

A GRAPHIC SCALE TO MEASURE PERCEIVED ABDOMINAL BLOATING

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Measuring symptoms of abdominal distension accurately and reliably provides an objective way of monitoring progress and outcomes of intestinal disorders. About 86% of patients experience "bloating" several times a week and consider it more distressing than pain or bowel dysfunction. Existing measurements for distension include questionnaires/scales, plethysmography, and bowel insufflation. However, these measures deal more with changes in girth, rather than perceptions of fullness or pressure. Physical methods may also be invasive, while textual instruments tend to be abstract, or difficult to quantify numerically. Graphic or pictorial scales do not rely on language or reading ability and are easy to administer. Examples include the Wong-Baker Faces Scale, Maunuksela Faces Scale, and Bieri Faces Pain Scale that are used frequently to assess pain. Development of a reliable, easily used measure for bloating could provide a useful tool for testing outcomes of therapeutic activities or research. Therefore, the **purpose of this study** is to test the reliability, validity, and feasibility of the "abdominal bloating scale" (ABS). **Design:** The scale consists of 10 stick figures in side view depicting increments in abdominal bloating with ordinal numbering 0-10 for no bloating to worst bloating. The Abdominal Distention Visual Analog Scale (ADVAS) and the Gastrointestinal Symptom Rating Scale (GSRS), both with known reliability and validity, will be used to determine concurrent validity. To determine face validity and ease of use, patients will be asked if this scale is an accurate depiction of bloating, easy to use, and then to rank the 3 scales in order of preference. **Sample:** A convenience sample (n = 100) of adult volunteers diagnosed with intestinal disorders from a Gastroenterology Clinic will be used. **Procedures:** Patients will report their bloating by each of the 3 methods and indicate whether the scale was easy to use and if it was a good representation of abdominal distention. Responses will be recorded on a 7-point scale. Patients will rank each of the 3 scales in order of preference. **Methods:** In addition to the ABS instrument, subjects will be given the ADVAS, consisting of a line 100 millimeters long with right-angle stops at both ends and bipolar anchors ranging from "none" to "worst" for bloating symptoms. Subjective sense of bloating symptoms is rated by placing a vertical mark on the line somewhere between 0 and 100 millimeters. Each subject will answer the questions on abdominal bloating on the GSRS. Patients will indicate whether the scale was easy to use (0= not easy and 6 = easiest ever seen) on an ease of use scale and if it was a good representation of abdominal bloating (0=not good to 6 = best ever seen) on a representation of abdominal bloating scale. Patients will be asked to rank-order the scales in order of preference (1=good, 2=better, 3=best). Associations among the 3 measures of patients' abdominal distention will be determined using Spearman rank correlation coefficient.