Cody Crnkovic
L3
LSU Health Sciences Center, New Orleans, LA

Dr. Vinod Dasa, MD
LSUHSC, Department of Orthopedic Surgery
Dr. Andrew Chapple, PhD
LSUHSC, Department of Biostatistics

Ethnicity, race and socioeconomic status are underreported in top orthopedic journals

Introduction: Ethnicity, race, and socioeconomic status (SES) can result in different outcomes and treatments for patients in all fields of medicine. In orthopedic surgery, this appears to be the case in certain areas such as joint replacement and spine surgery; therefore, ethnicity, race, and SES should be included in all studies, when applicable, to ensure proper assessment and treatment for unique patient populations. The purpose of this study was to identify published articles in 2019 orthopedic journals and determine if these studies included such documentation within the patient characteristics table.

Methods: Top 2019 orthopedics journals, not including subspecialties, based on impact factors were selected for evaluation. These include *Clinical Orthopedics and Related Research* and *The Journal of Bone and Joint Surgery*. Studies conducted outside the United States, lacking a characteristic table, or were bench research were excluded. This study considered race, income, education, and insurance; and quantified the percentage in these social economic descriptors factored into these journal's published studies. If any of these factors were considered in the study, further investigation was sought to determine their inclusion in a multivariable regression model and to quantify the number of studies which reported the effects. We report counts and percentages of reporting status in each journal, and test equality of reporting status distributions between the journals using Fisher exact tests.

Results: Only 56/159 (35.2%) of journal articles between *JBJS and CORR* reported race in table 1. Of the 99 papers that reported a multivariable regression model, only 30.3% included race in the regression, with only 21.1% reporting on the effect size. Similar trends are seen for ethnicity and SES, with 13.8% of papers reporting Hispanic ethnicity, and 8.2%, 14.5%, & 10.7% reporting income, education or insurance in table 1, respectively.

These reporting rates did not differ drastically between CORR and JBJS except with regards to race (p-value = .008, CORR = 47.1%, JBJS = 26.4%) and whether race was included in a multivariable regression model (p-value=.027, CORR = 42.9%, JBJS = 21.1%).

Conclusions: Ethnicity, race, and SES are drastically underreported in orthopedic database studies in CORR and JBJS. CORR does a slightly better job at reporting race, but still reports race in under 50% of their papers from 2019. It is important to report these factors in studies to identify whether certain subgroups of patients might be at a higher risk for adverse events or whether certain treatments and procedures differ in efficacy for different subgroups. Further work will be done to determine if the primary author's race and ethnicity had an influence on reporting these patient characteristics within their studies.