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1-1-2003

Reliability and Validity of the HRS

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Bennett, Mary P., "Reliability and Validity of the HRS" (2003). *Nursing Faculty Publications.* Paper 11.
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Reliability and validity of the Humor Response Scale (HRS)

The Humor Response Scale was developed for use in my dissertation. A research article from this study was published in Alternative Therapies in Health and Medicine (Bennett et al., 2003). Concerning the HRS, as far as I know, I am the only one who has used it up until now, although I have responded to requests from others for its use. Thus far, no one has returned any data to me from this work, so I cannot provide additional information on how it was used or if it has been used in other studies. It has face validity, and worked well in my dissertation to document humor response. It also has construct validity - the scale responses highly correlated ($r = 0.744$ $p = 0.001$) with changes in immune function, which was what the theory predicted would happen. I did not get evidence of concurrent reliability. Scores on the HRS did not correlate with self-reported sense of humor on either of the two sense of humor scales I used. (However, scores on the sense of humor scales did not correlate with any of the stress reduction measures or the physiological measures I used either, so I am not sure how good they were for this project).

As for reliability, this scale is an observer rating scale, which was only used by one observer, so I don't have inter-rater reliability on it. If I were to do another humor study I would video-tape the subject responses, then have two different observers use the scale to rate their response so I can get a measure of inter-rater reliability, but you have to check that each time you use more than one observer with an observer rating scale anyway. You also can not get internal reliability as the scale measures subject responses over time, unless you can count on having a stimulus which is equally funny across all time points. I tried looking at internal reliability, anyway, but it turns out that the movie I chose had a couple of time points that the subjects did not find as funny as the rest of the show, so the scores for these did not did not correlate with laughter achieved at later time points. If you are interested, the overall mean correlation for all time points was 0.486. If you remove time point #2 (the least funny part of the video) the correlation mean goes up to 0.604, and if you remove time 3 (some of the subjects were being scored on this less funny part at time two, while others were at time 3), the correlation goes up to .714. Again, I don't know how useful it is to try and document internal reliability on a characteristic that changes within the times that the instrument is being used. It appears to be a measure of how consistently funny the movie was, rather than really documenting how consistent the instrument is, but now you have the data, just in case.

The effect of mirthful laughter on stress and natural killer cell activity.

Bennett MP, Zeller JM, Rosenberg L, McCann J.

Altern Ther Health Med. 2003 Mar-Apr;9(2):38-45.