

THE BLOOD PRESSURE EFFECTS OF TALKING ABOUT ANGER
FOR ETHNICALLY DIVERSE ADOLESCENTS

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Purpose: Anger is a commonly-experienced feeling, especially during adolescent years when life and body are rapidly changing. There is evidence linking anger with elevated blood pressure (BP) but there has been little study of the anger-BP link in adolescents, especially across diverse ethnic groups. The purpose of this study was to describe BP for ethnically diverse adolescents during rest, when talking about a neutral topic and when talking about a topic that made them feel angry.

Method: This was a repeated-measures study describing BP for 131 African-, 103 Hispanic- and 116 Anglo-American adolescents, ranging between 11 and 16 years of age. The majority (53.1%) were female. BP was measured with an automatic oscillometric device (Dinamap) at rest, when talking about a neutral topic and a topic that made them angry. Data were collected in a quiet school room, using standard protocols. The average Body Mass Index (BMI) of the group was 22.5 (sd = 5.2) and was significantly different ($p < .01$) by ethnic group. Data were analyzed using a 2 (gender) X 3 (ethnic group) X 3 (resting, neutral- and angry-talking BP) repeated measures ANOVA with BMI as a covariate.

Findings: There was a significant gender-ethnicity interaction for systolic BP [$F(3.7, 579) = 2.7, p < .05$] and a significant main effect of ethnicity on diastolic BP [$F(3.5, 543) = 3.4, p < .05$]. For all subjects, except African-American males, systolic BP was highest during angry-talking; and highest systolic angry-talking BP occurred for Hispanic males ($X=118.8 \pm 14.2$) and Anglo-American females ($X=114.7 \pm 14.0$). Although ethnic groups differed little at rest, Hispanic-American subjects had higher diastolic BP at neutral- ($X=67.3 \pm 7.3$) and angry-talking ($X=70.1 \pm 8.8$) than either Anglo- (neutral: $X=65.2 \pm 8.0$; angry: $X=68.7 \pm 9.2$) or African-American (neutral: $X=64.9 \pm 9.7$; angry: $X=66.9 \pm 8.6$) adolescents.

Discussion: Hispanic-American adolescents were more responsive to angry-talking than either Anglo- or African-American adolescents. This could be related to cultural factors which influence their comfort with sharing a story of feeling angry or it could be related to situational factors, created by the research environment; all data collectors were Anglo-American females. These data highlight the importance of cultural considerations when studying health phenomena in adolescent populations. Data comparing the topics discussed during angry-talking for each ethnic group could provide additional insight.