongs to all the humans and to no one at the same time. Nobody can claim more privileges or rights than others in the existence of Earth as a planet common to all. Humans did not land from the sky onto separate territories designated for each nation exclusively. The current arrangement of people and countries is the result of conflicts and continuous movements of populations throughout history. Every individual is an immigrant from somewhere in some way or another. Without one’s own movement or that of parents or grandparents, nobody would find themselves at the geographical location or social status they are in now. Without immigration, most countries in the world would not exist or appreciate their current level of development. Suppose that life is possible on the planet Mars, and humans begin to colonize it. Over time, some individuals among the settlers develop racist attitudes towards the newly arriving humans. Is there any rational basis for such racism? As humans, there is much to learn from animals that often live in harmonious and coexisting communities without exclusion of each other, beyond their basic instincts for survival that lead them to hunt for eating only. Herbivorous animals, for example, from the same species or from different species coexist with each other without many hurdles. Even carnivores, who need to hunt for their food, have their own ways of coexistence with other species, except during times of hunting and feeding. Needless to say, that humans are not cannibals and do not need to hunt each other. The planet Earth is big and rich enough to provide sustenance to all its inhabitants. Vast and abundant, the Earth has the capacity to sustain tens, if not hundreds, of billions of people over countless centuries, so long as there is equity and solidarity, rather than selfishness and indifference.

Second, from a biological perspective, there is no scientific evidence to support the idea that an ethnicity or a race is intrinsically superior or inferior to another. All the humans form one and the same species, and they all share the same genetic material. It’s the diversity of life, including various plant and animal species, as well as diverse human groups with different skin colors, ethnicities, languages, customs, etc., that makes the planet beautiful and livable. Genetic diversity and variations are vital factors in environmental fitness, robustness, and adaptation. Without genetic diversity and variations, species would be more vulnerable to diseases and environmental challenges. A population with genetic diversities is more likely to adapt and thrive than one with low diversity. While humans do differ in physical characteristics, these differences do not determine intelligence, moral character, or other traits that are often associated with race. Instead of viewing our shared human qualities as factors that shape our identities, we should consider our individual differences as the more significant aspects that define who we are. The uniqueness of each person should be celebrated and acknowledged as a defining characteristic, rather than only emphasizing our common traits. Biological attributes are not chosen by anyone, who may become racist against others with different biological attributes, over which they also had no control. Nobody is white, tall, short, blue-eyed or black-eyed due to their willingness or intelligence, just as no one is black or brown by choice. Taking pride in biological characteristics that lead to discrimination against others with different biological traits is simply absurd and unjustifiable given that no one had a choice in the matter. Human and cultural diversity are integral components of the global biodiversity that are both endangered and
recognized worldwide. It’s essential to value and celebrate diversity, not only for its cultural richness but also for its biological importance and fitness.

Third, from a social perspective, humans are inherently social beings. No one can live in complete isolation from others. Each individual is dependent on someone else, whether they realize it or not. Our lives are shaped by social interactions, relationships, and connections with others. This interdependence takes a variety of forms, ranging from economic and social support to emotional and psychological connections. Humans thrive when they have meaningful connections with others. Racism hinders such connections both for individuals and society as a whole, while leading to social exclusion, prejudice, and violence, and creating a climate of fear, division and distrust. Fostering relationships and interactions with those who are different from us is a significant and essential aspect of personal growth and societal harmony, tolerance and openness. It is far more beneficial for humans to understand one another and collaborate towards social peace, rather than succumb to conflict-driven racism and discriminations. The future of humanity as a whole is jeopardized by other more attention-requiring environmental crises that demand collective actions and unity over exclusion and selfishness.

Finally, from a religious perspective, faiths such as Judaism, Christianity, and Islam promote values of tolerance, equity, and diversity. They emphasize the importance of justice and recommend against racism and discrimination in all its forms; they advocate for a sense of compassion and understanding towards all individuals, regardless of their race, color, ethnicity, or background. This common belief underscores the inherent dignity and worth of every person and provides a basis for promoting inclusivity and respect for diversity. Religious traditions stress the importance of empathy and kindness towards others as a means of building a more harmonious and just society. Racism goes against these teachings and violates the principles of justice and compassion that are at the core of religious educations.

In other words, when people claim faith in either science or religion or both, but at the same time they display racist, discriminatory, or xenophobic attitudes, they contradict their own scientific and/or religious principles, as neither sciences nor religions justify racism in any form.

Ironically, in some countries it is observable that individuals who hold xenophobic and racist views are immigrants themselves or descendants of immigrants from previous generations. This observation should raise two paradoxical points for reflection:

1) Why do these individuals want to hinder society from benefiting from other skilled immigrants with talents similar to their own, if they consider themselves talented? Doesn’t this selfishness contradict the principles of equity and democracy that they themselves take advantage of, allowing them the freedom to express their racist attitudes?

2) By adopting racist views and perceiving other people or immigrants as inherently undesirable, they inadvertently provide evidence of that negativity within their attitudes as immigrant themselves. With racist attitudes, they perpetuate this negativity, affecting not only themselves but also those who share their mindset. It’s ironic that such individuals find themselves living in countries that grant them the freedom to express such behaviors while if their new countries were as racist as they desire them to be, they might not have this very freedom.

To effectively combat racism, it is indispensable to understand and address the underlying factors. People who are mentally and psychologically healthy are less likely to exhibit such attitudes. The root causes of racism, discrimination and xenophobia are often linked to personal experiences, educational bias, media influence, fear of others, fear of losing privileges, a desire to monopolize exclusive advantages, or simply psychological problems and trauma.

Implementing antiracism discussion curricula can prove to be a successful approach in preparing students to tackle issues of racism in their future professional endeavors. Lessening inequities and restoring justice can bring healing to society as a whole. Behavioral science and representativeness can also play a vital role in dismantling institutionalized racism. Encouraging the entire scientific and medical community to unite in advancing anti-racism principles is vital for establishing a healthcare system that is both more equitable and just. In order to tackle health inequalities, it’s crucial to implement a comprehensive anti-racism framework and to recognize and confront institutional racism, which plays a significant role and requires attention within the healthcare sector. Policies on inclusion, diversity, and justice must go beyond being mere slogans in academic journals and books. They must
be implemented as real and effective policies to create a fairer and more just society for all.

Finally, diversity is a fundamental aspect of humanity. Each person has a unique history, culture, and experience that shapes their identity and perspective. By embracing diversity and treating everyone with respect and dignity, an equitable society will be more rewarding than hatred and discriminatory society. Establishing safe environments, providing education, acknowledging, and addressing microaggressions, championing diversity, and proactively dismantling racist systems within medicine are essential steps to reduce racism.\(^{15}\) Racism is irrational. It stems from bias, often rooted in prejudice and ignorance rather than rational thought. Addressing racism is primarily a matter of education and teaching. Through the integration of anti-racist education into curricula, the cultivation of inclusive environments, and the encouragement of open dialogues about race and discrimination, progress can be made in dismantling prejudice and advancing equality. This empowers individuals to challenge stereotypes, recognize systemic injustices, and contribute to a more just and inclusive society. It’s a collective effort that requires ongoing commitment from communities, institutions, and individuals alike. Effective solutions to combat racism require comprehensive approaches that encompass educational and psychological interventions with broader societal efforts can lead to a more inclusive and empathetic approach to tackle racism and discriminations in all their forms and manifestations.

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References
