associations with HIV risk in a single model, an approach we considered appropriate given that the three structures of the theory of gender and power have been described as being distinct, yet related, and as collectively influencing HIV risks. On the basis of previous research, we hypothesized that a wife’s autonomy would be negatively associated with HIV risk, and that a husband’s inequitable gender attitudes would be positively associated with HIV risk.

Modeling followed a two-step process. First, we performed confirmatory factor analyses to construct composite factors for the gender-based power measures. To estimate the factor for wife’s autonomy, we performed first- and second-order confirmatory factor analyses assessing the measure’s reliability and validity. The first-order factor model allowed us to test covariance among items for each dimension of wife’s autonomy; the second-order factor model allowed us to test covariance among the four dimensions of wife’s autonomy. The three survey items measuring husband’s inequitable gender attitudes were modeled on a single factor.

Next, we specified a structural equation model to test the hypothesized relationships between gender-based power and HIV risk indicators while adjusting for covariates. Because the gender-based power measures were categorical, we estimated the parameters by weighted least-squares using robust standard errors and mean- and variance-adjusted chi-square test statistics (previous work has shown that this approach can be used with categorical variables). Standard errors were adjusted for clustering. Because the quantity of missing data was small, we used listwise deletion. We report standardized beta estimates for all direct, indirect and total effects.

To evaluate model fit in the confirmatory and structural equation models, we used three indices: the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA). Models are generally considered to have adequate fit if scores on the first two indices are greater than 0.9 and that on the last is 0.06 or less. Descriptive analyses were performed in Stata 10.0, and structural equation modeling was conducted in Mplus version 5.0.

**RESULTS**

**Sample Characteristics**

Twenty-two percent of wives were younger than 24, compared with 8% of husbands (Table 1), and wives were twice as likely as husbands to have no formal education (46% vs. 22%). Almost one-third (30%) of husbands had used alcohol or marijuana in the past two weeks, and one

*We use the word “effect” in accordance with standard structural equation modeling terminology. However, as we noted earlier, the technique cannot prove a causal relationship.