

Unfair Treatment Predicts Masked Hypertension in a Community Sample of Black and Latino(a) Adults

Antoinette Schoenthaler EdD¹, Jonathan Tobin PhD², and Elizabeth Brondolo PhD³

¹Center for Healthful Behavior Change, New York University School of Medicine, NY; ²Clinical Directors Network, Inc, NY; ³St. John's University, Jamaica, NY

BACKGROUND

The prevalence of masked hypertension (MHT) in untreated and undiagnosed adults ranges from 9 – 23% (mean 10%), and 9.4 to 19% in those with a history of hypertension.^{1,2}

- While it is increasingly clear that MHT is a risk factor for cardiovascular (CVD) and cerebrovascular (CVA) disease less is known about the risk factors for MHT.^{3,4}
- Characterizing the psychosocial stressors that increase the risk for MHT may help to identify those for whom further clinical evaluation is warranted.
- This may be particularly important in minority populations who experience disproportionate rates of CVD and CVA-related morbidity and mortality.⁵

OBJECTIVE

To determine whether perceived daily unfair treatment serves as a predictor of elevated ambulatory blood pressure (ABP) levels in a community sample of 630 Blacks and Latino(a) adults.

METHODS

Setting:

•Embedded within an larger trial designed to examine the relationship between race-related stressors and ABP in a sample of American-born Black and Latino(a)s receiving care in community health centers.

Eligibility:

- Self-identified American-born Black or Latino(a)
- Normotensive or unmedicated hypertensive patient
- Between the ages of 25 and 65
- Fluent in English

PROCEDURES

- Participants were assessed over the course of three study visits between October 2003 and August 2005.
- At Visit 1, measures of demographics, socioeconomic status (SES), and clinic blood pressure (BP) were collected. Approximately 2 weeks later, during Visit 2, participants were outfitted with the ABP monitor. Participants returned the next day (Visit 3) to receive feedback about their ABP.

MEASURES

Daily Unfair Treatment (Predictor Variable): Participants completed an electronic diary (SONY CLIE PDA with the Quest Admin Program) to assess quality of social interactions, with labeled icons illustrating perceptions of being treated unfairly. Participants were trained in the use of the diary and practiced completing diary pages at the time they were outfitted with the ABP monitor. Participants indicated the degree to which they experienced that perception on a scale of 1 – 100.

Blood Pressure (Outcome Variable):

Clinic Blood Pressure measurements were obtained with the OMRON HEM 704. Three readings were taken 1 minute apart from the participant's non-dominant arm; they had been seated for at least 20 minutes before obtaining the resting BP measurements.

Ambulatory Blood Pressure measurements were collected using the validated and reliable Suntech Accutracker II (Suntech Medical Instruments, Raleigh NC). After outfitting the participant with the monitor, a series of 8 sitting and standing baseline readings were obtained. During the 24-hour period, participants' BP was taken every 20 minutes from morning to bedtime and every hour after bedtime (i.e., the time participants reported they were likely to go to sleep).

Masked Hypertension was defined as a normal mean BP at Visit 1 (i.e., SBP \leq 120 and DBP \leq 80 mmHg) and elevated mean ABP (i.e., SBP \geq 135 or DBP \geq 85mmHg at Visit 3

ANALYSIS

- T-tests for continuous variables and chi-square statistics for categorical variables were used to determine significant differences between HTN groups.
- Case-control comparisons were used to examine the relationship between sociodemographic characteristics and HTN groups at Time 2: remained normotensive versus showed elevated ABP.
- Discriminant function analysis was performed to determine whether perceived unfair treatment predicted change in HTN groups from the Visit 1 clinic BP readings to the Visit 3 ABP readings.

RESULTS

- Half of participants were female, black, and had a high school education or some college. The mean age was 39 years and mean BMI was 28.
- A total of 252 of the 630 participants were normotensive (NTN) at Visit 1, of these 105 (42%) had normal ABP at Visit 3 (NTN/NTN) and 51 (18%) had elevated ABP (MHT).
- Those with MHT were significantly more likely to be men and less educated than those in the NTN/NTN group (X² (1) 32.09, $p < .001$ and X² (2) = 7.43, $p < .02$, respectively).
- Participants labeled as having MHT were significantly more likely to have higher scores on daily diary measures of unfair treatment (mean = 10.31) than were NTN/NTN participants (mean = 3.74), even when adjusting for participant age, race ($p = .001$) and gender ($p = .002$).

CONCLUSIONS

- In this study, a substantial proportion of individuals who appeared fully normotensive at rest went onto display significantly elevated ABP levels.
- Those who showed elevated ABP have experienced more daily unfair treatment.
- Inquiring about patients' experiences with daily levels of interpersonal conflict may help determine which normotensive patients might benefit from further clinical follow-up.