ABSTRACT

The ability of the skin to identify color has long been suspected and a few studies have ventured to establish it. An exploratory study is undertaken to overcome the lacunae in the area of extraocular color vision (EOCV) so as to contribute to the knowledge and philosophy of science as well as to provide a springboard for further training and development. The objective is to establish experimentally that EOCV is not due to chance and that color is identified extraocularly. The sample consists of an equal number of male and female volunteers drawn from the sighted, partially sighted, and totally blind populations. A total of 64 subjects - half of them sighted - is presented under controlled conditions with three stimuli, each stimulus 24 times, at a distance of about 4 cm from the ventral side of the left hand. Correct responses obtained in terms of 0, 1, and 2 for blank, blue, and red stimuli respectively indicate EOCV. The scores based on such a measurement are found to be reliable and valid. The average performance is significantly above chance. Blue color is more accurately identified than other stimuli. Practice improves EOCV quite considerably. The totally blind are better than the other groups in identifying the stimuli and in benefiting from practice. Sex, time of the day, and time interval have no significant effect on EOCV. Several background, personal, psychological, and visual impairment variables are capable of predicting extraocular color sensitivity. It is imperative to change the outlook toward the capability of human sensitivity.