Student persistence in the STEM disciplines continues to be a national problem, especially for women and underrepresented minorities. We present the results of an ongoing study involving the use of peer role models to reduce stereotype threat and increase minority women’s persistence in the calculus sequence. Half of the first-semester calculus break-out sections were visited twice by female peer role models (treatment condition) whereas the other half were not visited by peer role models (control condition). At the start and end of the semester we collected data on student beliefs, attitudes, and behaviors, such as belongingness in the mathematics department, personal mathematical ability, attitude toward mathematics, and intention to continue in the calculus sequence. In the control condition, female students’ beliefs about their math ability were highly significantly lower than male students. Whereas, in the treated condition, female students’ beliefs about their math ability were just as high as that of male students. This finding shows promising evidence that exposure to a female peer role model may improve women’s mathematics experiences. (Received September 22, 2015)