

This Week's Citation Classic

Zuckerman M, Kolin E A, Price L & Zoob I. Development of a sensation-seeking scale. *J. Consult. Psychol.* **28**:477-82, 1964.

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A Sensation Seeking Scale (SSS) was developed to provide a measure of individual differences in optimal levels of stimulation and arousal. Factor analyses revealed a general factor, similar in males and females, running through diverse kinds of items. Reliability and initial validity studies are reported. [The **Social Sciences Citation Index® (SSCI®)** indicates that this paper has been cited over 180 times since 1966.]

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"In the early-1960s I was working in the area of sensory deprivation (SD). Volunteers in these experiments were isolated from the world of external stimulation in dark, soundproof rooms or water tanks for periods ranging from one hour to two weeks. Some of the effects of the situation, such as anxiety and hallucinations, were found to be due to variations in the experimental conditions and the sets produced by the instructions and conditions. But a wide variety of individual reactions could not be entirely explained by these factors. Personality tests were given to subjects in an attempt to identify traits that made some persons more vulnerable to the effects of SD. I formulated a theory that there were individual differences in what constituted an *optimal level of stimulation* (OLS) or arousal, and that these differences played an important role in determining responses to SD.¹ Since there was no personality test specifically derived from the OLS construct, we developed the Sensation Seeking Scale (SSS). The cited article contains the first version of the test (subsequent forms were published in 1971 and 1978^{2,3}).

"An experimental form was given to a large number of subjects and their responses were

factor-analyzed to see if there was a common factor running through the items. The items expressed preferences for extremes of sensation, novel experiences, irregularity as opposed to routine, and enjoyment of risky activities or sports and exciting persons. A general factor was found that was very similar in males and females. A scale was formed on the basis of these analyses and its reliability was determined.

"The initial applications of the scale to the prediction of responses to SD produced mixed results, but high sensation seekers were generally more restless in SD or social isolation confinement situations. But other investigators found the test, and the theory behind it, useful in many other areas, such as research on drugs and sex. The test has been shown to be related to these phenomena as well as physical risk-taking, vocational interests and choices, and perceptual and cognitive styles.

"The earlier theory of sensation seeking had suggested a biological basis for the trait in the balance between strength of excitation and inhibition in the central nervous system. Beginning in the mid-1970s, studies by our group and others found a number of psychophysiological and biochemical correlates of the SSS.⁴ Genetic studies using twins showed a high heritability for the trait. A recent book⁵ has summarized all of the phenomenal and biological correlates of sensation seeking and the last chapter of this book presents a new biological model for the trait based on the pharmacology of the limbic reward systems.

"SD led us into sensation seeking, and a test designed for prediction of phenomena in a narrowly defined experimental situation has proven to have validity for much broader aspects of life experience. The idea that personality differences are rooted in biological traits is not new, but it is attracting increasing interest as a consequence of the new discoveries in neuropharmacology."

1. **Zuckerman M.** Theoretical formulations. (Zubek J P. ed.) *Sensory deprivation: fifteen years of research.* New York: Appleton-Century-Crofts, 1969. p. 407-32.
2., Dimensions of sensation seeking. *J Consult. Clin. Psychol.* **36**:45-52, 1971.
3. **Zuckerman M, Eysenck S & Eysenck H J.** Sensation seeking in England and America: cross-cultural, age, and sex comparisons. *J. Consult. Clin. Psychol.* **46**:139-49, 1978.
4. **Zuckerman M, Buchsbaum M S & Murphy D L.** Sensation seeking and its biological correlates. *Psychol Bull.* **88**:187-214, 1980.
5. **Zuckerman M.** *Sensation seeking: beyond the optimal level of arousal.* Hillsdale, NJ: Erlbaum. 1979. 449 p.