CHAPTER V

SUMMARY AND CONCLUSION

5.1 SUMMARY

5.2 CONCLUSION

5.3 MERITS AND LIMITATIONS OF THE PRESENT STUDY
CHAPTER V

SUMMARY AND CONCLUSION

Career intervention as a form of career counselling and as means of career assistance, have been attracting the attention of the researchers working in the area of vocational behaviour, because of being applied in nature and because of having practical social implications.

A large number of such studies are carried out on the samples of adolescent students whose career behaviour has been the major concern of the subject of Home science also.

Intervention in vocational development has been described and defined in a variety of ways (Holland, Magoon & Spokane, 1981). It may be defined as any effort that involves a planned, deliberate, and programmatic intrusion into the development of career of individual or group of individuals. It is multiple forms of vocational assistance which include vocational or career counselling, self help devices, career courses, occupational information, interest inventories and vocational card sorts etc.
Career intervention or multiple forms of assistance is delivered via multiple techniques and treatments (Holland, Magoon & Spokane, 1981). It involves a programmatic effort to make a person able to be decisive about his/her career if he/she is careerwise indecisive (Vondracek, Lernoe, Schulenberg, 1983).

Nowadays, the interventions are being delivered via multiple techniques and treatment. The purpose of these techniques or programmes are to change a careerwise indecisive person into decisive one. These intervention programmes help in enhancing ability to learn about oneself, learn about career opportunities, clarify values, make plans, see oneself in control, engage in exploratory process with satisfaction etc. The intervention programmes may help the client to: i) Improve his/her career decision making skills ii) Increase in career or vocational maturity iii) Improve in the quality of choice iv) Improve his/her employment seeking skills v) Improve his/her job performance and satisfaction.

The task of these intervention programmes are to make aware the client or indecisive people of their abilities, interest, family and social
background, vocational aspirations, capabilities and potentialities so that they may be able to take decision about their careers.

Four major approaches are seen in dealing with the problem of career indecision:

1. Psychoanalytic approach
2. Existential approach (Humanistic-experiential approach)
3. Rational approach
4. Behavioural approach

The psychoanalytic approach is coloured by a heavy emphasis on unconscious motivation. Early writers like Jones (1923), Zillboorg (1934), Itendrick (1934) and Brill (1949) have reported cases in which the problem of vocational choice has been dealt psychoanalytically. They cited cases in which id impulses found its release in one's choice of career. Sadism might be "sublimated" (expressed in a socially acceptable manner) in the work of a Butcher, or surgeon. Free association, dream analysis and its interpretation and transfers are all involved in the process of choosing a career. The development of insight is the major goal of psychoanalytic intervention, that is, what was previously unconscious becomes conscious,
"where id was, ego shall be" (Freud, 1963). As a result of this insight there is a redistribution of psychic energy. The ego becomes more powerful because it no longer has to commit the bulk of its resources to defending against id impulses. A stranger ego, then, is better able to make decisions in accord with the pleasure and reality principles (Horan, 1979).

The humanistic experiential approach is based on the assumption that we have both the freedom and the responsibility to control our own behaviour that we can reflect on our problems, make choices and take positive action. This approach feels that a client must take most of the responsibility for the directions and success of counselling, with a counsellor merely serving as counselor, guide, and facilitator. The central focus of the humanistic counselling is always that of expanding a client's awareness. Thus it is cognition oriented approach. The major types of humanistic experiential counselling is client centered counselling (Carl Rogers, 1951, 1961, 1966), Based on Rogerian self concept approach a number of vocational choice theorist such as Super, Startishevsky, Matlin and Jordaan (1963); Tiedman and O'Hara (1963) have laid stress on the early
favourable developmental experiences, which culminate in an improved self concept. But the approach could not provide any specific strategy for helping client in resolving their career choice problem.

As compared to psychoanalytical and existential approaches, rational approach of vocational counselling are much more accommodating to the language of formal decision theory. In rational approach choice problems are clearly defined alternatives are weighed in the light of all the available information and the intervener actively helps the client to implement a plan of action.

Behavioural interventions are by and large based on principles of respondent and Operant conditioning. The potentials of these interventions have been strikingly demonstrated in dealing with career indecision (Baker, Herr, Moran, Hudson Wallace, 1973, 1975). The behaviouristic approach of career intervention believes that the career indecision occurs due to:

a) having failed to acquire competencies needed for taking career decision.
b) having learned faulty reactions to the problem of career decision.

c) or both

Thus, the intervener who intends to intervene the problem of career indecision specify the targeted career behaviours to be modified and behaviours leading to career decisions are to be achieved as well as the specific learning principles or procedures to be used. The intervener attempted to modify the state of indecisions by distinguishing or counter conditioning maladaptive reactions such as emotional arousal or by manipulating environmental contingencies that is, by the use of reward, suspension of reward, shaping to overt action. The ultimate goal of such intervention programme are not to suggest appropriate career for the careerwise indecisive persons, but to make themselves able to acquire the competencies that are required to take an appropriate decision about the career.

Mitchell & Krumboltz (1987) designed a cognitive restructuring intervention for individual’s having difficulty with career decision making and compared the intervention to a decision skill
intervention and a no treatment control. They found that cognitive restructuring intervention was more effective than the decision making training and the control condition. The client who received cognitive restructuring reported more benefit in the skills they learned were more satisfied with the decisions they made and found the treatment programme more useful in making decision than did in other two groups.

Snodgrass & Healy (1979) identified particular client goals and developed treatments with specified objectives, counselling components, and outcome measures that meet those goals. 18 volunteer counsellors with and without formal training applied a specified career counselling treatment to university undergraduates. Analysis of pre-treatment and post-treatment outcome measures indicated that clients significantly increased their knowledge of career decision making and planning and their satisfaction with their career choices but not their ability to solve career problems. Of the 18 counsellors, 15 achieved 60% or greater adherence to the specified treatment components with at least one client. Clients' feedback indicated that the counselling was particularly helpful for improving self awareness and decision making but that additional components...
may need to be added to improve information seeking and goal specification (Snodgrass & Healy 1979).

Holland (1970, 1985b) developed a career intervention programme named as Self-Directed Search. It is based on his own theory of career development of personality-environment congruence. The Self Directed Search is an interest inventory that has designed to be self administered and self-scored. The inventory has section focusing on occupational daydreams, activities, competencies, occupations and self-estimates. Scores are derived for each of the six Holland personality types: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (c). The test-retest reliabilities for these scales range between .60 to .84. In addition to the scores on the six codes each person is assigned a high code value based on the highest scale score. Test-retest reliability for high code ranking is reported to be .92 (Holland 1985b).

Individual vocational planning (IVP), is a modification of Self Directed Search. It tried to overcome the errors of Self Directed Search and had made the SDS more systematic. In Self Directed Search it is not clear that what the client will do after
identifying occupations corresponding to their summary codes. The IVP is divided into stages, and subjects to have their summary code calculations verified or corrected before they move on to select occupations corresponding to their summary codes. A structured sequence for evaluating selected occupation is then provided (Krivatsy & Magoon, 1976).

A close examination of the above mentioned discussion revealed the following facts:

(1) All the career intervention programmes developed so far are based on certain theories of career development;

(2) Almost all the career intervention programmes developed so far are intended to solve only partial problems of the careerwise indicisive subjects. For example, Mitchel & Krumboltz (1987) provided only decision making training to the subjects, other problems like lack of information, problem of over arousal during career decision making etc. remained untouched. Similarly, Sondgrass and Healy (1979) did not provide any programme to solve the affective problems related to career behaviour of the indicisive subjects;

(3) Most of the career intervention programmes are meant for adolescent's boys and girls of X standard since it is crucial point where students are required to make plan about their future career so that they can opt their major accordingly;
All the career intervention strategies are (a) either of cognitive in nature or (b) of affective in nature.

THEORY BASED INTERVENTION VS PROBLEM BASED INTERVENTION:

In his review article Fretz (1981) has stressed the need to develop a career intervention programme based on the empirical derivation of the actual career related problems faced by the careerwise indecisive subjects. In his own words “the preceding review provides only the beginning of an empirical basis for identifying distinctive parameters in career intervention”. It is now very clear that the treatment parameters must be empirically derived first then alone the relevant intervention strategy should be chalked out. Developmental career theorist (Super 1975) have also laid stress on the identification of such remedial parameters. They regarded it as necessary ones to attend if the intervener is interested to attain greater effects than interventions based on the simple trait and factor approaches.

Moreover, there is a sharp cultural divergence between Indian and Western part of the globe. Obviously, the problems of career decision making of Indian students are different than its western counterparts. So, there is a strong need to develop an indigenous career intervention programme that can be suitable to solve the career indecisiveness of the Indian adolescent students. Thus, it was decided
Thus, it was decided that before devising any such intervention programme the cognitive and affective problems faced by the career wise indecisive students should be served and then in the light of those problems a career intervention programme should be developed. In the light of the above mentioned discussion the following problems for the present study have been stated:

(1) Do cognitive intervention programme facility the career decision making ability in the adolescent students of class X?

(2) Do affective intervention programme facilitate the career decision making ability in the adolescent students of class X?

(3) Do mixed intervention programme facilitate the career decision making ability in the adolescent students of class X?

(4) Which programme is most suitable to the indecisive students of class X?

(5) Whether these programmes will leave their lasting impact on the Ss or not?

(6) Whether the impact of the intervention programme will remain same along with the time dimension or not?
Considering the aforementioned problems, it is very much clear that there exist following main variables viz.-

I) Career intervention i) Cognitive intervention; ii) affective intervention; iii) mixed intervention

II) Career decision making

The brief specifications of the variables are presented as under:

I) Career Intervention:

Career intervention may be defined as any effort that involves a planned, deliberate, and programmatic intrusion into the development of career of individual or groups of individuals. Operationally, it is a set of multiple form of remedial techniques that can change a careerwise indecisive person into decisive one (Holland, Magoon & Spokane, 1981). In this study three types of career interventions, Cognitive, Affective and Mixed have been introduced.
i) **Cognitive Intervention**:  

The Cognitive intervention is that intervention which is largely based on cognitive remedial techniques, such as cognitive resturcturing and modelling etc.

ii) **The Affective Intervention**:  

The affective intervention is largely based on the affective remedial techniques such as emotional role playing etc.

iii) **The Mixed Intervention**  

The mixed intervention programme is the blend of the above two programmes.
II) Career decision Making

Career decision making refers to the process by which a person chooses his/her career. Operationally, it may be defined as the acquisition of the following four career related steps:

i) Defining the problem

ii) Generating alternative solutions

iii) Systematically eliminating alternatives

iv) Committing to action

If a subject has acquired the above mentioned four steps he/she will said to the careerwise decisive. It will be assessed with the help of career decision making scale by Tiwari & Hasan (1990).

DEVELOPMENT OF INTERVENTION PROGRAMMES:

Derivation of the Actual problems faced by the careerwise in decisive subjects:

Since, all the available career intervention programmes are developed in Western countries, it has been argued that the problems related to career choice in Western countries are not same as that of in our country. The reason may be attributed to several factors, prominent among them are cultural and social. As it has already been mentioned that not even a single intervention strategy has tried to find out the real problems which are to be intervened. All of them are under the impacts of some or the other theories of vocational development. Not a single intervention programme whether it is individual programme, group intervention strategies or self help devices has tried to ascertain the actual problems or difficulties faced by the
careerwise indecisive Ss in real life situation, it is more true in case of adolescent Ss, So, it was decided to interview 50 careerwise indecisive Ss in order to find out the career related problems faced by them.

Table 5.1 gives a detailed account of the difficulties/ problems narrated by the Ss during the interview. The percentage of Ss giving a particular problem as frequently experienced by them, is also given in the last column of the table.
### TABLE - 5.1

Problems narrated by the Ss during the interview and their percentage

<table>
<thead>
<tr>
<th>S.No</th>
<th>Problems narrated by the Ss</th>
<th>Technical name in the theories of career development (parameter)</th>
<th>Percentage of Ss endorsing each problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Much concerned about career</td>
<td>Over arousal</td>
<td>92</td>
</tr>
<tr>
<td>2</td>
<td>Lack of clarity regarding the problem that of career decision making.</td>
<td>conceptualization</td>
<td>92</td>
</tr>
<tr>
<td>3</td>
<td>Lack of knowledge about the career decision making paradigm.</td>
<td>Part of the problem of conceptualization</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>Lack of knowledge regarding the steps involved in career decision making</td>
<td>Decision making scale</td>
<td>86</td>
</tr>
<tr>
<td>5</td>
<td>Making decisions about their career without considering the pros &amp; cons related to their decisions.</td>
<td>impulsivity</td>
<td>84</td>
</tr>
<tr>
<td>6</td>
<td>The Ss are unaware about their own characteristics pertaining to career decision making</td>
<td>self exploration</td>
<td>84</td>
</tr>
<tr>
<td>7</td>
<td>Lack of knowledge about the magnitude of various career related characteristics possessed by the Ss</td>
<td>self exploration</td>
<td>84</td>
</tr>
<tr>
<td>8</td>
<td>Lack of knowledge regarding socio-cultural variables, pertaining to career decision making</td>
<td>Environmental exploration</td>
<td>84</td>
</tr>
<tr>
<td>9</td>
<td>Lack of occupational information regarding academic area or disciplines, institutions, training centres, competitive exams, various kind of job, various skills, training programme, monitory gain &amp; loss, social &amp; cultural factor related to job satisfaction of particular needs for particular job.</td>
<td>Environmental exploration</td>
<td>84</td>
</tr>
<tr>
<td>S.No</td>
<td>Problems narrated by the Ss</td>
<td>Technical name in the theories of career development (parameter)</td>
<td>Percentage of Ss endorsing each problem</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>10</td>
<td>Problem in identifying alternative &amp; additional alternative</td>
<td>Enlargement of response repertoire</td>
<td>84</td>
</tr>
<tr>
<td>11</td>
<td>Problem in differentiating among various career on the basis of various career related parameters such as income, prestige etc.</td>
<td>Cognitive differentiation</td>
<td>82</td>
</tr>
<tr>
<td>12</td>
<td>Facing problem in deciding the suitability of various careers for themselves and working out the probability of achieving those careers.</td>
<td>Adaptive utilities and probability estimate</td>
<td>78</td>
</tr>
<tr>
<td>13</td>
<td>Facing problem in response selection</td>
<td>Goal selection</td>
<td>78</td>
</tr>
<tr>
<td>14</td>
<td>Problem of commitment to the finally selected alternatives.</td>
<td>Implementation</td>
<td>78</td>
</tr>
</tbody>
</table>

N = 50, Careerwise indecisive Ss
The distinguished feature of the present investigation is to develop the career intervention programme. On the basis of the career related problems actually narrated by the career wise indecisive Ss, not on the basis of any theory of career development or on the basis of any intervention programmes developed in Western countries.

A close examination of all the available techniques pertaining to the problems arrised in career decision making has made it clear that they can be broadly classified into two types (1) Cognitive techniques, (2) Affective techniques. In order to change career wise indecisive Ss into decisive one the following two types of career interventions were developed (1) Cognitive intervention programme, (2) affective intervetnion programme. In order to see the impact of the blend of the two programme the mixed intervention programme is also developed. All the intervention programmes are already discussed in chapter III. The selection of cognitive and affective remedial techniques are based on the following two considerations : (1) they should be verbal in nature (2) they should be easily administered in a group setting.
EVALUATION OF CAREER INTERVENTION PROGRAMME:

On the basis of the review of literature pertaining to the criteria of evaluation of various intervention programmes. The following valuation criteria were employed to evaluate our own intervention programmes.

I) Immediate or short term Criteria:

The immediate criteria was in the form of verbal report given by the indecisive Ss, e.g., determining whether the client can correctly define the problem as one of choice? After defining the purpose of counselling the subject should be able to define the purpose of the counselling in their own words. Similarly, when intervener determines if vocational choice is the main objective, the client should show his/her mental set to seek vocational counselling through his/her affirmative verbal clues like Ok, yes, proceed, let us start etc. Such verbal immediate criteria have been given in every steps of the intervention programme developed by the author of this dissertation.
2. Criteria based on Psychological variables:

As a psychological criterion the Indian adaptation of Crites Career Maturity Inventory (CMI) by Gupta (1989) has been employed here as criterion measure. The scale is intended to tap the career competencies viz self appraisal, occupation information, goal selection, planning, problem solving and career related attitudes viz decisiveness in career decision making, involvement in career decision making, independence in career decision making, orientation to career decision making, compromise in career decision making. Since the scale is best suited under Indian cultural context, it has been decided that full scale be taken as psychological criteria for the evaluation of intervention programme.

3. Methodological Criteria:

a) Assignment of Subjects randomly to intervention and control (No intervention) Groups:

Oliver (1979) has recommended that the Ss in such studies should be assigned randomly to treatment and control group. He observed that if random assignment is possible, the researcher can place
greater confidence in the internal validity of his/her study. Intact groups must be used, include a control group and use random assignment of the groups to the various conditions. The sample size should be sufficiently large not less than 60 Ss in a single treatment group, so that the parametric statistics may be employed. So in the present study random sampling techniques has been employed and randomization was done during the sampling as well as in assigning the Ss to each group. Through random assignment of Ss to groups some important subjects characteristics such as socio economic conditions, personality dispositions etc were satisfactorily controlled.

(b) Inclusion of a control group in the research design:

Apart from the random assignment of the Ss to intervention groups, a control group (No intervention group) has also been included in the research design to establish the internal validity of the present study. This valuation criteria has also been well emphasize by Oliver (1979).
METHODOLOGY

SAMPLE:

After screening on Career Decision Making Scale (Tiwari & Hasan, 1990) 200 male and 200 female students of class X were drawn randomly from different schools of district Durg, M.P. to serve as subjects in the present study. Those subjects who had scored less than median score i.e. 50 (according to the table of norms) were treated as careerwise indecisive.

Quotawise randomization was also done in assigning the subjects to four intervention groups. Thus, in each intervention groups 50 male and 50 female students were served as subjects. The four groups were also assigned randomly to the four treatment conditions, viz., (i) Cognitive intervention (ii) affective intervention (iii) mixed intervention (iv) no intervention.
TOOLS:

1. Career decision making Scale
   by Tiwari and Hasan (1990)

2. Career Maturity Inventory
   by Dr (Mrs) Nirmala Gupta (1989)
   (Originally prepared by Crites)

3. Differential Aptitude test
   (Indian Adaptation by J.M.Ojha, 1961)

4. 16 Personality Factor by S.D. Kapoor (1978)

5. Interest Test -
   (a) Educational Interest Record
   (b) Vocational Interest Record by
       S. P. Kulshrestha (1978)

In this study CDMS has been used as dependent
measure, CMI as criterion measure and for the self
appraisal of the Ss 16 PF, DAT and Interest Test have
been used.
DESIGN:

Before-After (Pretest-Posttest) random group design was considered appropriate to investigate the effects of intervention on career decision making. A control group was also included in this study.

<table>
<thead>
<tr>
<th>Group</th>
<th>Y</th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Y</td>
<td>X₁</td>
<td>Y</td>
</tr>
<tr>
<td>II</td>
<td>Y</td>
<td>X₂</td>
<td>Y</td>
</tr>
<tr>
<td>III</td>
<td>Y</td>
<td>X₁</td>
<td>Y</td>
</tr>
<tr>
<td>IV</td>
<td>Y</td>
<td>No X</td>
<td>Y</td>
</tr>
</tbody>
</table>

X = Independent variable;  
Y = Dependent variable  
X₁ = Cognitive intervention;  
X₂ = Affective intervention  
X₃ = Mixed intervention,  
No X = No intervention
In the light of the theoretical discussion and previous findings discussed earlier and keeping in view the specification of the variables incorporated in the present study the following hypotheses have been formulated:

**Hypotheses**

1) The cognitive intervention programme would facilitate career decision making ability of the subjects.

2) The affective intervention programme would facilitate career decision making ability of the Ss.

3) The mixed intervention programme would facilitate the career decision making ability of the Ss.

4) No intervention would not facilitate the career decision making of the Ss.

5) As compared to cognitive intervention programme the mixed intervention programme would leave significantly higher impact on career decision making.

6) As compared to affective intervention programme the mixed intervention programme would leave significantly higher impact on career decision making.

7) There would be no significant difference between cognitive and affective intervention with regard to their degree of impact on career decision making.

8) The time gap would not affect the impact of cognitive intervention programme on career decision making.
9) The time gap would not affect the impact of affective intervention programme on career decision making.

10) The time gap would not affect the impact of mixed intervention programme on career decision making.

11) In cognitive intervention group the attitude scale scores of CMI would be significantly higher in post testing than the pre-testing.

12) In cognitive intervention group the self appraisal scale scores of CMI would be significantly higher in post testing than the pretesting.

13) In cognitive intervention group the occupational information scale scores of CMI would be significantly higher in post-testing than the pre testing.

14) In cognitive intervention group the goal selection scale scores of CMI would be significantly higher in post testing than the pre testing.

15) In cognitive intervention group the planning scale scores of CMI would be significantly higher in post testing than the pre testing.

16) In cognitive intervention group the problem solving scale scores of CMI would be significantly higher in post-testing than the pre-testing.

17) In affective intervention group the attitude scale scores of CMI would be significantly higher in post testing than the pre testing.
18) In affective intervention group the self appraisal scale scores of CMI would be significantly higher in post-testing than the pre-testing.

19) In affective intervention group the occupational information scale scores of CMI would be significantly higher in post testing than the pre testing.

20) In affective intervention group the goal selection scale scores of CMI would be significantly higher in post-testing than the pre-testing.

21) In affective intervention group the planning scale scores of CMI would be significantly higher in post-testing than the pre-testing.

22) In affective intervention group the problem solving scale scores of CMI would be significantly higher in post testing than the pre testing.

23) In mixed intervention group the attitude scale scores of CMI would be significantly higher in post testing than the pre testing.

24) In mixed intervention group the self appraisal scale scores of CMI would be significantly higher in post testing than the pre testing.

25) In mixed intervention group the occupational information scale scores of CMI would be significantly higher in post testing than the pre testing.
26) In mixed intervention group the goal selection scale scores of CMI would be significantly higher in post testing than the pre testing.

27) In mixed intervention group the planning scale scores of CMI would be significantly higher in post testing than the pretesting.

28) In mixed intervention group the problem solving scale scores of CMI would be significantly higher in posttesting than the pretesting.

29) In no intervention group the attitude scale scores of CMI would not be significantly different between pre & post testing.

30) In no intervention group the self appraisal scale scores of CMI would not be significantly different between pre & post testing.

31) In no intervention group the occupation scale scores of CMI would not be significantly different between pre & post testing.

32) In no intervention group the goal selection scale scores of CMI would not be significantly different between pre and post testing.

33) In no intervention group the planning scale scores of CMI would not be significantly different between pre & post testing.

34) In No intervention group the problem solving scale scores of CMI would not be significantly different between pre and post testing.
PROCEDURE : 

After assigning the 400 careerwise indecisive Ss to four different groups viz., cognitive, affective, mixed, and control group, good rapport was established with them. Their queries were answered regarding the testing and intervention. After that they were pretested on career decision making scale and career maturity inventory. After the pretesting different groups were given different interventions accordingly. When intervention programme was given just after that they were post tested again on career decision making scale and career maturity inventory. The order of the items of CDMS was changed during post testing. After one month gap, to know the effectiveness of the intervention they were again tested on CDMS. Similarly, again after one months gape the second follow up study was conducted. The results pertaining to pre testing and post-testing and also of the follow up studies were statistically analyzed and interpreted.
Statistical Analysis of Data

a) Test of Difference between pre-test and post-test scores:

The research design employed in this study is pretest-posttest or before-after random group design. Such designs require comparison between the two values of dependent variables. The difference was to be tested for its significance which presupposes the estimation of the probability of the chance occurrence of the difference. This requirement will be served by employing Critical Ratio (CR) being the ratio of difference actually obtained to the difference which may result from chance.

\[
\text{C.R.} = \frac{M_1 - M_2}{\sqrt{\sigma_1^2 + \sigma_2^2 - 2 \rho \sigma_1 \sigma_2}}
\]

Where \(SE_b\) = Standard error of difference between correlated means.
\(M_1\) = Pre-test mean,
\(M_2\) = Post-test mean
\(\sigma_1\) & \(\sigma_2\) = Standard errors of the initial and final test means.
\(\rho\) = Coefficient of correlation between score made on initial and final tests.

Scheffe's multiple group mean comparison:

One of the major objectives of the present study is to make a comparative study of the effectiveness of the three career intervention programme viz Cognitive, affective and mixed intervention programme. In order to meet this end multiple comparison between (a) cognitive Vs affect, (b) Cognitive Vs mixed (c) affective Vs mixed are required. Since the comparison of more than three intervention groups are required it was decided to employ multiple group mean comparison techniques to find out the significance of differences between pairs of intervention groups. Using analysis of variance (F test) technique developed by Scheffe's (1953). The suitability for employing scheffe's multiple group mean comparison is based on the following two assumption:

i) The orthogonal comparison between pairs of means is required and

ii) A priority comparison between pairs of means are sought well in advance not after the inspection of data. Since here in this study, both the above mentioned conditions are being satisfied the Scheffes multiple group mean comparison technique is considered to the most appropriate statistics to have a comparative picture of the three intervention programmes. The
post test scores and their averages of the three intervention programme were used for the purpose of comparison.

\[
F = \frac{(X_1 - Y_1)^2}{\text{Sum of squares within groups}} + \frac{(SW^2/n_1) + (SW^2/n_2)}{N - K}
\]

what is \(X_1, X_2\) = Mean of group I, Group II
\(SW^2\) = Within group variance estimate
\(N\) = Number of subjects
\(K\) = Collum

iii) One way Analysis of Variance

(F-test with repeated measures):

For the evaluation of career intervention programme the follow up studies have also been conducted after one month and after two months gap. In order to see the lasting impact of career intervention programme two follow up studies were conducted after the gaps of one month and two months. The post test scores of the same subjects on the two repeated intervals were compared, employing the simple one way analysis of variance with repeated measures. In order to eliminate the familiarity effects the order of the items of the career decision making scale was changed besides the time gap.

\[ 
\begin{array}{c|c|c}
\text{Total} & \text{Kn-1} \\
\hline
\text{Between} & n-1 & \text{Within} \\
\text{Ss} & & \text{Ss} \\
\text{Between Treat} & K-1 & \text{Residual (error)} \\
\text{Kn} = \text{number of levels of a factor or treatment} \\
n = \text{number of subjects in each treatment} \\
\text{Kn} = \text{total number of observations} \\
\end{array}
\]

[Source Experimental Design In Behavioural Research K.D.Broota (1992), Wiley Eastern Limited, Delhi, 1st Reprint]
RESULT AND DISCUSSION:

HYPOTHESIS-I:

In hypothesis I, it was hypothesised that the cognitive intervention would facilitate the career choice or career decision making. To test this hypothesis the pre and post test scores on career decision making of those subjects who had received cognitive intervention were compared. The test of difference CR was computed to test the significance of difference. Pre testing mean 65.11 post testing mean 105.24. The CR is also significant beyond .01 level of confidence. This significant value of CR accept the hypothesis that the cognitive intervention has powerful impact on career decision making ability of the "S".

HYPOTHESIS II:

In hypothesis II it was hypothesized that the affective intervention would play powerful facilitating role in making the Ss decision regarding their career. To test this hypothesis the scores of the Ss on decision making scale during pretesting and post testing was compared. The significant value of the test of difference approve the hypothesis pre test mean 67.50, post test mean 96.95. The CR is also significant beyond .01 level of confidence. Thus the hypothesis is accepted.
HYPOTHESIS III:

In order to test the hypothesis III that the blend of the two intervention viz cognitive and affective will facilitate the career decision making, again we worked out a test of difference CR between the pre and post test scores of the Ss on career decision making scale. The difference was found significant beyond .01 level of confidence. Because of being blend of the two intervention strategies it worked more effective producing a sizeable magnitude of difference between pre test and post test mean, pre test mean - 64.26, post test mean 110.22.

HYPOTHESIS IV:

In hypothesis IV it was hypothesized that no intervention group would remain inconclusive in post testing on the career decision making scale scores. The difference between pre test and post test score is not significant at even .05 level of confidence. Thus hypothesis IV is confirmed. The no intervention group also served as control group.

HYPOTHESIS V:

In hypothesis V it was hypothesized that mixed intervention programme would leave significantly higher impact on career decision making ability of Ss then the cognitive intervention programme. In order to verify this hypothesis scheffe's group mean comparison
was worked out between the post test scores of cognitive intervention group and affective intervention group. (Affective intervention group post test mean 96.95, Cognitive intervention group post test mean 105.25) The difference was found significant beyond .01 level of confidence. Thus the hypothesis is accepted.

HYPOTHESIS VI:

In hypothesis VI it was hypothesized that mixed intervention programme would leave significantly higher impact on career decision making ability of Ss than the affective intervention programme. In order to verify this hypothesis Scheffe’s group mean comparison was worked out between the post test scores of affective intervention group and mixed intervention group. (Affective intervention group mean 96.95, mixed intervention group mean 110.13) The difference was found significant beyond at .01 level of confidence. Thus hypothesis VI is confirmed.

HYPOTHESIS VII:

In hypothesis VII it was hypothesized that there would be no difference between affective and cognitive intervention with regard to their degree of impact on career decision making. In order to test this hypothesis the Scheffe’s group were worked
(Cognitive intervention group mean 105.25, mixed intervention group mean 110.12). The difference was found significant beyond .01 level of confidence. Thus the hypothesis stands rejected.

HYPOTHESIS VIII, IX AND X:

In hypothesis VIII, IX and X it was hypothesized that time gap would not affect the impact of cognitive affective and mixed intervention programme on career decision making respectively. In order to test these hypotheses two post test scores (follow up scores) of the Ss were also taken after the gap of one month and two months. After running the single factor with repeated measures one way analysis of variance no significant difference was found among the scores pertaining to the repeated time interval. F ratio for cognitive intervention group was 1.78, for affective intervention group it was found to be .95 and for mixed intervention group the F ratio was 2.45 which is not significant even at .05 level of confidence at df 2 and 198. Thus the hypotheses VIII, IX and X are accepted.

HYPOTHESES XI TO XVI:

In hypotheses 11 to 16 it was hypothesized that in cognitive intervention group the post testing scores on criterion measures viz attitudes towards career, self appraisal, occupational information, goal selection, planning, problem solving, would be significantly higher than the pre testing condition. The pretest and post testing condition on all the criterion parameters are significant beyond .01 level of confidence. This hypothesis XI to XVI confirmed.
HYPOTHESES XVII TO XXII

In hypotheses No XVII to XVII, it was hypothesized that in affective intervention group the post testing scores on criterion measures viz. attitudes towards career, self appraisal, occupational information, goal selection, planning, problem solving, would be significantly higher than the pre testing condition. The difference between the pre testing and post testing conditions on all the criterion parameters are significant beyond .01 level of confidence. Thus hypotheses VIIX to XXII are confirmed.

HYPOTHESES XXIII TO XXVIII

In hypotheses XXIII to XXVIII it was hypothesized that in mixed intervention group, the post testing scores on criterion measures viz. attitudes towards career, self appraisal, occupational information, goal selection planning, problem solving, would be significantly higher than the pre testing condition. The difference between the pre testing and post testing conditions on all the criterion parameters are significant beyond .01 level of confidence. Thus hypothesis XXIII to XXVIII is confirmed.
HYPOTHESES XXIX TO XXXIV:

In hypotheses XXXIX to XXXIV it was hypothesized that in No intervention group, the pre testing and post testing scores on criterion measures viz attitudes towards career, self appraisal, occupational information, goal selection, planning, problem solving would not be different significantly. On self appraisal and planning parameters the t-values are significant at .05 level of significance that is 2.41 and 2.30 respectively, but on the rest of the criterion parameters the t value is not significant at either .01 or .05 level. Since this is no intervention group and the Ss did not get any intervention regarding career information. The significant t values rejects the hypothesis no XXX and XXXIII.

CONCLUSIONS:

The mean score obtained by each group in pretesting on career decision making scale was compared with the post testing score. Post testing was done after giving interventions. A control group was also employed which was not given any sort of intervention. t-test was employed to test the significance of the difference between means pertaining to the two conditions. In order to verify the comparative effectiveness, Scheffe's group mean comparison was worked out among the post test scores of cognitive intervention group, affective intervention group and
mixed intervention group. For the evaluation of career intervention programme the followup studies have also been conducted after one month and after two months gap. In order to see the lasting impact of career intervention programme one way analysis of variance (F test with repeated measures) have been employed.

The findings may be summarised as follows:

1) The cognitive intervention has facilitating effect on career decision making behaviour.

2) The affective intervention has facilitating effect on career decision making behaviour.

3) The mixed intervention has powerful facilitating effect on career decision making behaviour.

4) The effect of cognitive intervention is more effective than the affective intervention on career decision making behaviour.

5) The subjects belong to 'no intervention' group remained indecisive during post-testing because they did not receive any intervention.

6) Mixed intervention has the best effect on career decision making from rest of the two interventions.

7) All the three interventions have shown there lasting effect on career decision making.

8) By and large the cognitive, affective and mixed interventions improve the subjects' career related attitudes and career competencies viz., self appraisal, occupational information, goal selection, planning, problem solving.
**Merits & Limitations of the Present Study:**

**Merits:**

1. The interventions developed in the present study are based on empirically derived career-related problems of the careerwise indecisive Ss. So these interventions proved effective in tackling the problems of the Ss and changing the careerwise indecisive Ss into careerwise decisive.

2. In order to make the design of the study powerful, the Ss were drawn randomly assigned to each group random assignment of groups to treatment condition viz cognitive, affective and mixed interventions was also measured. This strategy, in fact, generates confidence in the results obtained in the present study.

3. The interventions developed in the present study are meant for class X adolescent student, that is the well-accepted careerwise crucial stage for a student. The interventions developed in this study may be proved helpful for them.

4. The intervention developed in the present study have been evaluated on the criteria suggested by Fretz (1981) and Oliver (1979), the eminent researcher in this area.

**LIMITATIONS:**

1. Besides control group of 100 Ss each intervention group is consist of 100 Ss (50 male, 50 female). Thus, in all 400 Ss have worked as Ss in the present study. However, in view of the generality of the result the size of the sample have been larger than the present one.

2. The sample has been drawn from different H.S.S. Bhilai city Distt. Durg. In order to achieve more generalizability of the result obtained in this study the sample should be broad based.