METHODOLOGY

CHAPTER III
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Design:

To fulfill the objectives as outlined in the previous chapters, the present study was conducted in two phases. In the first phase a survey was conducted on a large sample (i.e. N=1033) drawn from general population. A measure of belief in heredity / environment for human characteristics was administered to all the S's. Information regarding their age, sex, caste (social class) and educational qualification etc was also gathered.

In the second phase, a three group design (see Table 3.1) was used to study the effect of belief in heredity / environment for human characteristics on perception of self and others (i.e. individual's belonging to different social classes and enrichment conditions). The three groups were strong heredity (H) believers, balanced (B) believers and strong environment (E) believers, short listed from the first phase. S's scoring between 20-33 were considered to be strong H believers, those scoring between 34-47 were categorised as balanced believers, and Ss scoring more than 47 i.e. between 48-60 were considered as strong environment believers. A total of 300 subjects i.e. 100 in each group were taken for further study.
Table 3.1  Design of the study (N=300)

<table>
<thead>
<tr>
<th>Strong (H) believers</th>
<th>Balanced (B) believers</th>
<th>Strong (E) Believers</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=100</td>
<td>n=100</td>
<td>n=100</td>
</tr>
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</table>

Sample:

In the first phase a total of 1033 (N=1033) S’s drawn from general population were selected following non-random incidental sampling procedure. All the S’s were from Bhiwani city and nearby villages. Literate and illiterate S’s from both the sexes (male and female) were selected. S’s were drawn from urban as well as rural areas. The sample characteristics are shown in Table 3.2.

Table 3.2  Sample characteristics

| Age: range 18-70 years,  | $\bar{X} = 39.85$ years, $\sigma = 5.84$ years |
| Sex: Male = 573          | Female = 460                              |
| Education: Literate=930  | Illiterate = 103                           |
| Social class:            |                                              |
| General                  | $= 729$                                    |
| Other backward class     | $= 192$                                    |
| Scheduled caste          | $= 112$                                    |

The age of the S’s selected in the sample ranged from 18 years to 70 years. There were 573 males and 460 female S’s. The sample was predominantly literate (n=930) with a minority of (n=103) illiterate persons.
With regard to social class, there were 729,192 and 112 S's respectively in general class (GC), backward class (OBC) and scheduled castes (SC). This was ensured from the official notifications of the state governments. The S's were from different occupational groups, in addition to students, the occupation of the S's was, teaching (in schools, colleges and universities), agriculture, shopkeeper and business, daily wagers and labourers, doctors, nurses, other government services and housewives.

**Tools used:**

The following tools were used in the study:

1. **Measure of belief in heredity / environment for human characteristics**: A measure of belief in heredity / environment for human characteristics (Singh and Shyam, in press b) was used for measuring belief in heredity / environment for human characteristics. The checklist consists of 20 human characteristics of different types such as - performing arts, body height, orderliness, emotional instability, skin color, egocentricity, linguistic ability, scientific aptitude, color of hair, reasoning ability, aggression, anxiety, cleverliness, sociability, creativity, leadership, numerical ability, humour, body weight and bravery. The scale consists of connotative descriptives (in Hindi) of all the characteristics and arranged in the form of checklist subscribed with a three point scale. Items finally selected (i.e. 20 human characteristics) attest to an endorsement rate of around 0.5
(50%) and discriminate well between heredity and environment believers. The Kuder - Richardson reliability (KR-21) coefficient of the scale is .68. The checklist was standardized on a sample of 3001 S's drawn from heterogeneous population. The score of a person may range from 20-60. High score indicates environment oriented belief whereas low score indicates a subject's belief in heredity for human characteristics. Normative scaling has also been provided. A subject whose total score comes between 20-33 is considered as having belief in heredity, between 34-47 as having balanced belief and one who scores in the range of 48-60 is considered as having belief in environment. Taking a 3 point scale (by computing mean rating for 20 characteristics) a person below 1.70 could be categorized as heredity (H) believer and above 2.35 could be categorized as environment believers, while between 1.70 to 2.35 can be categorized as heredity - environment combine believer. The checklist is given in Appendix I.

**Value test (Ojha, 1992)**

To measure the value pattern of the S's, Hindi version of 'The Study of Values' (Ojha, 1992) was administered. The main aim of 'the Study of Values' is to measure six basic interest or motives in personality: the theoretical, economic, aesthetic, social, political and religious. This type of classification is based upon Spranger's type(s) of man (Spranger, 1928). The present scale in Hindi was designed for use in college students, studying
in graduate and postgraduate classes. It is also useful for adults who have equivalent qualification for service and business. The study of values is self-administering. It consists of a number of questions based upon a familiar situation. The test has two parts; the first part consists of 30 items and the second part consists of 15 items with four alternative answers each. Roughly 20 alternative answers belong to each of the six values. The subject records his preferences numerically by the side alternative answers.

The internal consistency of the scale is determined by split-half method. The reliability coefficients ranged from .76 to .84 for the six type of values i.e. theoretical (.78), economic (.81), aesthetic (.76), social (.82), political (.83) and religious (.84) for the revised form. 'The Study of Values' was standardized on a normative sample of 2450 (N=2450) drawn primarily from college students. Norms are provided in the form of means and SD’s. Scoring procedures have also been clearly outlined in the Manual both for part one and two. The total score for all the six values must equal to 240 (for part I 90 and for part II 150). Test booklet of the Hindi version of 'the Study of Values' is given in Appendix II.

Person Perception (self):

To measure the self-perception of the subjects, semantic differential for 20 human characteristics (which were used in the Measure of Belief in Heredity / Environment) was prepared. Each characteristic was presented in the form of bipolar adjective and the S’s were asked to rate the
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characteristics on a seven (7) point scale. Endorsing to scale point 1 shows that the characteristic / trait is present in the subject in its full vigour whereas to scale point seven (7) shows that the characteristic / trait is not present in the subject. If the subject checks on scale point 4, it shows the characteristic / trait is moderately present. The bipolar adjectives were given in both English as well as Hindi, however, the instructions with an example were given in Hindi (Appendix III).

The positive and negative direction of the characteristics / traits and their scale points were randomized. The semantic differential used for measuring self perception is given in Appendix III. For each characteristic / trait the score is the exact numerical value of the scale point checked. It may range from 1 to 7. Therefore the total score of a person on all the 20 characteristics may range from 20 to 140.

Person perception (others) protocols:

To measure the person perception of others i.e. social perception, 4 semantic differentials with primed protocols for two social classes, i.e., Low (Harijan) and High (Brahmin) with two environmental conditions, i.e., deprived and enriched were taken. A clear description of the social class and the enrichment condition was provided along with instructions in native language. Thus four semantic differentials were prepared. The first was about a person belonging to Harijan class with deprived conditions. S’s were asked to rate the 20 human characteristics (same as used in the measure of
heredity / environment belief and in self-perception) on a seven (7) point scale with a varied instruction (Appendix-IIIa). Similarly, semantic differentials for Harijan with enriched conditions, Brahmin with deprived condition and Brahmin with enriched conditions were also prepared. Their scores may also range from 20-140 in each case. The semantic differentials used for measuring other’s perception are given in Appendix IIIa.

**PROCEDURE**

In the first phase of the study a measure of belief in heredity / environment was administered to 1033 S’s drawn from general population from Bhiwani city and nearby villages. The checklist was administered individually to all the S’s under uniform testing conditions. Information regarding their age, sex, educational qualification, occupation, residence (in either rural or urban localities) was also recorded at this time. Scoring for the checklist of belief in heredity / environment was done as per scoring procedure laid down. Means and SD’s for the total heredity / environment belief score for all the 20 characteristics were calculated. Three hundred (300) subjects, 100 each in heredity (h) believers, moderate or balanced (M) believers and environment (E) believers category were selected (as described in sample). Hundred subjects who scored between 20-33 were selected in the ‘h’ believers category, hundred S’s who scored between 34-47 were selected in moderate believers category and hundred S’s who scored between 48-60 were selected in the environment believers category.
These 300 S's shortlisted from the first phase of testing were then administered ‘Study of Values’ and measures of self and others’ perception individually under uniform testing conditions.

**Scoring**

Scoring of all the measures was done according to the procedure laid down in manuals (eg. study of values) and in case of belief in heredity / environment and measures of self and other’s perception, as per scoring procedure described above.

**Statistical analysis**

In addition to measures of central tendency and variability the data in the present study were analysed by one way ANOVA; 3x2x2 ANOVA repeated on last two factors was employed to examine the effect of belief in heredity / environment, social class and enrichment condition on other’s perception (Winer, 1971; Broota 1989). Wherever necessary post hoc tests were employed to enrich the interpretation.