

**Nachshon, I. Elaad, E., & Amsel, T. (1985). The validity of the Psychological Stress Evaluator. Journal of Police Science and Administration, 13, 275-282.**

The PSE is designed to capture changes in voice that may be related to stress in the act of deception. Evidence for the PSE in the detection of deception is mixed, and it is not clear whether or not the PSE actually provides information that is useful to detect the act of deception. Particularly, in controlled laboratory studies, the PSE has not received much support, and many laboratory studies provided negative results regarding the validity of the PSE in the detection of deception. However, laboratory studies are criticized for an unrealistic setting and a lack of stress for the PSE to detect. The present study was, therefore, conducted in a field setting with real criminal suspects. In the study, the PSE was compared to other polygraph methods, and the consistency between the PSE and other polygraph methods was examined.

A total of 40 criminal suspects were individually interrogated. In an interrogation, galvanic skin responses (GSR), respiratory activities and cardiovascular responses were measured and recorded. All verbal responses were recorded for the PSE evaluation. A blind procedure was used for all polygraph and PSE evaluations, and evaluators had no knowledge whether or not responses were made to crime-related questions or control questions. Responses were evaluated as pairs of a crime-related question and its control question, and evaluators were to decide which response in a pair showed more stress. Then, a given suspect was identified as a deceiver if crime-related responses showed more stress than control questions.

First, PSE evaluations of response pairs were compared to polygraph evaluations. Correspondence scores between PSE evaluations and polygraph evaluations ranged from 33% to 55%, but they did not exceed the chance level. When PSE evaluations were compared to polygraph evaluations for the correspondence of final decisions (i.e., a deceiver vs. a truth-teller), PSE evaluations and polygraph evaluations agreed on deceiver decisions for 8.82%, and they agreed on truth-teller decisions for 64.71%. Thus, the present study showed that there were some degree of consistency between the PSE and other polygraph methods. However, some correspondence scores still did not exceed the chance level.