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Title of Initiative: Understanding the Influence of Interpersonal Biases on Health Outcomes and Disparities

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Objective: This initiative will support research that examines mechanisms and pathways linking interpersonal bias exposure to adverse physical and mental health outcomes and disparities.

Background: Interpersonal biases comprise two forms of stereotyping and prejudice defined by conscious awareness from those who harbor bias, including “implicit” or nonconscious and “explicit” or conscious forms. The term “interpersonal” refers to the way biases are transmitted, through relationships and/or communication between people. A member of any marginalized group may be subjected to interpersonal bias, including racial and ethnic minority groups, people with lower socioeconomic status, underserved rural communities, sexual and gender minority populations, and persons with disabilities.

Evidence shows that exposure to biases is associated with several adverse physical (e.g., hypertension, diabetes, asthma) and mental (e.g., depression, anxiety, psychological distress) health outcomes and is associated with an increased risk of mortality. Bias exposure also predicts disparities in heart disease, cancer, Alzheimer’s disease, and several maladaptive behaviors (e.g., poor sleep quality and quantity, substance use, and cigarette smoking). For instance, after controlling for economic indicators, Black patients living in areas with high implicit anti-Black bias exhibited a higher prevalence of heart failure than White patients. Similarly, the physical well-being of people with HIV was inversely associated with community implicit and explicit forms of HIV prejudice. Maternal health outcomes are also implicated, as counties with high anti-Black bias report the largest gap between Black women and White women in preterm births and low-birth-weight cases than counties low in bias. Evidence also links bias exposure to pre-clinical endpoints (e.g., coronary artery calcification, inflammation, oxidative stress) that often lead to chronic conditions, and to other “silent” indicators of poor health and premature aging, including allostatic load and shorter telomeres. Well established is that actual exposure to biases elicits maladaptive physiological responses, but evidence also suggests that perceived exposure or even the threat of exposure elicits similar physiological responses through the experience of vigilance, worry, rumination and anticipatory stress.

Interpersonal biases may lead to health disparities by exposing minoritized groups to negative feelings, attitudes, and/or behaviors over their multiple marginalized statuses

or identities. Since the landmark report *Unequal Treatment* published by the Institute of Medicine in 2003 and the recent release of *Ending Unequal Treatment* by the National Academies of Sciences, Engineering, and Medicine (2024), evidence documents the impact of exposure to interpersonal biases on individual-level health outcomes. Yet, research remains scant and siloed in scientific fields of study, including an absence of multilevel mechanistic studies. A need exists for transdisciplinary research examining processes leading from actual or perceived, repeated bias exposure to measurable health endpoints. The need becomes more evident when evaluating the pervasive nature of interpersonal biases. The Pew Research Center estimates that 70 to 80% of people exhibit an implicit preference for one racial group over another. Considering the expected continual increase in the proportion of U.S. residents who are vulnerable to biases based on recent Census estimates, the issue will continue to rise in severity if not addressed.

Current NIH efforts in this area: An FY 2019-2023 review of NIH grants on interpersonal biases related to health outcomes yielded 171 Research Project Grants (RPG) across ICs. Of the institutes, NIMHD funded the second highest number of RPG grants ($n = 30$). Of the 16 R01 grants funded by NIMHD, five projects focused on youth violence prevention interventions. The majority of R01 grant projects examined mental health outcomes and/or bias exposure in clinical settings. NIMHD sponsored a public workshop on June 17 and 18, 2024, that helped generate scientific knowledge for the upcoming Notice of Funding Opportunity on Understanding the Influence of Interpersonal Biases and Health Outcomes and Disparities.

Research gaps: Despite inroads made in the science of interpersonal biases and health, multiple issues remain unresolved including a comprehensive understanding of the various pathways and mechanisms in which biases influence health. For example, modern-day explanations for the bias-health link underscore the role of structural factors (i.e., unequal access to the health care system) and/or of behaviors from medical providers (i.e., unequal medical treatment, poor quality of care), but disparities remain after accounting for these differences. Evidence in this emerging field is also limited by a dearth of mechanistic, longitudinal, and epidemiological studies assessing the role of cognitive-perceptual (e.g., threat, vigilance, rumination) and physiological (e.g., inflammation, hypertension, accelerated aging) mediators and moderators (e.g., coping style, resilience factors) on health outcomes arising from bias exposure. The literature also presents widely divergent conceptualizations of the concept of interpersonal biases, including conflation of implicit bias with discrimination. There is also debate about how to best measure interpersonal biases in populations with multiple marginalized statuses and/or identities. Lastly, existing bias measurement tools exhibit psychometric deficiencies as many lack convergent validity, are of little use outside of a laboratory context, and/or provide only modest predictions of real-world behavior.

Description of Initiative: This initiative will support multidisciplinary and multilevel research to understand mechanisms and pathways through which interpersonal biases

influence health outcomes and disparities. Studies that utilize intersectional approaches to assess the influence of bias against multiple marginalized statuses and/or identities are encouraged. Also encouraged is research that examines resilience, coping, social support, and other protective factors that buffer against the impact of biases on health. Study designs may include longitudinal, epidemiological, observational, and/or experimental, examining associations between and among behavioral factors leading from bias exposure to health disparities.

Research Priorities: Areas of interest include but are not limited to the following:

- Assess temporal processes between actual and perceived exposure to biases and the development of adverse health conditions across the lifespan.
- Examine the effects of incremental and cumulative exposure to interpersonal biases over time on oxidative stress, and other physiological responses, and health outcomes.
- Investigate the combined and interactive influence of bias exposure with other social determinants of health across domains (e.g., built environment) and levels of influence (e.g., community, socio-structural) contributing to health disparities.
- Use historical approaches including intergenerational trauma to understand the manner that interpersonal biases shape health outcomes by revealing long-term patterns and mechanisms of inherited stress and discrimination.
- Assess sensitive, key transitional periods in exposure to biases to identify risk factors and optimal time points to mitigate the influence of bias exposure on health.
- Examine the influence of bias exposure on engaging in health-promotive behaviors (e.g., substance use abstinence) and health care utilization.
- Identify and isolate key cognitive mechanisms (e.g., vigilance, threat, worry) linking biases to maladaptive physiological responses and poor health.
- Assess similarities and differences between encounters with stereotyping and/or prejudice in contrast to discrimination exposure on chronic stress and health conditions across societal domains and contexts.
- Utilize systems science and social network approaches to examine how interpersonal biases are dynamically transmitted in population networks across contexts and social settings to influence health.
- Develop methods to improve measurement tools and to develop new, tailored tools that differentially measure the health impact of biases for different populations.