



PERGAMON

Personality and Individual Differences 32 (2002) 67–78

PERSONALITY AND
INDIVIDUAL DIFFERENCES

www.elsevier.com/locate/paid

Sensation seeking and performance on divided attention tasks varying in cognitive complexity

Joseph A. Buckhalt *, David F. Oates

*Department of Counseling & Counseling Psychology, Haley Center 2084,
Auburn University, Auburn, AL 36849, USA*

Received 28 April 2000; received in revised form 28 November 2000; accepted 29 December 2000

Abstract

Previous research has been inconclusive in testing Zuckerman's hypothesis that performance for persons high and low in sensation seeking should differ on focused and divided attention tasks. The present study used two primary tasks, the Sternberg Memory Search Test and a card dealing task, each with three levels of complexity. The secondary task was subjective time estimation. No differences between groups high and low in sensation seeking were discovered. Results are discussed in the context of previous theory and research. © 2001 Elsevier Science Ltd. All rights reserved.

Keywords: Sensation seeking; Divided attention; Short-term memory; Cognitive complexity; Subjective time estimation

Zuckerman's theory (Zuckerman, 1979, 1983, 1991) has proposed that individuals high and low in sensation seeking may process information differently due to differences in arousal and attention. Martin (1985) postulated that while high sensation seekers should do well in a selective attention task for which certain stimuli must be attended to and others ignored, they should do worse than low sensation seekers on tasks that require them to distribute their attention. Using the Embedded Figures Test (Witkin, Oltman, Rasking, & Karp, 1971) as a test of focused attention and a task requiring listening to speech while reading aloud, Martin (1985) found that high sensation seekers were significantly less adept at detecting speech targets presented aurally while

* Corresponding author. Tel.: +1-334-844-2875; fax: +1-334-844-2860.

E-mail address: buckhja@auburn.edu (J.A. Buckhalt).

they read aloud than low sensation seekers. Under conditions in which subjects were required to selectively attend to a single stimulus, however, the high sensation seekers performed better. While not directly studying attentional differences, Ball and Zuckerman (1990) considered the possibility that superior attention-focusing ability could have accounted for better performance by high sensation seekers on a concept learning task. Contrary to the conclusions of Martin (1985), however, they also concluded that high sensation seekers may have been able to divide attention better than low sensation seekers. They randomly assigned high and low sensation seekers to different conditions of reward and punishment in a series of concept formation tasks. The tasks entailed choosing between two visual stimuli which varied systematically on eight different dimensions. A “correlated attribute” condition provided for the presentation of an irrelevant stimulus in 75% of the trials in which the reinforced stimulus appeared. After subjects reached the criterion of five correct responses, a shift occurred during which the previously irrelevant stimulus became the reinforced stimulus. High sensation seekers learned the pre-shift task more quickly than lows across both reward and punishment conditions. High sensation seekers also learned the post-shift concept more quickly than lows when this attribute was partially reinforced on the pre-shift task. Ball and Zuckerman (1990, p. 352) concluded that the role of selective attention in sensation seeking needed to be addressed further with tasks developed specifically for that purpose.

In a follow-up study, Ball and Zuckerman (1992) studied selective attention of high and low sensation seekers during focused and divided attention on a dichotic listening task. Using a primary shadowing task in which subjects repeated words heard in one ear while performing a secondary light detection task, and a shadowing task presented to both ears, they predicted that high sensation seekers would exhibit superior performance on both the focused and divided attention tasks, and that they would demonstrate longer reaction times due to their increased attention to focal stimuli. As previous research (Ball & Zuckerman, 1990; Martin, 1985) had been inconclusive, no predictions were made for the divided attention task where subjects listened for target words among stimuli presented to both ears. While high sensation seekers performed better on the shadowing-only task, the difference did not reach statistical significance ($P=0.08$). In the divided attention with shadowing and simultaneous light detection, performance of the high sensation seekers was significantly better ($P=0.038$). Contrary to expectations, there were no differences between the groups for reaction time, and there were no differences for the divided-listening task. Suggestions were made to test other specific cognitive abilities in this general paradigm including immediate and short-term memory, basic sensory and perceptual processes, and resistance to distractibility. In addition, it was recommended that testing across different sensory and response modalities would be useful to rule out the possibility that the performance of high sensation seekers had not been the result of greater verbal facility.

The present study uses subjective time estimation and two different short-term memory tasks in a divided attention paradigm to determine differences between persons low and high in sensation seeking. While previous studies have documented apparent differences between high and low impulsivity in terms of time interval estimations with high impulsive subjects consistently overestimating temporal durations, (Bachorowski & Newman, 1985; Barratt, 1981; Barratt & Patton, 1983; Siegman, 1961; van der Broek, Bradshaw, & Szabadi, 1992), no studies have explored the relationship of time estimation to sensation seeking, and none has controlled for cognitive complexity of the primary tasks in a divided attention paradigm.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات