CHAPTER V

SUMMARY AND CONCLUSION
CHAPTER V

SUMMARY AND CONCLUSION

5.1 The Resume: Its Glimpses

5.2 The Conclusions: Their Orientations

5.3 The Present Study: Its delimitations and Limitations

5.4 The Further Studies: Some Suggestions
5.1 THE RESUME: ITS GLIMPSES:

As pointed out by Groves (1956) the term sportsmanship is standing with different shades of meaning in the literature. Some authors equated it with moral reasoning, whereas others defend it in terms of fairness and generosity in sports and games. A close synonym namely, sportsmen/women spirit is also existing in the literature to overshadow the real spirit of the technical term in the field. Realisation of such practical difficulty motivated the present investigator to make use and popularise the gender-bias free term "sportsperson-spirit", by way of making it a target of
scientific investigation. Stated categorically, it can be said that "sportsperson-spirit" can be perceived in terms of standard of thinking, mode of behaviour and general outlook not limited to the field of games and sports, because a good sportsperson, irrespective of sex, has stout heart, persistence and respect for rules and officials. An individual with good sportsperson-spirit behaves with the same spirit in all walks of life including playing of games in the spirit of games. It also determines certain characteristics of one's personality such as honesty, tolerance, courtesy, friendliness, cheerfulness, obedience and so on. A good sportsperson is more successful in his/her life, he/she is better adjusted to himself/herself, to home and to social environment. He/she is more disciplined obedient, sincere and trustworthy. He/she takes everything in its correct perspective whether it may be a victory or a defeat.

Thus, it is to be registered here that the term sportsperson-spirit is being favoured and used throughout the thesis as a 'scientific construct' with a full knowledge of its emancipation from the conventional but controversial term 'sportsmanship'.
Play, games and sports, and physical activities as the phenomenon attracted many educationists and social scientists to understand these from scientific point of view. Consequently, one encounters numerous investigations centered around these phenomena. As such, an attempt has been made here to present a birds eye view of the major findings.

Folkins & Sime (1981) studied the impact of physical fitness training upon mental health. Their research revealed that physical fitness training led to improved mood, self concept and work behaviour. Konzak and Boudreau (1984) investigated the impact of martial arts training upon mental health. The training emphasized the artistic meditative aspects of 'karate' and was expected to have effect on their concentration, self control and confidence. Singh (1986) reviewed the findings on the practice of yoga to promote good health and treat psychosomatic deseases. Yoga appeared to have a potential values in promoting mental health and treating the mentally ill. Agnew and Levin (1987) studied the effects of running on mood and perceived health using longitudinal data. A multiple regression analysis of interview data indicated that running has a small positive effect on perceived health but no
significant effect on mood or severity of emotional problems. Agashe and Helodec (1990) investigated the main and joint action effect of participation in sports, sex and personality dimensions upon mental health of players and non-players. Their findings revealed that psychoticism, neuroticism and participation in physical activities have shown significant interaction effects upon positive mental health; extraversion has shown its significant positive relationship with mental health and thereby extraverts have shown significantly greater amount of positive mental health than the introverts. Reglin, Eksten and Carl (1995) assessed the effect of an intensive pre-season conditioning programme on mood state in 13 members of a men's university basketball team. Repeated measures ANOVA revealed that training regimen was associated with negative changes in each of the mood factor with exception of confusion. Cox and Yoo (1995) studied the relationship between selected psychological skills and playing position of 43 American Football players. Significant differences were observed between offensive and defensive players for anxiety control. McAfee (1955) investigated sportsmanship attitudes of sixth, seventh and eighth grade boys by using 20 situations covered in physical
education classes. Since the sportsmanship attitude of the boys in this study become progressively lower from the 6th through the 8th grade, these seems to be a need to revise the methods used in teaching sportsmanship. Kistler (in Singer, 1968) noted that high percentage of college students he inquired, demonstrated what we might considered to be unsportsman like attitudes in sports situations. Johnson (1969) attempted to quantify sportsman attitude by developing scales using the scale discrimination technique. Baley (1960); Coon (1964); McAfee (1955); and others reported that motivated toward the learning of sportsmanship is lacking in much of school sports world because of the over emphasis onwining as the measure objective. Mishra, Agashe and Helode (1993) studied 40 university/ national level players and 40 non-players. Their findings revealed that players showed significantly greater sportsperson spirit than the non-players; female exhibited significantly more sportsperson-spirit than the males and although an interaction effects of participation/non-participation in sports and sex upon sportsperson-spirit turned out to be insignificant, female players exhibited significantly greater degree of sportsperson-spirit than the male and
and female non-players; while the male players did not show significantly more sportsperson-spirit than the female players and non-players but showed significantly greater degree of sportsperson-spirit than the male non-players.

Thus, on the strength of studies and views cited above, it can be said that many investigators devoted their scientific investigations to study the impact of physical training and participation in sports and games upon personality characteristics; some investigators attempted to see the effects of coaching and training upon acquisition of skills and sports performance; and a few attempted to quantify the measurement of sportsmanship attitudes and values. However, studies pertaining to the measurement of sportsperson spirit and identification of the determinants that could explain "variance" existing in the phenomenon of sportsperson spirit, are scanty. Therefore, in the present study an attempt has been made to identify, if any, the contribution of certain well-known demographic variables, like, sex and participation in games and sports; and of certain well-established personality dimensions such as, extraversion, neuroticism, psychoticism, and
intelligence in accounting for "individual differences" in sportsperson-spirit.

To materialise the aforesaid purpose, an attempt has been made in this thesis to seek scientific solution to the following problems:

1. Has participation-non-participation in sport and games any noticeable influence upon the magnitude of sportsperson spirit?
2. Has sex any systematic bearing upon sportsperson-spirit?
3. Is sportsperson-spirit related to extraversion in a systematic way?
4. Are neuroticism (emotional stability-instability) and sportsperson-spirit related in some systematic way?
5. Is psychoticism associated in any systematic way to sportsperson-spirit?
6. Are intelligence and sportsperson-spirit related to each other in some manner?
7. Is sportsperson-spirit susceptible to the joint-action influence of participation in sports and games; and sex the two well-known demographic variables?
(8) Are extraversion, neuroticism, psychoticism and intelligence - the four personality dimensions - jointly capable of influencing sportsperson-spirit?

To obtain scientific solutions to the above mentioned problems, two sets of hypotheses were developed; one around the demographic variables and another around the psychological variables; and the same were put to empirical test. One set of hypotheses covers the following:

**I.1** Ss having participation in the sports will show more sportsperson-spirit than the Ss having no participation in the sports.

**I.2** Male Ss will show more sportsperson-spirit than the female Ss.

**I.3** Male Ss having participation in the sports will show more sportsperson-spirit than the female Ss having no participation in the sports.

Second set of hypotheses comprises of the following:

**II-1** Extraversion will show its positive relation with sportsperson-spirit; and thereby extraverts will show more sportsperson-spirit than the introverts.
Neuroticism will show its negative relationship with sportsperson-spirit; and thereby Ss with low neuroticism scores will show more sportsperson-spirit than the Ss with high neuroticism scores.

Sportsperson-spirit and psychoticism may show their association in the negative direction; and thereby Ss with low psychoticism scores will show more sportsperson-spirit than the Ss with high psychoticism scores.

Intelligence may show its positive association with sportsperson-spirit; and thereby Ss with high intelligence will show more sportsperson spirit than the Ss with low intelligence.

Hypotheses II-5 to II-10 were formulated to see how far sportsperson spirit is susceptible to the joint-action effects of any two personality dimensions out of four taken together at a time.

Hypotheses II-11 to II-14 were devoted to see the joint-action effects of three personality dimensions out of four taken together at a time, upon sportsperson-spirit.
This hypothesis was set up to understand the joint-action effect of four personality dimensions taken together at a time, in that, it was speculated that Ss of high level of extraversion, low level of neuroticism, low level of psychoticism but high level of intelligence may exhibit more degree of sportsperson-spirit than the Ss of low level of extraversion, high level of neuroticism, high level of psychoticism but low level of intelligence.

For verification of the above mentioned hypotheses, the following methodological steps were taken:

A sample of 440 college/university students, on the stratified-incidental-cum-random basis, was selected. Out of these 440 cases, 215 cases were of those students who have participated in sports at the college/university levels and the remaining 225 cases were of those students who never participated in the sports at the tournament level. Out of these 215 cases 101 were male and 114 were female students coming under the category of participation; and out of 225 cases 122 were male and 103 female students who never
participated in the college/university level sports. The age, educational level and socio-economic status were held constant as far as possible in the case of this research sample.

To measure extraversion, neuroticism and psychoticism, Mohan and Virdi's (1985) Hindi version of Eysenck Personality Questionnaire (EPQ) was used. For measuring intelligence Mehrotra's (1984) Mixed Type Test of Intelligence (MGTI) in Hindi was employed. For measuring sportsperson spirit, Dubey's (1988) sportsman-spirit test (Hindi) was used.

To verify the correlational hypotheses, the R-R type of research design was followed. To verify the differential hypotheses, contrast groups research design and to verify interactional hypotheses, factorial such as 2x2 and 2x2x2x2 (fixed model) research designs were followed.

The aforementioned psychological tools were administered in a sequence, in that, EPQ was given first, then MGTI was given and finally sportsperson spirit test was administered, with due time interval, in a group setting, comprising of at least 5 Ss at a time. The Ss' responses were scored in accordance with the scoring keys provided with the manuals for these tools.
After warranting normality of the distributions of the extraversion (E), Neuroticism (N), Psychoticism (P), and Lie (L) scores obtained on 440 cases, the statistical verification of the above mentioned hypotheses was done with the help of parametric statistical devices.

To verify hypotheses I-1 through I-3, pertaining to studying the main and interaction effects of participation in games and sports and sex upon the magnitude of sportsperson-spirit a 2x2 (A = Participation x B = Sex) fixed model ANOVA was run. However, suspicion of the possible pollution of the sportsperson spirit scores by the tendency to tell a lie (L scores) on the part of the Ss, led to verification of the association between sportsperson-spirit scores and L scores. After noticing the significant positive correlation between these two, it was decided to nullify the influence of the lie tendency from the sportsperson-spirit scores, by way of running a 2x2 analysis of Covariance (ANOCOVA) as applied to unequal cell frequencies.

To verify the hypotheses II-4 through II-15 pertaining to the role of personality dimensions namely, extraversion, neuroticism, psychoticism and
intelligence, in influencing the degree of sportsperson-spirit, Pearson's Product moment coefficients of correlation were calculated and to nullify the role of L scores in influencing the correlations between these personality dimensions and sportsperson spirit scores, first-order partial correlations were worked out in the case of 440 subjects.

Further, to study the main and interaction effects of four personality dimensions namely, extraversion (A), Neuroticism (B), Psychoticism (C) and Intelligence (D) upon sportsperson-spirit, a $2 \times 2 \times 2 \times 2$ factorial design was employed. For getting sufficient number of cases in each cell of a $(2)^4$ factorial design, the criteria of identifying cutting points was relaxed to $P_{33}$ (for knowing low level of the given personality dimensions) and $P_{67}$ (to know the high level of each personality dimension). This procedure led to the identification of 179 cases situated in the different cells of 16 cells design. After noticing the significant correlation between sportsperson-spirit scores and lie scale scores of these identified 179 cases, it was decided to eliminate the role of a tendency to tell a lie. Therefore, the 179 sportsperson-spirit scores were put to $2 \times 2 \times 2 \times 2$ (fixed
model) ANOVA and ANOCOVA treatments applied to unequal cell frequencies.

5.2 THE CONCLUSIONS: THEIR ORIENTATIONS:

The results of the statistical findings reported above, led to the following main inferences:

(a) Distribution-Oriented:

1. The distribution of the five psychological variables, viz, extraversion, neuroticism, psychoticism, intelligence and sportsperson-spirit have been found to be normally distributed in the college/university students.

(b) Difference-Oriented:

2. The sex differences between the male and female college/university students in the scores of extraversion, neuroticism, psychoticism and intelligence have been found to be statistically insignificant.

(c) Relation-Oriented:

3. The L scale has shown its significantly positive correlation with extraversion and
sportsperson-spirit scales; significantly negative correlation with neuroticism and psychoticism scales, while no significant correlation with intelligence.

(4) The correlation between extraversion and neuroticism; between extraversion and intelligence; between extraversion and psychoticism and between extraversion and sportsperson-spirit, before eliminating the contribution of lie scores, turned out to be significantly negative; significantly positive, insignificant and insignificant, respectively; and after eliminating the contribution of lie scores through first-order partial, it turned out to be, respectively, significantly negative, significantly positive, insignificant and insignificant.

(5) The correlations of neuroticism with psychoticism; intelligence, and sportsperson-spirit, respectively, before and after eliminating the contribution of L scores, have been turned out to be significantly positive, insignificant and significantly negative.
(6) The correlation between psychoticism and intelligence before and after nullifying the influence of lie scores, has been found to be statistically insignificant; whereas between psychoticism and sportsperson-spirit under zero-order and first-order partial found to be significantly negative.

(7) The correlation between intelligence and sportsperson-spirit, before and after nullifying the role of lie scale scores, came out to be insignificant.

(d) Main Effect-Oriented:

(8) The main effect of participation in sports and games upon the sportsperson-spirit under 2x2 (fixed model) analysis of Variance (ANOVA) and Analysis of Covariance (ANOCOVA) before and after nullifying the influence of lie scale scores, respectively, turned out to be statistically significant, and thereby rendered empirical confirmation to hypothesis I-1 that those who participated in the sports and games showed more amount of sportsperson-spirit than those who did not participate.
(9) The main effect of sex upon sportsperson-spirit in a 2x2 factorial situation under ANOVA and ANOCOVA, before and after nullifying the role of 'lie tendency', turned out to be statistically significant and thereby provided empirical support to hypothesis I-2, convincing that male students exhibited significantly more sportsperson-spirit than the female students.

(10) The main effects of extraversion and neuroticism, respectively, upon the sportsperson-spirit in a 2x2x2 factorial situation under ANOVA and ANOCOVA treatments, have been turned out to be statistically insignificant and thereby provided an empirical rejection, respectively, to hypothesis II-1 and II-2.

(11) The main effect of psychoticism upon sportsperson-spirit under extreme groups design and in a (2)^4 factorial situation under ANOVA and ANOCOVA, have seen to be statistically significant and thereby provided an empirical support to hypothesis II-3 in that low psychoticism scorers showed
more sportsperson-spirit than the high psychoticism scorers; and empirically demonstrated the hypothesized negative correlation between sportsperson-spirit and psychoticism without and with nullifying the contribution of tendency to tell a lie.

(12) The main effect of intelligence upon sportsperson-spirit under the extreme groups design as well as in a (2)^4 factorial situation under ANOVA and ANOCOVA, have been seen to be statistically significant and thereby provided an empirical support to hypothesis II-4 in that, high intelligent Ss showed significantly more magnitude of sportsperson-spirit than the low intelligent Ss and demonstrated a significant positive relationship between intelligence and sportsperson-spirit without and with nullification of the contribution of L scale scores.

(e) Two-factor interaction effect-oriented:

(13) The two-factor interaction effect of extraversion x neuroticism upon sportsperson
spirit has been seen to be statistically insignificant under both ANOVA and ANOCOVA treatments, and thereby hypothesis II-5 has been empirically rejected.

(14) The two-factor interaction effect of extraversion x psychoticism upon sportsperson spirit has been turned out to be statistically insignificant under both ANOVA and ANOCOVA treatments; and hence hypothesis II-6 received an empirical rejection.

(15) The two-factor interaction effect of extraversion x intelligence upon sportsperson spirit has been noticed to be statistically insignificant under both ANOVA and ANOCOVA treatments; and thereby hypothesis II-7 received an empirical rejection.

(16) The two-factor interaction effect of neuroticism x psychoticism upon sportsperson spirit has been seen to be statistically insignificant under both ANOVA and ANOCOVA treatments. As such, hypothesis II-8 has been rejected.

(17) The two factor interaction effect of neuroticism x intelligence upon sportsperson-
spirit under both ANOVA and ANOCOVA treatments, received an empirical rejection and thereby hypothesis II-9 stood rejected.

(18) The two-factor interaction effect of psychoticism \( \times \) intelligence upon sportsperson spirit, under ANOVA and ANOCOVA conditions, has been turned out to be statistically insignificant and thereby hypothesis II-10 did not receive an empirical support.

(f) Three-factor interaction effect-oriented:

(19) The interaction effect of extraversion \( \times \) neuroticism \( \times \) psychoticism upon sportsperson spirit under both ANOVA and ANOCOVA conditions, turned out to be statistically insignificant and thereby hypothesis II-11 received an empirical rejection.

(20) The interaction effect of extraversion \( \times \) neuroticism \( \times \) intelligence upon sportsperson spirit under ANOVA and ANOCOVA conditions, did not touch statistical significance and as such hypothesis II-12 stood rejected.

(21) The interaction effect of extraversion \( \times \) psychoticism \( \times \) intelligence upon sportsperson
spirit, under both ANOVA and ANOCOVA conditions, turned out to be statistically insignificant; and as such hypothesis II-13 did not receive an empirical confirmation.

(22) The interaction effect of neuroticism x psychoticism x intelligence upon sportsperson spirit under both ANOVA and ANOCOVA situations, did not receive statistical support and as such hypothesis II-14 stood rejected.

(g) Four-factor interaction effect-oriented:

(23) The interaction effect of extraversion x neuroticism x psychoticism x intelligence upon sportsperson-spirit, under ANOVA and ANOCOVA conditions, did not reach the level of statistical significance and thereby hypothesis II-15 received an empirical rejection.

(h) Need-oriented:

(24) The overall observation that the two demographic variables namely, participation in sports and sex have shown their significant main effects upon sportsperson-
spirit in a 2x2 factorial situation, under both ANOVA and ANOCOVA situations; and the observation that out of the four personality dimensions, only psychoticism and intelligence have, respectively, demonstrated their main effects upon sportsperson-spirit to the significant extent, under both ANOVA and ANOCOVA treatments, indicate a need to go for an integrated design in which demographic and personality dimensions are to be incorporated so as to get an opportunity to study not only the main but also the interaction effects of these variables upon sportsperson-spirit under personality x situational model.

(i) Theory-oriented:

(25) The Eysenckian Personality Model seems to provide a sound theoretical base in explaining the "variance" existing in the sportsperson-spirit, if, relevant statistical controls are exercised over extraneous variables that are likely to pollute the 'real' influences of personality dimensions.
5.3 THE PRESENT STUDY: ITS DELIMITATIONS AND LIMITATIONS:

The sample of the present study has been selected from the colleges and university teaching departments affiliated to Pt. Ravishankar Shukla University, Raipur, on the incidental-cum-random stratified basis. Therefore, the finding of the present study are best applicable only to the students of this university. As such it can be registered as one of the delimitations of the present investigation.

Geographically speaking, only the Chhattisgarh region of the state of Madhya Pradesh received a representation in the present investigation. Hence the findings of the present thesis can best be extended to represent college/university youth of the Chhattisgarh region. As such this restriction can be admitted here as one of the delimitations of the present thesis.

The phenomenon of sportsperson-spirit was studied mainly on the college/university youth belonging to middle class families. As such, it can be said that the finding of the present thesis are best applicable to the middle class youth population of the
Chhattisgarh region. Hence, it can be identified here as one of the major delimitations of the present piece of research.

Two varieties of Ss namely players and non-players were studied in the present investigation. As such it can be said that the finding of the present investigation are applicable only to these two classes of the college / university students of the Chhattisgarh region. It can be, therefore, be identified and stated here that it is one of the major delimitations of the present investigation.

Sex difference in the sportsperson-spirit was also investigated in the present inquiry. As such, it can be said that the finding of the present study are best applicable only to male and female students of the college/university level. Hence, it has been identified and mentioned here as one of the major delimitations of the present inquiry.

While executing the present research for empirical verification of the researchworthy hypotheses, certain shortcomings were came to floor. These shortcomings have been named as the limitations of the present thesis. These are as under:
Due to want of sufficient number of cases in each of the 16 cells of a $(2)^4$ factorial design, the conventional criteria of $Q_1$ and $Q_3$ were relaxed to $P_{33}$ and $P_{07}$ respectively, to identify the low and high levels of extraversion, neuroticism, psychoticism and intelligence so as to know the main and interaction effects of these personality dimensions upon sportsperson-spirit. As such, it can be said as one of the noticeable limitations of the present investigation.

While studying the main and interaction effects of the four personality dimensions namely, extraversion, neuroticism, psychoticism and intelligence upon sportsperson-spirit, the factor of participation in sports and games was not held constant, which in turn might have shadowed the real influences of these personality dimensions upon sportsperson-spirit. As such, it is to be identified and registered here as one of the major limitations of the present study.

An integrated approach comprising of both demographic (e.g. sex, and participation in the sports) and personality dimensions (e.g. extraversion, neuroticism, psychoticism and intelligence) might have
provided the better canvas in explaining the components of sportsperson-spirit "variance". Such approach has not been executed in the present study due to limited number of cases available in the sample. As such, it is to be registered here as another limitation of the present investigation.

5.4 THE FURTHER STUDIES: SOME SUGGESTIONS:

The central theme of the thesis namely, "sportsperson-spirit" is very much heuristic in nature from the point of view of generating further research in the field. As such the following suggestions may be taken into consideration.

(1) Based on situation x personality model, a comprehensive study can be planned to understand the attributors of sportsperson spirit by way of throwing the data into factor analytical treatment.

(2) The distribution of sportsperson-spirit among the college/university students along the parameters of region, caste, religion; and type of schooling, can best be ascertained with the help of a further study.
3. Madhya Pradesh being tribal dominated area, the distribution of sportsperson-spirit can be located tribal area-wise with the help of a new study.

4. Sportsperson-spirit being an acquired quality, how for its acquisition is affected with and without having facilities to run physical education programme is one of the important question that could be answered through a new study.

5. To know the impact of counselling upon minimization of element of jealousy and rivalry among players; and to know the impact of counselling upon the magnitude of sportsperson-spirit, an experimental study can be planned along the guidelines of "before and after" design.