A Cognitive-Based Indicator of Deviant Sexual Arousal: Concurrent Validation of the Emotional Stroop

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The extensive media coverage of sex crimes perpetuates society’s view of sex offenders as violent, predatory, and recidivistic. The reality is that sex offenders are not a homogenous group and they vary in level of pathology, violence, arousal patterns, and overall risk of sexual reoffending (Finkelhor, 2009). Despite commonly held stereotypes, the overall rate of sex offender recidivism is quite low relative to other crimes. Recent meta-analyses have demonstrated that 5-14% of sexual offenders will reoffend after three to five years post-release from incarceration (Hanson & Bussière, 1998).

The strongest predictor of sexual recidivism among sex offenders is deviant sexual arousal (DSA; Hanson & Harris, 2000). Phallometric testing is currently the most accurate measure of DSA; however, it is also invasive and costly. Self-report, while less invasive, is vulnerable to social desirability and lack of self-awareness. Recently, several less invasive, cognitive measures of DSA have been proposed.

One promising measure is the Stroop test, a task that measures attentional interference when participants are presented with words and asked to state the color of the word ink while ignoring word meaning (Stroop, 1935). The Stroop has been modified to illustrate emotional interference among patients with affective disturbances, as longer latencies have been found for color naming words relevant to one’s own pathology (Fairburn et al., 1991; Williams et al., 1996). Two studies have thus far employed a modified Stroop task to measure DSA among sexual offenders, with mixed results (Smith & Waterman, 2004; Price & Hanson, 2007).

The current study aims to take a step back to determine whether the Stroop is a viable alternative measure of DSA by administering the task to a non-offending sample. The primary goals of this study, therefore, are to: identify rates of self-reported DSA among a non-offending sample, employ the Stroop task to assess response latencies to color name sexually deviant words relative to non-deviant and neutral words, and finally, to evaluate the concurrent validity of the Stroop methodology as a measure of DSA by correlating deviant word interference with self-report. It is hypothesized that those with the greatest self-reported DSA will exhibit the greatest interference effects for sexually deviant words, and that among those with self-reported DSA, participants will exhibit greater interference for sexually deviant words than non-deviant and neutral words.

Method

Participants in the present study include university students at least 18 years of age, enrolled in undergraduate courses participating in the Research Experience Program. Participants first complete a computerized modified Stroop Task. They are shown a series of words presented in various ink colors, and use a keyboard to indicate the ink color of each word while response times are recorded.
Participants then complete a computerized self-report measure about their sexual fantasies and interests.

**Measures**

*The Emotional Stroop* (Stroop, 1935). The Stroop measures interference effects when participants are asked to state ink color while ignoring word meaning. In this study, a modified version is being employed using sexually deviant, sexually normative (non-deviant), and neutral words.

*Sexual Interest Questionnaire* (SIQ; Gray et al., 2003). The SIQ is a 93-item measure that measures the frequency of various sexual fantasies on a 5 point Likert scale.

**Implications & Future Directions**

If a significant relationship between self-reported sexual arousal and Stroop performance is found, the next step in this line of research will be a comparison of Stroop performance to the best concurrent measure of DSA currently available, phallometric testing.

Clinicians are often asked to evaluate sexual offenders’ recidivism risk to inform decisions about treatment, sentencing, and post-release supervision. However, sex offenders vary widely in their risk of reoffending. Thus, accurate identification of those who are at highest risk is crucial, so that policies, resources, and treatment may be allocated, based on risk level, to those offenders for whom these interventions are most appropriate (Storey et al., 2012). Validation of the Stroop as a measure of sexual arousal in general seems an essential step to accomplish before comparisons between offender groups can be meaningful. Provided that the Stroop is a valid measure of DSA, this research has far reaching implications for sex offender risk assessment. Phallometry is invasive, expensive, and difficult to administer. The Stroop, however, is non-invasive and would provide a faster and significantly less invasive alternative for evaluating sexual recidivism risk.