CHAPTER - 2

METHODOLOGY

In the previous chapter our major concern was
to present briefly some of the views about human nature,
meaning of altruism, related concepts, and various
theoretical approaches about altruism. After that a
resume of the previous researches on the problem and
derivation of problems necessiating further researches
were delineated.

The present chapter is intended to cover
methodology used in the present investigation to probe
the various issues raised at the end of the previous
chapter under the caption of"derivation of problems."
The general methodology employed in any research include,
the sample, the mode of observation and the tools,
measurement and variables, and the procedure. The metho-
dology followed in the present research is presented below.

Sample :

Whichever mode of data collection behavioural
scientists use to study behaviour, they have to question
or observe some portion of the people rather than deal
with everyone. The behavioural scientists are confronted
with the problem of selecting a population or drawing some
people out of the entire population to probe the issues
or questions raised. Thus, a sample is a part of a
population of people or things probed in order to under-

stand the whole. Accordingly, the central issue is not
the sample or whether it is drawn randomly, but rather
its representativeness. A truly representative sample
is one that faithfully reflects the population from
which it is chosen. A representative sample provides a
sound basis for generalizing about the population from
which the sample is drawn. Unrepresentative (or biassed")
samples can lead to erroneous generalizations and
consequently to wrong conclusions.

After deciding the population to be studied,
the investigator, selects a truly representative sample,
as it is impossible for him to study the entire population.
Not only that, when the population is too large no
appropriate statistics can be applied. So it is generally
assumed that any particular attributes are found equally
among all the members of the population. Therefore,
instead of studying the entire population a representative
sample is drawn from it. By selecting representative
sample, not only time, energy and lot of money is saved
but efforts are made to obtain errorless results and
conclusions.

The universe of the present investigation, from
which the sample was drawn comprised of undergraduate
students of Shibli National (P.G.) College, Azamgarh.
The college draws students from Azamgarh district and all

the neighbouring districts of eastern Uttar Pradesh. The universe had 700 participants from Arts, Science and Commerce faculties of the College, consisting both rural and urban, Hindus & Muslims, males and females from various Socioeconomic strata. Some of the participants were volunteers/cadets of N.S.S. and N.C.C. The formal and traditional method of stratified random sampling was adopted because stratification variables are largely associated with sociocultural variations in Indian population, and they are supposed to be useful criteria in selecting a representative and useful sample. So in view of this fact, stratified random sampling technique was followed in choosing the partipants for various groups in accordance to variables as stated earlier in the first chapter under the caption of "derivation and statement of problems." Socioeconomic status of the parents was also kept in view while selecting the sample. All possible precautions were taken to make the sample a true representative of the young--adult population of eastern U.P.

Modes of Observation and tools:

In whatever setting research is conducted, someway of observing the behaviour--under investigation must be devised, that is, modes of observation must be decided. By modes of observation we mean the sorts of data collection instruments, devices or channels of observation available

to researchers. They include questionnaires interviews
protocol, objective tests and scales, projective test
physiological instruments, systematic observation of
behaviour and unobtrusive measures. Here, we have
chosen objective tests and scales and questionnaires
for this piece of research. Objective tests and scales
or paper-pencil tools are designed to sample complex
sets of behaviour such as personality traits, aptitudes
or intelligence. What makes them "Objective" is that
they contain a fixed assortment of response options.
Typically they are multiple choice options or scales on
which a person circles or puts a mark (_/) the extent
to which he agrees or disagrees with a statement.

(a) Altruistic Attitude Scale : Rationale

In many social science and behavioural researches,
objective tests or scales are employed. As discussed
earlier in this sectionobjective tests and scales are one
of the simplest and easiest modes of observation of
behaviour. Apart from that they are "objective" in the
sense that they have a fixed assortment of response.
They are considered as an important mode of observation
or tool of measurement for collectionof data. It is
constructed and standardised to sample complex sets of
behaviour. Hence, some of the data collected in the
present investigation was through administration of some

objective tests already available e.g. personality traits and socioeconomic status. For observing and measuring altruistic attitude no reliable and valid objective tests are available. Therefore, the present investigator constructed and standardized an objective test or scale for measuring attitude towards altruism among young adults in general and collegiate in particular. The construction of A-Scale (altruism scale) was a unique attempt for this dissertation. Earlier, almost all the investigators in India and abroad, working in the area of altruistic behaviour employed field observations or laboratory experiment. Keeping in view the difficulties involved and possible shortcomings in field observation and or laboratory experiment it was decided to design, develop and standardize an objective test to assess altruistic attitude. All necessary precautions and prescribed care was taken while constructing and standardizing the A-scale to measure altruistic attitude.

Constructionof Altruism Scale and Selection of Items :

Hundreds of items or statements (Nearly one hundred) were prepared to make a prediction of altruistic attitude. They were worded so as to avoid vagueness and complexities and to elicit real responses of the young adults. The statements were given individually to ten teachers of Psychology, Sociology and Philosophy, requesting them to judge their appropriateness. On the basis of

their rankings fifty statements were selected for the
scale and best were discarded. To obtain the responses,
a Likert type scale was employed. In order to maintain
objectivity, the scale contains a fixed assortment of
responses. It is a multiple choice option scale on which
a person has three alternative options i.e. Often, Seldom
and Never. The respondents encircle or put a tick mark
(_/) the extent to which he/she agrees or disagrees
with a particular statement. These fifty items were
given to one hundred students of Arts, Science and Commerce.
Their responses were obtained on a three point multiple
option scale. On the basis of analysis of their responses
all the fifty items were retained for the final scale.

Dimensions or Areas of Altruism Scale:

Attitude towards altruism is not a specific form
of experience or behaviour but includes diversity of
responses. People help others or show concern for others
in many ways e.g. helping, sharing, intervening, defending,
rescuing, relieving, sympathysing etc. Therefore, sacrifice
and concern for others finds expression through various
modes of behaviour and many responses. Such modes of
behaviour through which altruistic tendency finds expression
and through which people show their concern for others,
were taken into account while constructing the A-Scale. On
the basis of such responses items of ten areas were
selected for the final scale. All of these forms of

behaviour imply selfless service, sacrificial or other directed behaviour. The ten areas of the scale are the following:

(i)	Helping	- H
(ii)	Sharing	- S
(iii)	Intervening and Defending	- ID
(iv)	Rescuing caring and Relieving-	R
(v)	Empathy	- E
(vi)	Charity	- C
(vii)	Prosocial behaviour	- P
(viii)	Volunteering	- V
(ix)	Donating	- D
(x)	Gift giving	- G

Scoring :

As stated earlier, the A-scale designed and developed for the present research contains a fixed assortment of responses which is an index of its objectivity. Therefore, the responses on multiple option A-scale were obtained on a three point Likert type scale, that is, Often, Seldom and Never. The three options are provided against each items of the scale and as per instructions the respondents had to put a tick mark (_/) the degree to which he/she agrees or disagrees with that particular statement. The responses i.e. Often, Seldom and Never are scored 2, 1 and 0 respectively. The total of scores thus obtained are the raw scores. The raw scores

are converted into T scores computed for the present research. The T scores are interpreted according to the norms prepared for the A-scale.

Statistical Treatment

Before analyzing the results of any test it is essential to understand the tendency of distribution of scores. Inorder to standardize the test it was administered over a sample of 550 collegiates of Shibli National (ÆG) College, Azamgarh. The distributionof T scores, and norms obtained on administration of Altruism scale are given below:

Table 1-A showing frequency distribution

C.I.	f
79-88	16
69-78	67
59-68	121
49-58	159
39-48	111
29-38	58
19-28	18

N = 550

Mean = 53.90

σ = 13.73

Table 1 - B depicting T scores

Raw score	T score
19	24.58
20	25.30
21	26.03
22	26.76
23	27.49
24	28.22
25	28.95
26	29.67
27	30.40
28	31.13
29	31.86
30	32.71
31	35.32
32	34.04
33	34.77
34	35.50
35	36.23
36	36.96
37	37.69
38	38.41
39	39.14
40	39.87
41	40.60

42	41.33
43	42.06
44	42.78
45	43.51
46	44.24
47	44.97
48	45.70
49	46.43
50	47.15
51	47.88
52	48.61
53	49.34
54	50.07
55	50.80
56	51.52
57	52.25
58	52.98
59	53.71
60	54.44
61	55.17
62	55.89
63	56.62
64	57.35
65	58.08
66	58.81
67	59.54

68	60.26
69	60.99
70	61.72
71	62.45
72	63.18
73	63.91
74	64.63
75	65.36
76	66.09
77	66.82
78	67.58
79	68.28
80	69.00
81	69.73
82	70.46

Norms

Without norms scores on any test carry no
meaning. Therefore, norms essential for providing
meaning to numerical values obtained on a test. "Norms"
are standards which permit interpretation of the
behavioural attributes measured in any given individual.
As stated earlier in foregoing section, norms for
Altruism scale were obtained on a sample of 550 collegiates
of Shibli National (P.G.)College, Azamgarh. The norms
are to be used to categorize people into high average

and low. They were used in interpreting the results of the present research. The obtained norms are given below:

Table 1-C showing norms

T Scores	Explanation
60.26 - 70.46	Highly altruistic
40.60 - 59.54	Average
24.58 - 39.14	Lowly altruistic

Reliability

The reliability of Altruism Scale was determined by test-retest method over a sample of 50 respondents. Retesting of the same sample was undertaken after a lapse of three month. The obtained coefficient of correlation was .74 which is quite high and hence reliable. Thus, the scale has temporal consistency.

Validity

The scale has face validity as the items of the scale were judged by ten experts of the subject and allied disciplines. The face validity of the scale is high. Taking into consideration the characteristics of altruistic behaviour, the content validity of the Altruism scale is also adequately assured, because only those items found a place in the final form of the scale on which there was more than enough agreement among the experts who judged

and ranked them. The items on the test adequately represent
a defined broader class to a great extent, therefore, its
face or content validity is beyond doubt. It measures
what it is supposed to, hence it is taken as a valid
measure of altruism.

16 P F test

The psychometric approach to the study of personality
relies on tests intended to tap personality traits. These
traits, according to J.P. Guilford (1959) are a certain
quality or attribute, and these dispositions are quantifiable
and Scalable. Cattell (1965) has pointed that certain
source traits of personality can be identified by factor
analysis. He has developed a questionnaire for this
purpose which he calls the 16 P.F. questionnaire because
it is designed to measure the sixteen source traits which
he thinks can account for the most important trait elements
in personality. Table 2.6 illustrates the sixteen factors
or source traits. It is a multidimensional set of sixteen
questionnaire scales, arranged in omnibus form. The test
provides information in reasonably practicable testing
time, information about individual's majority of Primary
Personality Factors. It is an objectively scoreable test
devised to provide most complete coverage of personality
in a short time. The test is meant for persons aged
sixteen years and above. In this tests, coverage of
personality rests upon measurement of sixteen functionally

independent and psychologically meaningful dimensions isolated and replicated in more than thirty years of factor-analytic research on normal and clinical groups. For convenience each factor is listed with its alphabetic designation and low, high scores. Any item in the test contributes to the score on one and only one factor so that no dependencies are introduced at the level of scale construction.

The test has 10-13 items for each scale in form A and B. Three alternative answers are provided for each of the items. Dependability and stability coefficients as given in Handbook of the test are as under:

Table 2 A : 16 P F DEPENDABILITY COEFFICIENTS :

Test-Retest with 2-7 Day Intervals

Form	A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
A^a	86	79	82	83	90	81	92	90	78	75	77	83	82	85	80	72
A^b	81	58	78	80	79	81	83	77	75	70	61	79	73	73	62	81
B^b	75	64	74	80	81	77	89	79	77	70	60	81	70	75	65	87
$(A+B)^b$	89	65	87	88	90	88	83	89	87	82	76	89	83	85	78	91
$(A+B)^c$	82	45	76	78	80	75	86	83	69	68	60	76	66	76	76	80
$(C+D)^d$	82	76	83	77	80	83	86	83	75	68	67	79	75	68	77	82

[a]Canadian subjects : N = 243 high school males and females

[b]American subjects : N = 146:79 employment counselors and 67 undergraduate students.

[c]New Zealand subjects : N = 95 high school males and females

[d]American subjects : N = 150 undergraduates males and females

Note : Decimal points have been omitted.

Table 2 B Stability-Coefficient test -retest within 2 - 48 Month Intervals

Form	A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
(A + B)[a]	85	63	75	85	78	84	88	87	76	71	74	77	83	81	70	78
A[b]	80	43	66	65	74	49	80	85	75	67	35	70	50	57	36	66
A (Males)[c]	49	28	45	47	48	54	49	63	40	43	39	57	52	46	41	56
A (Females)[d]	62	23	48	52	52	46	64	53	42	49	21	52	51	50	41	51

Source Trait (header spans A–Q_4)

[a]Two-month interval, N = 132.

[b]Two-and-one-half-month interval, N=44, from LaForge (1962)

[c]Four-year interval, N = 432, from Nichola (1965)

[d]Four-year interval, N = 204, from Nicholas (1965)

Note : Decimal points have been omitted.

Validities

The items in these final forms are the survivors
from several thousands of items originally tried and
constitute only those which continue to have significant
validity against the factors after ten successive factor -
analyses (Cattell, 1973) on different samples. Cattell
computed direct and indirect validities as given in tables
2.C & 2.D .

Table 2.C DIRECT CONCEPT VALIDITIES OF THE 16 PF SCALES

Form	N	A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
A+B	958	86	53	77	71	88	77	94	80	67	71	64	86	68	80	80	63
C+D	794	87	91	63	82	90	54	90	45	65	85	74	71	68	82	70	80
A	958	79	35	70	63	83	67	92	70	49	45	41	71	62	70	68	57
B	958	78	45	66	64	79	69	87	75	63	73	60	81	51	70	69	59

Note : Decimal points have been omitted.

Table 2.D INDIRECT CONCEPT VALIDITIES OF THE FULL 16 PF

A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
96	95	95	91	96	94	95	96	91	74	63	84	83	90	93	93

Notes : Based on 606 males and females
        Decimal points have been omitted.

    Hindi adoptation of the test was used.

Table 2.E THE PRIMARY SOURCE TRAITS COVERED BY THE 16 PF TEST

Factor	Low Sten Score Description (1-3)	High Sten Score Description (8-10)
A	Reserved,detached, critical, aloof, stiff Sizothymia	Outgoing, warmhearted, easygoing, participating Affectothymia
B	Dull Low intelligence	Bright High intelligence
D	Affected by feelings, emotionally, less stable easily upset, changeable Lower ego strength	Emotionally stable,mature, faces reality, calm Higher ego strength
E	Humble, mild, easily let, docile, accommodating Submissiveness	Assertive, aggressive, competitive, stubborn Dominance
F	Sober, taciturn,serious Desurgency	Happy-go-lucky, enthusiastic Surgency
G	Expedient, disregards rules Weaker superego strength	Conscientious, persistent, moralistic, staid stronger superego strength
H	Shy, timid,threat-sensitive Threctia	Venturesome, uninhibited, socially bold Parmia
I	Tough minded, self-reliant,realistic Harria	Tender-minded, sensitive, clinging, overprotected Premsia
L	Trusting,accepting conditions Alaxia	Suspicious hard to fool Protension

M	Practical, "down-to-earth" concerns Praxernia	Imaginative, bohemian, absent minded Autia
N	Forthright, unpretentious, genuine but socially clumsy Artlessness	Astute, polished, socially aware Shrewdness
O	Self assured, placid, secure, complacent, serene Untroubled adequacy	Apprehensive, self-reproaching, insecure, worrying, troubled Guilt Proneness
Q_1	Conservative, respecting traditional ideas Conservatism of temperament	Experimenting, Liberal, free-thinking Radicalism
Q_2	Group dependent, a "joiner" and sound follower Group adherence	Self-sufficient, resourceful, prefers own decisions Self-sufficiency
Q_3	Undisciplined self-conflict, lax, follows own urges, careless of social rules Low self-sentiment integration	Controlled, exacting will power, socially precise, compulsive, following self-image High strength of self-sentiment
Q_4	Relaxed, tranquil, torpid, unfrustrated composed Low ergic tension	Tense, frustrated, driven, overwrought High ergic tension

Socio-economic Status Scale

Socio-economic status Scale by S.P.Kulshrestha
(1980) was used to measure the Socio-economic status of
the subjects. The two separate forms for rural and urban
population were administered. The main components(areas)
of the scale are given as under:

Components

1. Parental and subling's occupation

2. Parental and siblings education

3. Economic indicators

4. Cultural indicators

5. Psychological indicators

Reliability

Test-retest reliability of the (Urban) scale
after a lapse of ten days was .87, whereas the coefficient
for rural scale was .85.

Validity

The validity of the scale (Urban) was determined
by comparing the scale with Kuppuswamy and Pandey's
Socio-economic Status questionnaire . The coefficient of
correlations were found .57 and .89 respectively.Similarly
Pareek's and Trivedi's Socio Economic Status Scale (rural)
was administered over 50 rural people. The coefficient of
correlation was found .81 which is quite high correlation.

The construct validity was calculated by Kulshreshtha by the test of normality of distribution.

The Socio Economic Status Scale was administered, scored and analysed in the light of the procedure laid down in the manual of the test.

Variables

Independent variables

(1) Sixteen personality traits

(2) Socio economic status

(3) Rural and urban environment

(4) Hindu and Muslim culture

(5) Sex

(6) Stream of education

(7) N.C.C. and N.S.S. training

Dependent variable

Altruistic attitude of respondents (Responses on Altruism Scale)

Procedure

Hindi versionof Sixteen Personality Factor Questionnaire (16 P.F.) was administered over seven hundred undergraduates, as stated earlier in this chapter of the dissertation, in accordance to the procedure and instructions as laid down in the Handbook of the test.

It takes 50 minutes in actual administration of the
questionnaires. Respondents obtaining 1 to 3 sten scores
were categorized as low scorers, and those obtaining sten
scores between 8 to 10 were placed in the category of high
scorers on the 16 P.F. test. Thus, the Ss were categorised
into high and low scores on the basis of theirsten scores
on 16 P.F. test. Since the test has sixteen Personality
factors i.e. A.B.C.E.. . . .Q.4, therefore, high and low
sten score groups were prepared for every personality
factor seperately. Every such group comprised of 50 Ss
each. Thus, we had 100 Ss for every personality factor.
Then, altruistic attitude scale, specially designed,
constructed and standardized for the present research,
was administered on the Ss as high and low sten scorers
on Sixteen Personality Factors. The obtained scores on
altruism scale were scored as per procedure described
earlier in the present chapter. The obtained scores
were subjected to various statistical treatment e.g. mean,
standard deviation and t value were computed. To probe
the impact of socioeconomic status on altruistic attitude,
SP Kulshresth's, Socio Economic Status Scale was administered
and S's were categorized into three classes -- high,average
and low socioeconomic status. After that altruism scale
was administered over them. The data, thus obtained was
subjected to statistical treatment (given in the next
chapter on 'Result's). Effect of sex difference too was

determined on altruism. For that end altruism scale was
administered over 50 males and female S$s.

The sample of the present investigation was drawn
from Shibli National (P.G.)College, Azamgarh, when both-
urban and rural students are easily available, hence the
sample comprised of equal number of rural and urban under-
graduates. Therefore, altruism was also studied in relation
to this variable i.e. rural and urban environments.
Similarly, it was probed in relation to religion i.e. Hindu
and Muslim. Christians, and Sikhs were not studied as their
numbers in the College is negligible. As stated earlier
that we had decided to study the relationship, if any between
altruistic attitudes and N.S.S. & N.C.C. Training among
young adults. Hence, we explored altruism as determined
by the impact of N.S.S. and N.C.C. Training among those
undergoing such training and normal groups, each comprising
of 50 S$s. There are people who suppose that Science, Arts
and Commerce students may differ from each other with regard
to their concern for others, sharing, helping, rescuing,
volunteering behaviour. Hence, 50 S$s each were studied
from each of the three faculties of Science, Arts and
Commerce with regard to their attitudes towards others.
The mean performance on altruism scale in relation to all
the factors studied i.e. personality, factors, Socioeconomic
status, sex, rural and urban environment, religion, training
(NSS/NCC) and stream of education, was computed and were

subjected to t test which are presented, alongwith the
graphic representation of the data in Chapter 3.