

Lynch, B. E., & Henry, D. R. (1979). A validity study of the Psychological Stress Evaluator. *Canadian Journal of Behavioral Science*, 11 (1), 89-94.

Investigators in the present study examined the Psychological Stress Evaluator (PSE) for its ability to measure arousal in vocal responses. The PSE is designed to capture inaudible changes (i.e., microtremors) in voice that may be associated with physiological arousal and stress. For the PSE analysis, verbal responses are recorded, and outputs from the PSE are scored by trained judges. Evidence for the validity of the PSE has been mixed, and the present study tested the PSE if it actually detects arousal in verbal responses, and if the PSE outputs could be indeed better scored by trained judges than untrained judges.

A total of 43 participants were asked to say 10 taboo words and 10 neutral words in a randomly order. It was hypothesized that taboo words would produce more arousal than neutral words, and the PSE should be able to detect arousal in verbal responses. Participants' verbal responses were tape-recorded for the PSE, and 2 trained judges and 10 untrained judges evaluated the PSE outputs. The judges made a decision whether or not a given verbal response was a taboo word or a neutral word. In addition to verbal responses, participants rated word stimuli on a 7-point scale, from very pleasant to very disgusting.

Although participants rated taboo words as more disgusting than neutral words, both trained and untrained judges failed to correctly identify taboo words and neutral words based on the PSE outputs. The accuracy of judgment based on the PSE was not different from chance. Thus, the PSE was not able to detect arousal in verbal responses to taboo words, and it appears that training did not contribute to a higher accuracy rate. It is possible that the level of arousal in the present study was too low for the PSE to detect. If a certain level of arousal or stress is required for the PSE to perform successfully, it is crucial to identify and quantify a lowest level of arousal or stress necessary for the PSE. More research is needed to understand the reliability of the PSE across various conditions of arousal and stress.