



Presence or absence of video based knowledge produce p300: An ERP based brain stimulation study

Om Kant Sharma

Gujarat Forensic Sciences University, India

Abstract:

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In the modern world, existing ways of investigations are becoming limited in its scope. Right to remain silent, right to not give any statement against oneself, which are promised by the constitution is easily exploited. There is need for novel strategies for collecting evidence, investigating the missing links of the crime without hampering anyone's personal rights. Technology is one such promising advancement. In the contemporary world, where technical advancements are taking over almost all the possible areas, Forensic sciences also need such a technical advancement. The inclusion of such technical aspects should both help investigator and innocents to prove themselves right. In this paper, one such available tool ERP (event related potential) is studied extensively for its reliability in the forensic setting and validity of its evidence in courtroom. P300 is a type of evoke elicited by brain in electroencephalogram, which indicates the recognition of particular stimulus. In this paper, P300 is assessed and analyzed. 24 volunteered university college students participated in the study. They were randomly divided into two groups (Experimental & Control). Experimental group were shown a crime scene video and two types of probes (target & relevant) were set which identifies the knowledge about the crime scene. ERP was administered on both the groups. It was assumed to



be only experimental group would show the P300 evoke but results showed were against our expectation. Results showed that P300 alone cannot be used as measure to test presence of relevant information nevertheless the study showed a promising results in terms of components of P300. The latency (reaction time) of the experimental group was significantly more than control group. Detailed explanation of the results is discussed in the paper.

Biography:

Om Kant Sharma, M Phil, Forensic Psychologist, Arka Forensic Attorneys [P] Ltd, New Delhi, research done by me under the supervision of Dr. Priyanka Kacker, Assistant Professor, Institute of Behavioural Sciences, Gujarat Forensic Sciences University, Gandhinagar, Gujarat, India.

Recent Publications:

1. Om kant sharma, Journal of neurology, 2019

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