CHAPTER 6

CONCLUSIONS

AND

OVERVIEW
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This chapter presents a brief summary and conclusions of the investigation, identifies the limitations of the study and it's significance. It also points out the novelty of the study and suggests the ways in which the present investigation can generate future research.

6.1 Summary of the Investigation and Conclusions:

6.1.1 Summary of the Investigation

The objectives of the study were to find out the interrelationships among human – figure drawings, cognitive style (field – dependence – independence) and self esteem of ten to fifteen year old girls and boys; to predict the human – figure drawing scores of the subjects on the basis of their cognitive style and self esteem scores; to examine the impact of age - level as well as gender, if any, on the said variables and to probe the age - related differences, if any, on the nature of the interrelationships among the relevant variables in case of the ten to fifteen year old girls and boys.

In order to fulfill these objectives, the following variables were selected for the investigation along with their assessing tools. These are mentioned in Table 6.1.
Table 6.1

VARIABLES OF THE INVESTIGATION, THEIR MEASURING TOOLS AND APPENDIX NUMBERS OF THE TOOLS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>VARIABLE</th>
<th>MEASURING TOOL</th>
<th>APPENDIX NUMBER OF THE TOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Human - Figure Drawing</td>
<td>Goodenough – Harris Human – Figure Drawing Test devised by Florence L. Goodenough and Dale B. Harris (1963; 1991)</td>
<td>Appendix A</td>
</tr>
<tr>
<td>2</td>
<td>Cognitive Style</td>
<td>Group Embedded Figures Test developed by Philip K. Oltman, Evelyn Raskin and Herman K. Witkin (1971)</td>
<td>Appendix B</td>
</tr>
</tbody>
</table>

Besides the background information regarding the subjects of the study was gathered with the help of the identifying information printed at the top of each of the tools. Additional information like residential address, mothers' occupation, the board of affiliation of the school the girl or the boy is studying in, the language of instruction at school and whether the subject took private lessons in art was recorded using short individual interviews. These background information's helped in controlling the variables of parental occupation of the subjects, habitat of the subjects, type of schooling and language of instruction at school and private lessons in art. In this way the influence of the extraneous sources of variation on the results were controlled.
Initially, a pre-pilot study was conducted on a small sample of 30 subjects of ten through fifteen years of age to verify the effectiveness of the tentatively selected tools. The age-range of the pre-pilot study included the following three age-groups: a) 10 and 11 years, b) 12 and 13 years and c) 14 and 15 years. The subjects, five girls and five boys each were included under each age-group. On the basis of the experience gained during the pre-pilot study, the standardized tools mentioned in Table 6.1 were finalized for data collection in the actual investigation.

Then a pilot study was carried out on a sample of 90 subjects comprising 30 subjects each belonging to the already mentioned three age-groups. Each age-group comprised equal number of girls and boys of middle socio-economic status families, residing in urban localities of Kolkata and studying in renowned English-medium schools. On the basis of the findings of the pilot study, a tentative-time schedule for the administration of the tools (given in Table 4.1) was prepared.

After that the actual investigation began. The population of the investigation comprised of ten to fifteen year old girls and boys staying and studying in Kolkata. The technique of drawing a sample from the population conformed to a combination of area sampling, stratified random sampling and multi-stage random sampling. At the outset the technique of area sampling was used to randomly select certain localities from each of the five regions of the city of Kolkata viz., east, west, north, south and central. The selected localities were included under 23 wards of the Kolkata Municipal Corporation. The list of the selected localities is presented in Table 4.2.

A few streets from each locality were randomly selected. Then certain houses on those streets were randomly chosen. From among these households, only those with ten to fifteen year old girls and boys were included in the area sample. The
age – range of ten to fifteen years was then divided into three strata: a) 10 and 11 years, b) 12 and 13 years as well as c) 14 and 15 years. Girls and boys of these age-groups were randomly selected to ensure equal representation of each stratum in the sample. Thus the technique of stratified sampling was used.

Then data were collected from the selected subjects. Following which, the background information elicited from the subjects was scrutinized to facilitate the drawing of the multi – stage random sample. Subjects who did not conform to the criteria of inclusion in the sample were eliminated at every stage. In this way, only the subjects belonging to middle socio – economic status families (as inferred from their parental occupations), studying in reputed English – medium schools affiliated with the C.B.S.E. and the I.C.S.E. and not taking private lessons in art were randomly selected for inclusion in the final sample.

For inferring middle socio – economic status from the occupations of the parents of the subjects, the manual of the Socio – Economic Status Scale (Urban) developed by Kuppuswamy (1962; 1984) was consulted.

Thus the size of the sample was 600 comprising 10 to 15 year old girls and boys drawn from the population. The sample included equal numbers of girls and boys i.e. 300 each as already mentioned, the sample comprised of three age based strata i.e.,

i) 9 years 12 months to 11 years 11 months (10 and 11 years),
ii) 11 years 12 months to 13 years 11 months (12 and 13 years)
iii) 13 years 12 months to 15 years 11 months (14 and 15 years).

Each stratum included 200 individuals i.e., 100 girls and 100 boys. The age-wise and gender-wise composition of the sample is presented in Fig 4.2. Almost equal number of subjects was selected for inclusion in each stratum of the sample from different parts of Kolkata- east, west, north, south and central. The
sample comprised of girls and boys studying in reputed English – medium schools of Kolkata which were affiliated with C.B.S.E. and I.C.S.E. The subjects belonged to middle socio-economic status families with respect to their self-reported parental occupations. The sample included only those girls and boys who did not take private lessons in art.

Data were collected from children and adolescents in small groups of about ten persons each. The venues for data collection included the homes of the subjects, community centers, clubs, tutorial classes, music and dance classes. Before data collection rapport was established with the subjects to motivate them. The objectives of the investigation were briefly explained. After that the three standardized tools (already mentioned in Table 6.1) were administered to the subjects one after the other in accordance with the tentative time – schedule of administration of the tools chalked out beforehand (and given in Table 4.1). The directions for administration of the tools mentioned in the manuals were followed. It was ensured that the methods of administration were uniform from one group of subjects to another. Care was taken to ensure that the subjects had filled in the identifying and background information accurately at the top of the booklets of the tools. It was also made sure that the girls and boys did not look at others’ work or consult with others while doing the tasks required by the tools.

Following the administration of the three standardized tools, some additional background information was gathered from each subject by the investigator using a brief interview schedule. The items in the schedule are mentioned in section 4.6.

After data collection and scoring of the standardized tools the raw scores were obtained and tabulated. Then the computerized statistical analysis of the tabulated data was conducted. The following computations were carried out:
i) Mean, Standard Deviation and Correlation Coefficients

ii) Two - Way Analyses of Variance (ANOVA)

iii) Multiple Regression Analyses

The descriptive statistics were calculated not only for the entire sample (N = 600) but also separately for the three age - groups. In case of the mean and standard deviation calculations gender groups within each age - group were treated separately. The Two - Way Analyses of Variance were conducted to the study the effects of age, gender and the interaction of the age and gender on the human - figure drawing, cognitive style and self esteem scores of the entire sample (N = 600). The Multiple Regression Analyses were conducted not only for the entire sample but also for each of the three age - groups to find out whether the subjects' human - figure drawing scores could be predicted on the basis of their cognitive style and self esteem scores.

6.1.2 Conclusions of the Investigation

On the basis of the results obtained (reported in Chapter 5), the following conclusions were drawn:-

i) There seems to be strong influence of age - level on human - figure drawing, cognitive style and self esteem scores of the subjects. This is evident from the relevant values presented in Table 5.4 to 5.6. Moreover, observation of Tables 5.1 to 5.3 and Figures 5.1 to 5.3 reveal that the scores on these variables have improved with increase in age - level. In respect of the improvement in human - figure drawing ability over age among children and adolescents the outcome of the present study fits in well with Lowenfeld and Brittain's (1987) model of the development of human - figure drawing skills with age. This model has already been described in section 1.4. Thus it appears that the age - related improvement in human - figure drawing indeed follow a series of stages.
Lowenfeld and Brittain (1987) have opined that these improvements in the children's and adolescents' drawings are associated with, if not stem from, the intellectual and socioemotional developments which occur as individuals grow up. Such intellectual developments can be understood in Piagetian terms as qualitative changes in cognition taking place with increase in age (Morgan et al., 1987). These cognitive as also socioemotional changes are reflected in the age-related improvement in human–figure drawing performance of children and adolescents.

The rise in cognitive style scores with age indicate the journey from relative field-dependence to relative field-independence taking place among children and adolescents. The obtained result in this respect agree with the observations of Witkin et al. (1971). On the basis of the outcomes of many research studies, Witkin et al. (1971) had spelled out that there is a definite and continuous increase in field-independence between eight and fifteen years of age as mentioned earlier in section 1.5. They had also argued that this increase occurs because of an interplay between maturational changes in the body (specially the nervous system) and the changing socialization experiences of children and adolescents.

The enhancement of self esteem with age among children and adolescents as found in the present study is not exactly congruent with the finding of Coopersmith (1981; 1990) reporting a decline in self esteem scores with age. Kagan et al. (1982) had also suggested that children's self esteem scores are sometimes higher than those of the adolescents because either the children had inflated self esteem due to immaturity or they deliberately report more positive self images than they actually feel. Similarly, Hoare et al. (1993) had opined that the self esteem scores of individuals tend to decline with the onset of adolescence because they engage in more realistic self-appraisals. The views of Coopersmith (1981; 1990), Kagan et al. (1982) and Hoare et al. (1993) have already been discussed in section 1.6. However, in the present study a steady
increase in self esteem scores with age among children and adolescents was observed. This may have been brought about by the growing sense of competence among the subjects with age. As indicated by the outcome of the study by Cole et al. (2001). Fichman et al. (1996) has also reported that the tendency of self criticism which undermines self esteem tends to decrease with age among subjects aged eight to fourteen years. The findings of Cole et al. (2001) and Fichman et al. (1996) are mentioned in section 2.6. So it may be reasoned that the growing perception of self competence is associated with the rise in self esteem with age among the subjects of the present study.

ii) The influence of gender on human – figure drawing, cognitive style and self esteem scores of the subjects have been found to be non – significant and small. These results are reported in Table 5.4 to 5.6. Besides, the negligible gender difference in the scores on the said pertinent variables is evident from Tables 5.1 to 5.3 and Figures 5.1 to 5.3. So it is clear that the gender – groups within each of the three age – levels of the present investigation have not differed much on human – figure drawing, cognitive style and self esteem scores.

This finding in respect of human – figure drawing is in contradiction with the outcomes of many research studies in the area. In fact, Reeves and Boyette (1983) had remarked that an individuals gender socialization can be inferred from his of her artwork. Zoller Booth (2004) reviewed researches on human – figure drawings of children and adolescents and opined that the majority of the studies carried out in western and Western - influenced cultures report a superiority of girls in this respect. This outcome agrees with the view of Geetha (2006) which relates such findings to the impact of gender socialization which mandates that girls should cultivate gentle, decorative skills. But Zoller Booth (2004) also pointed out that the superiority of girls in human – figure drawing is not universal. She remarked that the opposite is true in some parts of Mexico, Nigeria and Swaziland. In some tribes e.g. the Hopi and the Australian aborigines, the boys displayed superiority over the girls in this respect. (Dennis, 1966; Money and
Nurcombe, 1974) because the former were engaged in the production of ceremonial art. In this context of apparently conflicting findings, Zoller Booth’s (2004) view that culture moderates the impact of gender in human—figure drawing and vice versa seems relevant. The observations of Reeves and Boyette (1983), Zoller Booth (2004), Geetha (2006), Dennis (1966) as well as Money and Nurcombe (1974) have already been presented in section 1.7. So the present finding of negligible gender difference in human—figure drawing within each age group among the sampled children and adolescents might have occurred because more or less egalitarian socialization (with respect to gender) had helped bridge the gender gap in human—figure drawing. This is not unexpected because the sampled children and adolescents belonged to educated, urban families of middle socioeconomic status (in terms of parental occupations). Moreover, the children and adolescents had similar socialization experiences at school as they studied in reputed, English—medium schools affiliated with either the C.B.S.E. or I.C.S.E. at Kolkata. So, in general, they were not expected to experience much gender discrimination.

Similarly, the results revealed non—significant gender difference in cognitive style(field—dependence—independence). This outcome is in contradiction with the contention of Witkin et al. (1971) that boys and men tend to be more field—independent than girls and women. As discussed in section 1.8, it has been suggested that gender socialization has a role to play in this context. It is assumed that the males are more field—independent since they are socialized in such a way that they develop sense of autonomy much more than their female counterparts across cultures. The development of autonomous functioning is associated with field—independence (Witkin et al., 1971). It appears that in case of the present sample the socialization experiences were more or less free from gender distinction. As already mentioned, the subjects belonged to educated, middle class, urban families and enjoyed the privilege of studying in renowned English—medium schools of Kolkata. So gendered socialization possibly could
not influence their cognitive styles resulting in similar levels of field—dependence—inde
dependence among the gender groups within each age—group.

The significant influence of gender on the self esteem scores of the sampled children and adolescents was also not obtained. This finding is not in line with the majority of investigations which report the presence of gender difference in self esteem. It is clear from section 1.9 that boys surpass girls in self esteem. This is not surprising because males enjoy an elevated status and many privileges in most cultures (Geetha, 2006). Even when the two gender groups do not differ much in global self esteem, it was argued, the girls tend to perceive themselves as less competent (Coopersmith, 1981; 1990). Thus the present finding is not an usual one. But such a finding can not be considered as rare. There are some studies (e.g. Ketcham and Morse, 1965; Donaldson, 1974; O’ Malley and Bachman, 1979; Bosacki et al., 1997) which have found no gender difference in self esteem. The apparent conflicting nature of findings in this area makes one wonder about the reason for gender difference in self esteem in the first place. According to Geetha (2006) the rigid emphasis on sexual differences through disparate socialization brings about the gender difference in self esteem. So it is logical to assume that the egalitarian socialization of the children and adolescents belonging to the two gender groups may eliminate the gender difference in self esteem. This must have been the reason for the present result in which the girls and boys of each age—group manifested similar levels of self esteem. Trezesniewski et al. (2003) have even indicated that girls and boys do not differ in their self esteem stability either in childhood or adolescents. So it is possible for members of the two gender groups to have similar levels of self esteem (owing to similar socialization experiences the reasons for which have already been elaborated) and to display similarity in the stability of self esteem.

iii) After studying the values reported for the gender—age interactions reported in Tables 5.4 to 5.6, it is obvious that none of the interactions are significant. In fact, the values are negligible. This justifies not dividing the sample into gender—
groups within each age-level while computing the correlation coefficients presented in Tables 5.8 to 5.10 and Figures 5.7 to 5.15 as well as when carrying out the Multiple Regression Analyses for the three age-groups reported in Tables 5.13 to 5.18. The reason for not obtaining significant gender-age interaction could be that the strong influence of age had naturally overpowered the non-significant and small influence of gender in case of each of the relevant variables. Thus, only the pronounced effect of age on the scores was evident.

iv) The standard deviation values reported in Tables 5.1 to 5.3 reveal more or less moderate levels of variability in respect of the scores on human-figure drawing, cognitive style and self-esteem for the entire sample (N = 600), the three age-groups as also the gender-groups within each age-group. This outcome indicates that the scores for all the three relevant variables show more or less homogeneity within each age-group and the gender-groups included under each age-level. This justifies the use of statistics like the Analysis of Variance as well as Multiple Regression Analysis.

v) The results reported in Tables 5.7 to 5.10 and Figures 5.4 to 5.15 indicate that human-figure drawing, cognitive style and self-esteem scores of ten to fifteen year old girls and boys are highly interrelated. This means that the subjects scoring high on human-figure drawing test tend to be field-independent and tend to have higher self-esteem. The opposite is true for low scorers on human-figure drawing test.

The finding that the human-figure drawing and cognitive style (field-dependence-independence) are associated agrees with the assertions of Witkin et al. (1962) and Witkin (1965) given in section 1.3 as also with the findings of numerous studies some of which have been cited in section 2.1. Witkin et al. (1962) and Witkin (1965) have reported that human-figures drawn by field-dependent children depict minimum details, unrealistic proportioning of body parts etc. Whereas, the drawings of field-independent individuals are detailed,
show realistic proportioning of body parts, represent the gender and the role of the human – figure clearly. That is why the scores of the field – independent subjects are generally higher on human – figure drawing tests because the inclusion of more details earns higher score on human – figure drawing tests. Moreover, the observations by Witkin et al. (1962) and Witkin (1965) clarify why the obtained relationship between human – figure drawing and cognitive style has come out to be positive. A subject who includes more details in human – figure drawing gets higher score. Such a person is expected to pay more attention to details in the disembedding task required by the cognitive style test. Thus, such a person generally earns higher score on the cognitive style test indicating relative field – independence. While a subject who includes less details obtains a lower score on the human – figure drawing test. Such a person tends to overlook the embedded parts in the cognitive style test thereby getting a lower score indicating relative field – dependence. This explains the positive relation between the variables of human – figure drawing and cognitive style.

The outcome of the present investigation in respect of the relation between human – figure drawing and self esteem revealed significant relations for the entire sample (N = 600) and the three age - groups. Besides, the obtained relations were positive which implies that the higher the human – figure drawing score of the subject, the higher his or her level of self esteem and vice versa. So a person scoring high on human – figure drawing score tends to score high on self esteem. Whereas, a person scoring low on human - figure drawing tends to score low on self esteem. This outcome is congruent with the results of many previous studies. Investigators have repeatedly highlighted the strong association between human – figure drawing and self esteem of individuals. For instance, Coopersmith et al. (1976), as described in section 2.2 reported that expressions of self esteem were greatly associated with human – figure drawings of children. For some time researchers in the field tried to verify whether the size of human – figures drawn by children and adolescents were related to their self esteem or not. From the results of several such studies (e.g. Dalby and Vale, 1977; Prytula
et al., 1978) discussed in section 2.2, it emerged that the size of human—figures drawn by the subjects did not reflect their levels of self esteem. Thus, it was felt from the perspective of quantitative analysis that the scores obtained on human—figure drawing test and test of self esteem could be correlated to probe the nature of relations shared by the two variables.

Many researchers who found close and positive associations between human—figure drawing and self esteem attempted to explore the reason for obtaining such outcomes. Cole et al. (2001), as discussed in section 2.6 had indicated that a child or adolescent would experience an enhancement of self esteem if he or she felt competent in performing an activity. So it could be logical to assume that children and adolescents having a higher self esteem would try to draw human—figures as best as possible in order to feel competent and safeguard their elevated self esteem. Similarly, it is also plausible that children and adolescents capable of drawing better human—figures tend to feel more competent which may boost their self esteem. Thus there seems to be a two—way relationship between human—figure drawing ability and self esteem mediated by variables such as competence.

Another rationale in the respect of strong and positive relation between human—figure drawing and self esteem emerged from an Indian study by Bardhan Roy (2005). In Bardhan Roy's (2005) investigation (mentioned in sections 1.3 and 2.2) the original version of the Goodenough—Harris Drawing Test was used. The original version as mentioned in section 3.6 was known as Draw—a—Man Test (Goodenough, 1926). A child or an adolescents I.Q. could be estimated using that test. Bardhan Roy (2005) found a significant and positive relation between human—figure drawing and self esteem using the Draw—a—Man Test. So she reasoned that the subjects obtaining higher scores on the Draw—a—Man Test (hence higher I.Q.) tend to have higher self esteem because possession of higher level of intelligence enhances their self esteem. She also suggested that the opposite was true for the low scorers of the Draw—a—Man Test. So it
seems that Bardhan Roy (2005) suggested the role of intelligence in mediating human—figure drawing—self esteem relation. However, in the present study the latest revised version of the Draw—a—Man Test known as Goodenough—Harris Drawing Test (1963) was used. I.Q. of subjects can not be estimated from this test. This is evident from section 3.6. In fact, Harris (1963; 1991) in the manual of the test categorically stated that this test does not yield a score that is identical with the I.Q. derived from an individual intelligence test. At best, the Goodenough—Harris Drawing Test can indicate the intellectual maturity of the subjects (Harris, 1963; 1991). So Bardhan Roy’s (2005) reasoning may not hold good in the context of the outcome of the present investigation. Therefore, the explanation derived from the finding of Cole et al. (2001) appears to be more appropriate.

In the present study the relationship between cognitive style (field—dependence— independence) and self esteem emerged as strong and significant. Moreover, the relation was positive indicating that children and adolescents getting high scores on the cognitive style test (hence more field—independent) generally earned higher scores on self esteem. But those subjects getting lower scores on cognitive style (hence more field—dependent) tended to score lower on self esteem. Such an outcome agrees well with the findings and interpretations of Witkin et al. (1971) as discussed in section 1.3. According to them, field—independent persons typically have a pronounced sense of self. They are very conscious about their own identity. In other words, they are aware and clear about who they are. If they fall prey to psychiatric problems, then they typically suffer from delusions of grandeur, aggression, paranoia etc. These pathologies bring out their high levels of self-awareness. The prominent sense of self among field—independent persons is the reason behind the higher self esteem that they possess. In contrast, the field—dependent persons do not develop a clear sense of identity. Their levels of self-awareness are low. They typically look to others for forming their opinions, attitudes etc. They have tendencies of suffering from dependence, helplessness, conversion disorder etc. owing to the
less developed sense of self. That is why their level of self esteem is lower (Witkin et al. 1971). Similarly, as described in section 1.3, Willing (1988) opined that field – independent persons experience self with a lot of internal differentiation and complexity. Such persons themselves define their personal identities and social roles. The self esteem of field – independent persons are therefore not much influenced by the opinion of others. They value themselves. But field – dependent persons tend to look to their community or family for identity - formation and role – definition (Willing, 1988). Because of this, the field – dependent persons are typically unsure of themselves, less confident and may have poorer opinions regarding self.

vi) The nature of interrelationships among human – figure drawing, cognitive style and self esteem appears to be similar across the three age – groups: a) 10 and 11 years, b) 12 and 13 years and c) 14 and 15 years as well as for the entire sample (10 through 15 years). So it seems that the relations among these variables are so close and positive that these cut across age – levels even when there is a transition from late childhood to adolescence or in piagetian terms from the concrete operational to the formal operational stage of cognitive development. The underlying reason for this result could even be the age – related linearity of the pertinent variables which means that at least between 10 and 15 years of age, girls and boys show marked improvement in human – figure drawing skill and self esteem as well as increase in field – independence with increase in age.

vii) Since the above pertinent variables of the investigation were highly and positively interrelated so whether one of the variables could be predicted on the basis of the other two was the obvious question. In order to answer the question the human – figure drawing, being the performance variable, was chosen as the dependent variable. Cognitive style and self esteem served as the predictors. Multiple Regression Analyses were carried out for the entire sample and the three age – groups. The results were presented in Tables 5.11 to 5.18. From
these results it is apparent that the human—figure drawing scores of the 10 to 15 year old girls and boys can be significantly predicted on the basis of their cognitive style and self esteem. This indicates that the cognitive style and self esteem of children and adolescents are responsible for a significant portion of the variance in their human—figure drawing scores. The fact that human—figure drawing scores of 10 through 15 year olds can be predicted on the basis of their cognitive style and self esteem has the potential to open up new approaches in the field of psychological testing of younger persons as elaborated later in section 6.4.

6.2 Limitations of the Study:

i) In the present investigation the cross—sectional approach to the study of human development rather than the longitudinal approach was used. The cross—sectional approach provides an approximate understanding of the human development. It does not afford as comprehensive a study of human development as the longitudinal approach does. But the cross—sectional approach was adopted to save time and prevent the problem of subject—drop out.

ii) The sample of the study consisted exclusively of children and adolescents belonging to middle socioeconomic status families (as inferred from their parental occupations) studying in English—medium schools affiliated with C.B.S.E. and I.C.S.E. at Kolkata who do not take private lessons in art. So the findings of the study can not be widely generalized. However, the criteria of inclusion in the sample had to be stringent in order to control extraneous sources of variation which might have affected the results.
iii) It would have been better if equal numbers of localities and wards from each region of the city of Kolkata had been included in the area sample. But this was practically not possible the reasons for which have already been cited in section 4.7.

6.3 Newness of the Study:

i) By going through Chapter 2, it is clear that there is paucity of Indian investigations on the relations among human – figure drawing, cognitive style (field – dependence – independence) and self esteem of children and adolescents. However this area of research is important both from an academic standpoint and also for practical reasons. So the present study attempts to fill in the gap. The study was meticulous in design and execution.

ii) The prediction of human – figure drawing scores of 10 through 15 year olds on the basis of their cognitive style and self esteem was the highlight of the study. There are previous investigations in the field which have studied the associations among human – figure drawing, cognitive style and/ or self esteem. However the prediction of human – figure drawing was largely ignored. So the present investigation has addressed this problem.

iii) The outcome of the present study that the scores of the sampled children and adolescents did not differ significantly by gender in respect of human – figure drawing, cognitive style and self esteem is in conflict with the majority of the previous research findings in the area. The present result, although not absolutely rare, signifies a departure from the prevailing trend. It indicates that the researcher should not presume the existence of gender differences in the variables without verification as some of them have done before.
6.4 Implications of the Study:

i) The outcomes of the study have suggested progressions in human – figure drawing performance, cognitive style (from relative field – dependence to relative field – independence) and self esteem with age. As for the age – related improvement in human – figure drawing of children and adolescents, it appears that there is transition from the Dawning Realism Stage through Reasoning Stage to the Decision Stage (Lowenfeld and Brittain, 1987) as described in section 1.4. Through these stages the drawings become more detailed, individualistic and manifest more realistic gender and role representations resulting in gradually higher scores on the Goodenough – Harris Drawing Test. The improvement in the execution of drawing of human – figures by children and adolescents stem largely from their cognitive development. From Table 1.1 it is clear that between 10 and 15 years of age there is the transition from the piagetian concrete operational to the formal operational stage of cognitive development. This qualitative shift is mirrored by children's and adolescents' drawings. If the subjects' drawings are analyzed then it would emerge that the drawings of the sampled children (between 10 and 12 years of age) were more standardized while those of the adolescents (between 12 and 15 years in the present study) depict more abstraction and individuality. To capture this transition the age – range of 10 to 15 years was chosen for this study as mentioned in subsection 3.7.1.

Similarly, the journey along the field – dependence – independence continuum from less to more field – independence gradually taking place over the age – range of 10 to 15 years is evident from the results of the study. Thus the model suggested by Witkin et al. (1971) is upheld. The increment in self esteem with age over the period of 10 through 15 years of age indicate the emergence of the
self-identity which take place due to improvement in cognition and augmentation of socioemotional experiences over age (Mussen et al., 1990) as discussed in section 1.6.

Therefore, if the enhancement of human-figure drawing, cognitive style (field-dependence–independence) and self-esteem scores do not occur with increase in age then a developmental lag may be suspected. In that case, the child or the adolescent may be subjected to further evaluation and if such a lag is confirmed then it has to be remedied. Therefore, it highlights the scope for practical application of some of the outcomes of the present study.

ii) From the results reported in section 5.1 and 5.2, it is evident that there is negligible impact of gender on the human-figure drawing, cognitive style and the self-esteem scores of the sampled children and adolescents. This finding is significant and heartening. In many cases biological differences do not matter much but pronounced differences in socialization of the members of the two gender–groups bring about stark differences in psychological characteristics (Geetha, 2006). The present finding of small gender differences may be explained on the basis of the gender–egalitarian socialization experiences of the sampled girls and boys, the reasons for which have already been elaborated in section 5.2 and subsection 6.1.2. The present finding implies that the modern trend of socializing girls and boys alike, although confined mostly to the educated upper and middle classes, has indeed the power to level off gender differences in not only performance but also in some of the psychological characteristics. This pattern of egalitarian socialization has to be promoted among the uneducated and underprivileged communities who practice rampant gender discrimination. This is very relevant in the Indian context. The lot of the Indian girl children (specially from underprivileged sections of the society) could indeed be improved by generating more awareness in the community about non-sexist socialization. The Government, Non-Governmental Organizations, educational institutions,
social and religious organizations as well as the media should step up their efforts in this direction.

iii) The study of the interrelationships among human—figure drawing, cognitive style and self esteem undertaken by the present investigation is important because a lot of studies (e.g. Abell et al., 2001) have focused on the relation between human—figure drawing and intelligence. But the researches on the relations between human—figure drawing and non—cognitive variables have been much less in number. The present study has attempted, to some extent, to fill in the lacuna. The variable of self esteem is a purely non—cognitive variable while cognitive style straddles the cognitive—non—cognitive dichotomy (Ridding and Cheema, 1991). The relationship between cognitive style and self esteem is also important because cognitive style is gradually emerging as a single pervasive continuum including many apparently different psychological characteristics under its ambit. So the different dimensions of cognitive style are increasingly being clubbed together under the umbrella of psychological differentiation (Witkin et al., 1971).

iv) From the results of the study, reported in Chapter 5, it is apparent that the present findings in respect of age—related change and the relations among human—figure drawing, cognitive style and self esteem of children and adolescents are in agreement with the majority of similar researches carried out in the Western milieu. However the outcome of the present investigation in respect of gender — differences in the three pertinent variables deviates from the majority of findings of Western researches in the area the reasons for which have already been cited in section 5.2 and subsection 6.1.2. Thus the present investigation carried out in the Indian context would lead to the enrichment of knowledge in the area. Thus, the first purpose of the study (mentioned in section 1.10) is addressed.
v) Since there were strong associations among human—figure drawing, cognitive style and self esteem so the investigation had ascertained whether human—figure drawing (performance variable manifesting the developmental characteristics of children and adolescents) could be predicted on the basis of the subjects’ cognitive style and self esteem. It is evident from the results reported in section 5.4 that cognitive style and self esteem of children and adolescents are indeed reflected in human—figure drawings they create. In other words, the psychological variables of cognitive style and self esteem of the subjects strongly influence and predict their human—figure drawings. The outcome (which fulfills the second purpose of the present study as given in section 1.10) is of great practical significance. The present finding could bolster the advocacy of the use of human—figure drawings instead of the use of the conventional psychological tools like questionnaires, inventories etc. to ensure stress—free testing for children and adolescents. The chances of faking would also be less in case human—figure drawing tests are used for psychological assessment because the intents of these tests are not apparent. Moreover, the children and adolescents will not feel bored but would rather enjoy taking such tests. The problem of language—bias (typical of the verbal—tests ) would be substantially reduced if human—figure drawing tests are used. This would be of great help in a multilingual society such as India.

One might argue that is it also possible to predict the psychological variables of the individuals like cognitive style and self esteem on the basis of their human—figure drawings? Although this aspect was outside the purview of the present study yet in view of the highly significant associations among the pertinent variables, one is almost certain that, at least in case of the present sample, it would be possible to predict the subjects’ cognitive style and self esteem on the basis of their human—figure drawings . However, this aspect was not put to test. Anyhow, on the basis of the trends of the results, it seems plausible that the human—figure drawing test can be modified and scoring systems so devised that subjects’ cognitive style and self esteem can be assessed using such tests.
The human—figure drawings of children and adolescents can be regarded as windows on their minds. Very often adults can not understand what younger people think, want and try to communicate. In fact, in many cases children and some adolescents can not express their inner feelings through words owing to limitations in linguistic skills. But drawings provide them with a medium through which they can express a subtlety of intellect and affect that is beyond the power of verbal expression (Dileo, 2007). Such drawings are also rich in emotional contents (Arnheim, 1954; Langer, 1953). Emotional problems of children and adolescents which can not be expressed verbally find expression in drawings (Veltman and Browne, 2003). As mentioned in subsection 1.2.1 Freud believed that art embodied and projected the artist's unconscious consisting of infantile wishes, psychic conflicts, repressed anxieties, hostilities etc. (Glover, 2005). Similarly Klein (1975) pointed out that infantile anxiety situations are mirrored in artworks and in creative impulses. As elaborated in subsection 1.2.4, Vygotsky (1925; 1971) opined that the basic aesthetic response comprised of both the emotion expressed by the creator (could be children and adolescents) through the art and the emotion expressed by the audience (could be thought of as adults like parents, teachers, psychologists etc.). The emotional experience of the audience, according to Vygotsky (1925; 1971), is so vivid that it appears real. Therefore it is possible for adults to understand the inner world of children and adolescents through the drawings created by the latter. It would help remove many misconceptions regarding the thought processes and emotions of the younger persons. Besides, the communication gap between children and adolescents on the one hand and the adults on the other would be plugged leading to better adjustment of both the parties with one another.

As discussed in subsection 1.2.4, according to Vygotsky (1925; 1971) art provides an avenue for the release of pent-up emotions of the artist (including children and adolescents). This is known as catharsis. In subsection 1.2.1 it has been already mentioned that Freud believed that the sexual impulses of the
creative people (it could even be a child or an adolescent) were partly channelized and satisfied through the creation of aesthetically appealing and socially recognized products. This is the defense mechanism of sublimation (Morgan et al., 1987). Because of these qualities of artworks, drawings serve as effective tools of therapy for emotionally disturbed children and adolescents (Frostig and Essix, 1998). So it is apparent that the drawings of the young want to tell the adults many things. Only we have to learn the language of reading the drawings. Human – figure drawings are, therefore, valuable tools for the assessment of children and adolescents which we can not afford to ignore.

6.5 Suggestions for further Research:

i) Longitudinal studies can be carried out on the age – related changes and gender differences in human – figure drawing, cognitive style and self esteem of children and adolescents. The interrelationships among the above variables can also be examined using longitudinal studies to get a complete and accurate picture.

ii) Investigations like the present one can be conducted on the samples of the subjects belonging to the three socioeconomic statuses viz., high, middle and low to find out if the outcomes are influenced by socioeconomic status or not. Gender difference in respect of human – figure drawing, cognitive style and self esteem may emerge in the lower socioeconomic status because generally gender discrimination in socialization is more prevalent in that socioeconomic level.

iii) To make the findings of the study widely generalized, children and adolescents studying in the vernacular – medium of instruction and studying in schools affiliated with the regional boards of education could be included in the sample.
iv) Researches on similar lines can be carried out on samples of not only urban but also semi-urban and rural children and adolescents for wider generalization and comparative study.

v) Similarly, comparative studies can be carried out on human-figure drawings of children and adolescents taking private lessons in art and those without such art training. The findings could be interesting.

Finally, it could be stated that the proper and age-appropriate development of the young people is of special concern to a country like India where a substantial proportion of the population (35.30%) are under 14 years of age (Census of India, 2001). So it is important to gauge not only the physical but also the psychological development of children and adolescents because the future of our country rests with them. Another concern is the assessment of needs, wishes, emotions and problems of the young people which they may not be able to articulate. This study has brought to light the importance of human-figure drawings of children and adolescents in reflecting the development of their psychological characteristics and suggested that greater use of such drawings be made as non-invasive tools of assessment of the inner world of the young.