1086-VA-624 Karen Traxler* (karen.traxler@unco.edu) and Soofia Malik. Assessing the Reliability and Precision of the Visual Analog and Likert Response Scales in a Measurement of Statistical Anxiety in Undergraduate Students.

Response scale selection is a critical aspect of survey development. Two prevalent response scales in survey research are the Likert Scale and the Visual Analog Scale (VAS). In the medical field, the VAS is routinely used to measure levels of pain, disability, and anxiety. (Avery, 2010; and Morris et al., 2005). Researchers in mathematics education have been reluctant to employ VAS over the more widely accepted Likert rating scales; due in part to the many decisions necessary in the development of VAS, such as: line placement, length, or absence, anchor characteristics, and discrete vs. continuous scales (Couper, Tourangeau, Conrad, & Singer, 2006). In order to provide recommendations to researchers in mathematics education, the current study assessed the reliability and precision of scores derived from a 5-point Likert scale and VAS on a 10-item statistics anxiety survey. The participants were 400 undergraduate students at a university in the midwest United States. Results suggested that reliability coefficients were moderate to high, r = .66 to r = .91, with no indication of age or gender differences. The increased precision of measurement with the VAS provides evidence to recommend their use in future measurements of mathematical attitudes, beliefs, and opinions. (Received September 09, 2012)