CHAPTER V
GENERAL DISCUSSION

The present investigation intended to examine the contribution of social desirability factor to scales developed following the projective-inventory method for which three studies were conducted. In the Study I, attempt was made to develop a projective inventories battery to measure different areas of adjustment i.e., health, home, social, and emotional. Accordingly, Adjustment Projective-Inventory for measuring above mentioned areas was developed following the standard test construction procedures. In the Study II, attempts were made to demonstrate the reliability and validity of the newly developed Adjustment Projective-Inventory. Test-retest and Kuder-Richardson reliabilities were computed for these scales which were quite high. Criterion related validity coefficients were also determined for this newly developed test which were found to be quite encouraging. As stated earlier, the basic objective of the Projective-Inventory method has always been to minimise the social desirability contribution to scale scores (Puhan, 1982). Thus in the Study III, an attempt was made to determine the contribution of social desirability factor to Adjustment Projective-Inventory scores. For this purpose, Adjustment Projective-Inventory (AdP-I), Vyaktitva- Parakh-Prashnavali (V.P.P., Saxena, 1962), and Crowne-Marlowe Social Desirability (M-CSD) scale were administered to the subjects
in three testing sessions. The correlation co-efficients were computed between Adjustment Projective-Inventory and Social Desirability, Vyaktitva-Parakh-Prashnavali and Social Desirability Scale, and Vyaktitva-Parakh-Prashnavali and Adjustment Projective-Inventory. Social desirability was also correlated with all the four areas of the adjustment of both Adjustment Projective-Inventory and Vyaktitva-Parakh-Prashnavali. The results which appear in Table 18 indicate that the correlation coefficients (\( r_{SD-ADP-I} \)) of Social Desirability Scale with Adjustment Projective-Inventory were found to be very low (i.e., -.08, .00, -.05, -.01, & -.05) in comparison to the same in the V. P. P. self-report inventory for all the earlier mentioned areas of adjustment (i.e., .34, .33, .35, .38, & .33). This indicates that the social desirability factor is more related with V. P. P. self-report inventory and very less related with the Adjustment Projective-Inventory. It may also be concluded from this type of results that the Vyaktitva-Parakh-Prashnavali in addition to measuring different areas of adjustment, is also measuring social desirability factor. But the manual of this self-report inventory tells us that this inventory was designed to measure only the mentioned areas of adjustment not social desirability factor which now appears doubtful. On the other hand, the correlation coefficients of M-CSD Scale
with AdP-I were found to be very low, all being near zero. It means this newly developed Adjustment Projective-Inventory measures only health, home, social, emotional, and total adjustment. It has also been stated earlier that this Adjustment Projective-Inventory was designed to measure only above mentioned areas. Therefore, it is clear from above discussion that this Adjustment Projective-Inventory is almost unaffected by social desirability factor. Similar results were also found in the studies of Patnaik (1985) and Puhan and Roy (1985). Puhan and Dash (1985) have also pointed out that personality scales developed following the Projective-Inventory model are considerably less susceptible to social desirability factor.

The most important danger of the social desirability effect on inventory scores is its implications for a measure's validity. It has already been said earlier that a test just does not need to correlate with a criterion (convergent validity), it also must not correlate with variables which it is not supposed to correlate with (discriminant validity). As found in the Study III, the areas of adjustment as measured by Vyaktitya-Parakh-Prashnavali are highly correlated with social desirability factor (i.e., .34, .33, .35, .38, & .33) and the same areas as measured by Adjustment Projective-Inventory had near zero correlations with social desirability factor.
The basic psychometric requirements of a test are its reliability and validity. It was also pointed out earlier...
that to test reliability with an alternate form approach was difficult. Similarly, the stories and statements reflect differential manifestations of the trait under measurement thus making it impossible to divide the test items into equal parts. So test-retest and Kuder-Richardson reliabilities were computed for this Adjustment Projective-Inventory. The test-retest reliability coefficients was found to be very high (i.e., .87) for this battery. As mentioned earlier, this Adjustment Projective Inventory provides separate measures of health, home, social, and emotional adjustments. The test-retest reliability co-efficients were also computed for these sub-inventories all of which were found to be less (i.e., .69, .70, .61, & .74) than the reliability found for the total Adjustment Projective Inventory (i.e., .87). In fact, the reliability of a test depends on the test length. In general, adding more items, provided they are reliable ones, will increase the reliability of the tests (Anastasi, 1982; Brown, 1970; Nunnally, 1981). In the present study, sub-projective-inventories contained only 21-29 items and total Adjustment Projective-Inventory contained 97 items. Therefore, the reliability for the total Adjustment Projective-Inventory was found to be higher (.87) compared to those of the sub-projective inventories (.69, .70, .61, & .74, respectively).
When Kuder-Richardson reliability coefficients were computed for Adp-I, the trend of the result was reversed. The correlation coefficients of sub-Projective-Inventories (i.e., .61, .65, .71, & .69) were higher than the total Projective-Inventory (i.e., .60). These findings are also in line of theoretical work relating to internal consistency reliability. The Kuder-Richardson reliability measures the homogeneity (internal consistency) of a test. A subtest is generally composed of items measuring the same content area and obviously the different subtests will differ among themselves in format and contents. The homogeneity (internal consistency) of a subtest will therefore be higher than that of the total test.

It is evident in the present study that this newly developed Adjustment Projective-Inventory has a high level of both test-retest and Kuder Richardson reliability for all the mentioned areas of adjustments. However, the test-retest reliabilities of different adjustment areas were generally higher than those of the Kuder-Richardson reliabilities. These findings are consistent with the domain sampling model of test-retest method which recognises practice effect in retest. The results of the Study II indicate a high level of stability and consistency of the newly developed Adjustment Projective-Inventory. It was also found that this newly developed test is a
homogeneous in nature. The literature suggests that only one study (Puhan & Rath, 1981) has been conducted which determines the reliability for a test (i.e. honesty) developed following the projective inventory approach. Thus, some other investigations should be conducted to determine the reliability of tests developed following this newly developed approach.

It is important to note that the effectiveness of projective-inventory scales for measuring several areas of adjustment were demonstrated in terms of high reliabilities found in the present investigation. However, it may be pointed out that reliability as such may not be enough justification of a personality measure and the approach it follows. Validity, on the other hand, ensures some amount of reliability and is a far more important consideration than reliability. The concepts of reliability and validity also require that agreement between measures be demonstrated. Reliability indicates the extent of agreement between the efforts to measure the same trait through maximally similar methods (e.g., split-half method). Validity, on the other hand, is represented in the agreement between two attempts to measure the same trait through maximally different methods (Campbell, 1960; Campbell & Fiske, 1959). A common denominator which most validity concepts share in contrast to reliability is that this agreement represent the convergence of independent approaches. This independence,
is a matter of degree, and in this sense, reliability and validity may be considered as regions on a continuum. Viewed thus a split-half reliability, as Campbell and Fiske (1959) point out, is a little more like a validity coefficient since the items are not identical. In strict psychometric sense, therefore, personality tests always require to demonstrate its validity than reliability. In many cases, for example, it is found that when a test intends to measure a personality attribute and satisfies the requirements of reliability, it seemed to measure personality characteristics other than those they attempt to measure (Pervin, 1975). It simply suggests that a test may be reliable without being valid, but it cannot be valid, if it is unreliable. In a thoughtful analysis of reliability testing Pervin (1975) has pointed out "although high reliability indicates that there has been systematic gathering of data through the use of an assessment technique and that observations can be replicated, it no way indicates that what is being measured is meaningful" (p.26). Therefore, the issue of validity is of great concern to a test developer.

In the study only criterion-related validity was determined for this newly developed Adjustment Projective-Inventory. In fact, it is clear from the discussions in study II, that convergent and discriminant validity and criterion related validity are appropriate for personality
tests. Two criterion measures such as the Asthana Adjustment Inventory and Rating method were used. The Asthana Adjustment Inventory provides only a total score of adjustment and, therefore, it was not appropriate for measuring health, home, social, and emotional adjustment areas separately. It was appropriate only for total adjustment. Thus average rating of parents and friends were used as a criterion for determining the criterion validity. Table 15 shows these validity coefficients of adjustments projective inventory. The correlation coefficients between ratings and this newly developed Adjustment Projective-Inventory were found to be .69, .81, .71, .82, and .35 for the four areas of adjustment and total, respectively. These results suggest that Adjustment Projective-Inventory has a high level of criterion related validity for all the areas of adjustment. On the basis of these results, it may also be concluded that this scale measures health, home, social, and emotional adjustment because it had high level of correlations with corresponding criterion measures. It is clear from the results of Study II that Adjustment Projective-Inventory is a highly valid test in criterion-related sense.

As stated earlier, the convergent and discriminant validity (Campbell & Fiske, 1959) are more appropriate for validity testing of personality inventories. Puhan (1982, 1985) has also pointed out that convergent and
discriminant validities would be more appropriate for the tests developed following the projective-inventory method. However, no attempt was made in the present investigation to determine the convergent validity. Discriminant validity was determined for the Adjustment Projective-Inventory in terms of the contribution of social desirability factor to its subscales and the total scale (Study III). As mentioned earlier, the subscales of the Adjustment Projective-Inventory have near zero (i.e., -.08, .00, -.05, & .01) correlations with the social Desirability scale. These findings therefore suggest that this newly developed scale only measures different areas of adjustment and does not measure social desirability. These correlation coefficients suggest that the Adjustment Projective-Inventory seems to have a satisfactory discriminant validity which obviously lacks in a corresponding self-report inventory.

Besides reliability and validity, the psychometric merit of a test depends on other considerations like objectivity in scoring, standardization of the testing procedure, efficiency, feasibility, etc. In the first study, a system of scoring was developed with a rational or intuitive approach. The approach utilizes expert judgements to determine the suitability of an item for inclusion in a particular test battery. This procedure places emphasis
on developing items to measure a theoretically meaningful set of constructs. Several studies (i.e., Goldberg, 1972; Guilford, 1975, Hornick, James & Jones, 1977) reported that rational approach provides better understanding of the theoretical meaning of the constructs than the empirical approach to scoring. The findings of the present study therefore provide support for the rotationally developed scoring procedure which, in projective-inventory, consists of a simple dichotomous (i.e., 0 and 1) weighting system. Moreover this scoring system suggests the possibility of achieving greater objectivity (Sechrest, 1968) in projective-inventory test protocol. The present study utilized structured instructions and standardized procedures of test administration and the subjects were required to follow uniform procedure of responding. All these merits of the projective-inventory method indicate that it is less expensive. It also suggests the possibility of collecting a maximum amount of data with minimum cost and effort. Finally, the projective inventory approach involves projective based structured stimulus situations. These psychometric advantages of the projective-inventory method, therefore, seems to indicate that it has successfully achieved greater objectivity in the structured test situations. Projective-inventory method attempts to combine the positive aspects of both projective and
inventory methods. Therefore, highlighting its theoretical framework may help further in understanding its psychometric advantages.

The stories and statements (items) for the Adjustment Projective-Inventory were written following a logically formulated rational approach. Support for the rational approach to test construction may be found in a study by Hase and Goldberg (1967). Projective methods usually involve two fundamental properties such as structure and ambiguity. The structure refers to the physical attributes of the stimulus whereas ambiguity means the characterization process itself (Murstein, 1963). So the structure of a stimulus in projective test situation indicates who are the characters and what they are doing. But the consideration, for instance, why they are doing a particular activity depends on the factor of ambiguity. Ambiguity involves identification of character, description of actions, and the meaning of actions (Murstein, 1959). Ambiguity in projective stimulus situations is favoured by the personality assessors for it helps the subject to project his characteristic personality attributes to the outer world. But experimental studies on the effect of ambiguity on projection show that more ambiguous stimuli elicit less projection than the stimuli with moderate of minimum ambiguity (Veroff, 1961, Veroff, Atkinson, Felds & Gurin, 1960). It was also found that more ambiguous
stimulus reduces the possibility of having a common meaning for all the subjects (Heath, 1958). Perhaps all these disadvantages associated with high ambiguity have made the projective approach very non-objective in nature. On the other hand, there are plenty of evidences which suggest that by structuring a given theme or by introducing minimum ambiguity in it, one can increase test-retest reliability or stability of scores (Zubin, Eron & Schumer, 1965) and can standardize the testing situation of projective technique. Therefore, the present study attempted to introduce minimum ambiguity by structuring the stories and statements of Adjustment Projective-Inventory for measuring health, home, social, and emotional areas of adjustment.

The other consideration for evaluating the stimuli of projective inventory relates to the type of projection. The literature on projective techniques indicates four possible views on projection which include classical, attributive, artistic, and rationalized projections (Murstein & Pryer, 1959). The latest views, as Sechrest (1968) points out, include similarity, complementary, Panglossian and reactivity projection. The projective assumption underlying the theory of projective-inventory approach may be considered as attributive or similarity projection. Attributive projection occurs when "the
individual projects on others' people's characteristics which are identical to his own, and he is consciously aware of these characteristics within himself (Holmes, 1968, p. 253). The statements following each story in projective-inventory (Appendix P) require evaluative judgement of the activities of the characters by the subjects. Projective workers believe that a subject is likely to reveal himself when he talks about another, and more likely to show defensive behaviour when he talks about himself (Goldberg, 1965). Therefore, it is assumed that through the evaluative judgement of the character's activities, a subject would ascribe his own feeling to the stimulus situation (i.e., projection) which, in turn, would reflect his personality dispositions. Utilization of projective principle, in the stimulus situations appears to suggest the positive aspect of projective method. To summarise the appraisals it may be said that projective-inventory method seems to achieve success in combining the positive aspects of both projective and inventory methods.

Overall, the evaluation of the findings of the three studies suggest that the contribution of social desirability factor to projective-inventory scores was examined following essential steps which are required for constructing a test or a method. These steps include selection of traits, defining trait domain, writing the test items, pretesting,
item analysis, reliability and validity testing, and finally evaluating the contribution of a social desirability factor to a projective-inventory test scores. The first study attempted to construct the test of adjustment (e.g., for measuring health, home, social, and emotional adjustment separately) following the steps involved in test construction procedures. In the second study, attempts were made to examine the test-retest and Kuder-Richardson reliabilities and criterion-related (predictive) validity of this newly developed projective inventory. The results suggest satisfactory reliabilities and criterion-related and discriminant validity of projective-inventory measures. The third study was conducted to determine the contribution of social desirability factor to Adjustment Projective-Inventory scores. The results clearly suggest that this new approach more or less eliminates social desirability contributions to the Adjustment Projective-Inventory scores. Therefore the findings of this research indicate that projective-inventory method has achieved a considerable success as a technique for measuring personality. Although this new method in its present form seems to possess the potentiality for measuring different personality attributes unaffected by social desirability, it appears to have some difficulties which require further investigations.
In the present study adjustment (e.g., health, home, social, and emotional) was selected for the purpose of measurement. But the future studies, as Puhan (1982) feels, require first to try out the projective-inventory approach with certain traits of different nature—socially desirable, socially undesirable, and neutral ones. Honesty for example, may be considered as a socially desirable trait. Among other traits, jealousy and sulking may be tried out as socially undesirable and neutral traits, respectively. Once the traits are selected and defined, the next requirement is the preparation of materials for the test. The test materials, as stated earlier, consist of stories with only two or three characters in each. In the present study, the validity of each item (statement) were determined on a sample of Hindi speaking University student population. In future studies, therefore, test items may be administered to different type of samples other than the students.

In the present study, items were analysed by criterion validation approach. Of the various procedures used for item analysis, the contrast group method is claimed to be the most satisfactory one (Sundberg, 1977). In this procedure, keying the items and item analysis are done simultaneously. Items (i.e., statements in the stories) of honesty test, for example, are to be administered to a
group believed to possess more of this trait and to an average group. The same procedure should be followed in administering the items for other selected traits. Having done this, each item's average score on each measure may be compared across the groups. The items with significantly different average scores across these groups are to be retained for the final measures and the trait keyed responses are the ones which are generally responded by the group supposed to possess more of the trait under measurement. After item analysis, the retained items may then be administered to a single group for the purpose of reliability and validity testing. As stated earlier perhaps test-retest and Kuder Richardson approaches would be the most appropriate methods for reliability testing.

The most important stage would be the validity testing. It has already been stated earlier that convergent and discriminant approach to validity testing by multitrait multimethod procedure (Campbell & Fiske, 1959) can give more meaningful information about a new measure than the other conventional methods of validation. But in the present study, these types of validities were not determined. Therefore, in the future studies, the adjustment (e.g., health, home, social, and emotional) may be measured by different methods like projective-inventory, self report inventory, and associates rating methods. If the tests are
found to satisfy the four criteria (Campbell & Fiske, 1959) of convergent and discriminant validity, the data in the obtained matrix would, in turn, suggest the validity of all the instruments as well as the methods. In future, this newly developed Adjustment Projective-Inventory may also be administered to a group of mental patient in a mental hospital for validity testing purposes. It is expected that mentally disturbed persons would score less on Adjustment Projective-Inventory compared to normal persons in all the areas of adjustment.

Finally, the present study assumed that the test scores were less affected by social desirability factor since adjustment were believed to be comparatively less socially desirable traits. This assumption has already been verified in the present study. It was found in the present study that the Adjustment Projective-Inventory is minimally affected by social desirability factor which has been a nagging problems for all kinds of inventories. Some other studies (e.g., Patnaik, 1985; Puhan & Roy, 1985), have also reported similar results. But all these studies including the present one have used an old scale to measure social desirability which too has been developed in a foreign land. Therefore, a conclusive statement regarding projective inventory's immunity to social desirability awaits results of future studies which may convert the
projective-inventories themselves to social desirability scales following the techniques suggested by Edwards (1970). In this case, the projective-inventory may be administered to a large sample of subjects and proportion of 'true' or 'agree' responses, $P(T)$, may be calculated for each of the statements. A correlation between the $P(T)$ and the corresponding social desirability scale values (SDSV) for all the statements in the projective-inventory need to be very low to justify the superiority of this assessment model over the conventional ones. Future investigations may also use a locally developed social desirability scale which may be correlated with projective-inventories and corresponding self-report inventories.

Apart from social desirability, it would also be informative to check the effects of other irrelevant factor on projective-inventory scores. The acquiescence, response bias, response style, central tendency factor, item ambiguity, item stability, item serial position, and grammatical quality of the items to projective-inventory scores may all be thoroughly investigated into before the proposed model is recommended as an alternate technique for developing personality assessment tools. Most of these factors may be controlled in the writing stage of stories and statements (items). For example, acquiescence,
may be controlled by phrasing an equal number of items of the projective-inventory in both positive and negative directions. Therefore, the future studies may attempt to demonstrate the contributions of some other mentioned irrelevant factors on the Adjustment Projective-Inventory which was constructed in the present study.