Methodology

Objectives

Relationship between handedness and schizotypal personality has been intensively studied in western society (Collinson et al., 2004; Gruzelier & Doig, 1996; Schiffman et al., 2005; Somers et al., 2008). Few studies have also been conducted in Asian societies (in Japan: Asai & Tanno, 2009; Gregory et al., 2003; in Taiwan: Chen & Su, 2006), however, as far as we know, no study has sought to understand the relationship between handedness and schizotypal personality in Indian society. The present study seeks to understand the effect of handedness and other lateral preferences on schizotypal personality. Sex and its relationship with handedness in effecting schizotypal personality is an additional focus of the present study.

Hypotheses

Based on prior research following hypothesis were formulated:
1. Non right-handers are expected to have higher schizotypal scores than right-handers.

2. Participants with left lateral preferences (foot and eye) are expected to have higher schizotypal scores than participants with right lateral preferences.

3. Participants with discordance lateral preferences are expected to have higher schizotypal scores than participants with concordance lateral preferences.

4. Male participants are expected to have higher score than female participants on negative schizotypal personality factor (interpersonal-affect) subscales.

5. Female participants are expected to have higher schizotypal score than male participants on positive schizotypal personality factor (cognitive-perceptual) subscales.

**Participants**

A sample of 588 college students and faculty members (Male, \(n = 313\); Female, \(n = 275\)) with mean age of 22.4 years (\(SD = 3.5\), range = 17 to 35 years) were selected from colleges of Muzaffarnagar based on availability. Most of the participants were
Hindus (95.6%) whereas nine out of ten among the rest (4.4%) were Muslims. The educational profile of the participants was: 260 undergraduates (44.2%), 247 postgraduates (42%), and 81 above-postgraduate (13.8%).

**Tools Used and Procedure**

Schizotypal personality was assessed using Schizotypal Personality Questionnaire (SPQ; Raine, 1991). The questionnaire contains 74 items with a forced choice responding schedule. It is an instrument with high reliability and validity (Raine, 1991). Studies have shown that SPQ has strong cross-cultural validity also (Reynolds et al., 2000). A Hindi translated version of SPQ was used in the present study. This version of SPQ has been in use in the laboratory of the Department of Psychology in D.A.V. College, Muzaffarnagar, for some time. The procedure of translation included an initial draft of Hindi translation of questionnaire by researchers in the department which was modified and agreed upon by two translators, teaching English literature for more than 10 years and well versed in nuances of English language and literature. This final Hindi translated version of SPQ was also send to Adrian Raine for records.
A composite questionnaire was used to assess lateral preferences of the participants. This included 14 items for assessment of handedness, drawn from Edinburgh inventory (Oldfield, 1971), and five items each for eyedness and footedness, drawn from Coren’s lateral preference questionnaire (2000). A five-point response scale: always left, generally left, equal, generally right, and always right, was attached with the items of the questionnaire. A laterality quotient was calculated for lateral preference of each of the modality: hand, eye and foot, using the formula: \( LQ = \frac{(\text{total value of items} - 3 \times \text{number of items})}{2 \times \text{number of items}} \times 100 \). This formula gives a common range of scores (from -100 to 100) for handedness, footedness, and eyedness. The scores from -100 to 0 LQ represent left preference whereas scores from 0 to 100 LQ right preference (Singh et al., 2001).

The participants were assessed individually as well as in groups. The investigator read out the instructions in both the cases. Care was taken that the method of approaching participants was not exclusive to the handedness category. Studies have shown that the number of left-handers in Indian population is quite low (Mandal et al., 1993; Singh et al., 2001; Singh & Bryden, 1992). However, any
meaningful analysis of discordant-concordant lateral preferences among left-handers requires a relatively large number of participants with left preference. Therefore, left-handers were actively sought during the data collection.

Left-handers were approached through advertisements placed at notice boards of the colleges, through referrals, and as part of classes that became available for data collection. When left-handers were approached individually care was taken that his /her right handed friends were also assessed.

**Variables and Statistical Analysis**

Handedness, footedness, eyedness, hand-eye preference, hand-foot preference, sex, and age were the independent variables whereas participants score on SPQ and its subscales the dependent variables. Regression analysis was used to identify key variables having an effect on schizotypal personality. Further, analyses of variance were undertaken to understand the effects of these selected variables on schizotypal personality and its different subscales. Correlation and frequency analyses were also used to understand relationship between different variables.