REVIEW OF LITERATURE
Chapter-II

REVIEW OF LITERATURE

It is clear from the discussion in the first chapter that personality determine and shape the total behavior of the organism and at the same time these are influenced by various factors. In the realm of Indigenous Perspective, triguna prakriti found the root of all human behavior as prakriti is the major factor that tends to initiate and sustain activity or behavior. Therefore, the present study was planned to uncover the relationship between various personality traits (prakriti) and health dimensions in Indian context. The concept of 'Triguna' has now been taking due importance in the field of scientific psychology. Past few decades have witnessed a gradual progress of research in this field, therefore here only general studies conducted in this field has been mentioned. A few of highly important ones are discussed in hierarchical and chronically order in this section. All the available sources as psychological abstracts included with Indian psychological abstracts, journals, sites and retrieval modes, e.g., Google, Pubmed, Medlar, Holistic.com, Psychology 4 all, wikipedia and jstor etc. were attempted to collect the empirical studies on triguna and Health.

Pathak (1932) highlighted the psychological implications of trigunas after which several psychologists attempted to explain its relevance (Akhilananda, 1948; Dwivedi, 1967; Phukan, 1960; Rao, 1962). Sharma, Gupta and Mitra (1965) attempted an investigation of these personality types. Their work has been described by Gupta (1977). They prepared a personality inventory comprising 85 items and administered it on 100 subjects for item analysis. Item analysis revealed that the two items which were not discriminating between high and low scores, which were therefore, dropped. Reliability by test-retest method revealed a correlation of 0.617. A test using modern methods of standardization aimed at explication of factors analysis is needed to empirically validate these concepts. The Indian cultural perspective more than dictates an empirical verification of these sixteen personality types as the Ayurvedic texts describe them.
Chapter-2
Review of Literature

The concept of *gunas* is equally applicable to cognitive characteristics. Bhagavan Das (1955) elaborated an interaction theory of *gunas* which speaks of their influence on various cognitive processes. A person with a *sattvic* outlook on life will have an abstract memory, realistic and appropriate perceptions and productive and abstract thinking. A person in whom the *rajas* *guna* predominates will have a concrete memory, ego involved perceptions, scattered thinking and imagination. In contrast a *tamasic* person would have loss of memory, distorted perceptions and confused thinking.

However, the first inventory to measure the personality in terms of the three *gunas* was developed by Paramaswaran (1969) and Uma, Lakshmi and Parameswaran (1971). Their inventory measured the *gunas* as independent dimensions and any interaction between them or even a predominance of one over the other *guna* was not observed. They validated their inventory against the criterion of Neymann-Kohlastedt test of introversion and extroversion. Parmeswaran found that the persons who scored high on *sattvic* dimension tended to be introverts, while those scoring high on *rajasic* dimension were extroverts.

Singh (1971) after examining the nature of the *gunas* in various Indian philosophical texts has presented the characteristics in relation to different categories such as temperamental condition, beliefs, attitudes, values and cognitions. With regard to cognitions the *sattvic* people manifested fully developed awareness, very clear perceptions and cognitions, abstract thinking and intuition. *Rajasic* people showed a developed awareness, sharp perceptions, clear cognitions, factual and tangible thinking, with an emphasis on direct knowledge. Where as *tamasic* people showed hazy awareness, delusions, hallucinations, confabulations, feeble or defective memory and poor attention.

A study based on *Samkhya* theory of human personality was conducted by Lakshmi-Bai, Murthy and Nagalakshmi (1975). In order to test for the presence of *sattvic*, *rajasic* and *tamasic* factors, 30 normal, 15 neurotics and 15 psychotics were selected. Study pointed out that *rajas* and *tamas* were significantly higher in the patient groups, especially the psychotics, than in the normal. Behavioral indices for *rajas* and *tamas* seem to be valid as they differentiate clinical conditions significantly.
Chapter-2
Review of Literature

Rao and Harigopal (1979) explored the relationship between three gunas (sattva, rajas and tamas) and ESP (extra sensory perception). The sample consisted of 112 postgraduate students with an age of 19-31 years. Results show a significant negative correlation between ESP scores and tamasic person.

The basis of human personality as given in ancient Hindu Ayurvedan literature is reviewed and interpreted in the light of current knowledge and understanding by Dube, Kumar and Dube in 1983. The structure of mind expounded in Samkhyan philosophy is explained and its parallelism with the Freudian approach is brought out. The formative influences in the development of the mental constitution of an individual are described. An attempt is made to demonstrate close similarity between Ayurvedan and Lewin’s field (Gestalt) theories. Significance of Tridosha (vatt, Pitta and Kapha), by vitiating the chemical balance, as etiological factors of mental illness is also described. Sixteen personality types and their correspondence with 16 types of mental disorders are also there in the above study.

Chakraborty (1987) has empirically demonstrated the usefulness of breathing exercise for enhancing the proportions of sattva. Strengthening of Sattva has turns the approach towards a purer mind. He also inducted top managers and MBA students of IIM-Calcutta to take a course to improve quality of work life following Vedantic Psycho-Philosophy. The key idea of the course was to encourage them to strive for experiential growth from within. Although it took long time but some of them could view a managerial problem or a conflict episode in an illuminated perspective, with a greater detachment and objective clarity of sattva. He, therefore, commented “strengthening of sattva hastens one’s approach towards a purer mind, taking it closer to the Purusha or Atman aspect of human being”. According to Chakraborty this is the crux of improvement of quality of work life.

A comparison of the Eysenck’s personality model was attempted with the triguna personality model by Mohan and Sandhu (1988). Their study showed a positive relation between introversion and sattva, extroversion and rajas, psychoticism and tamas, and a negative relationship between extroversion and sattva, neuroticism and sattva and psychoticism and sattva.
Kaur and Sinha (1992) present an empirical analysis of the Indian concept of *guna* on the assumption that this construct would be of interest from the organizational behavior perspective. A sample of 310 male executives in 3 cities in India answered the 37-item *guna* questionnaire of Chakraborty (1987). The construct of *guna* was operationalized and the data were subjected to factor analysis. Though they consider *triguna* as three independent dimensions theoretically, the correlation obtained shows significant relation for *rajas* and *tamas* not for *tamas* and *sattva* or *sattva* and *rajas*. Mohan and Sandhu (1986, 1988) considered them as separate dimensions with one being dominant. *Sattva, rajas* and *tamas* are negatively correlated at significant levels and *rajas* is closer to *sattva* than *tamas* in the hierarchy.

Sitamma, Sridevi and Rao (1995) attempted a study to investigate the relationship between the *gunas* (on the basis of Pathak, Bhatt and Sharma’s 1992 test) and perceptual abilities as assessed by Group Embedded Figures Test (GEFT) and perceptual acuity test (PAT). The study was conducted on the sample of 30 male and female post graduate students around 22 to 28 years. Positive correlations were obtained between *sattva*, GEFT and PAT scores. Negative correlations were found between *tamas*, GEFT and between *rajas* and the two perceptual tests. Although, the strength of the relationship varied according to the *guna* and the correlations were not significant except in the case of *tamas* and GEFT scores ($r = -0.41$, $df = 28$, $p < .05$). Significant relationship between *tamas* and GEFT scores as suggested by the correlation data ($t = 3.13$, $df = 28$, $p < .01$). People on high on *tamas* tend to be more field dependent. A possible explanation for the no significant correlation between *sattva* and GEFT and PAT scores may be attributed to the fact that in ordinary states of consciousness there is a noticeable lack of *sattva* or of pure discriminative awareness. Sitamma and Rao (1995) correlated ESP, verbal paired associates and three *gunas* and found that only high scores on *tamasic* scale differed significantly with ESP and memory tests. There was also a significant negative correlation between *tamasic* persons and the two measures.

Kapur, Hirisave, Reddy, Barnabas and Singhal (1997) made a courageous effort to explore temperamental differences based on *triguna* among 4
to 6 years old 50 normal and 30 psychologically disturbed children. They found majority of normal children having satvic disposition and reported that normal and psychiatric children had distinct temperamental profiles.

Chittranjan, Daftuar and Anjuli (1997) conducted a study focuses on three dimensional approach to personality (i.e., satva, rajas and tamas) in relation to occupational stress, organizational commitment and job involvement. The data were collected by administering four different test/questionnaire to measure, four variables on a sample of 50 respondents belonging to an engineering manufacturing organization located in Western India. Significant negative correlation was found between job involvement and occupational stress whereas organizational commitment yielded significant positive correlation with satva personality types. In case of organizational stress, satva gave only one positive correlation with occupational stress whereas tamas generated stress in several areas. No positive significant correlation was obtained in case of rajas guna. It was in fact negatively correlated with role conflict.

Chittranjan, Daftuar and Sharma (1997) conducted a study in a public sector organization. The questionnaires were distributed to 80 randomly selected permanent employees from the supervisory level with the mean age of 25.7 years. The results reveals that satva works at "self actualization" level, rajas as "esteem" level whereas tamas at only the "basic needs" level. Sattva and rajas were expected to show negative correlations with lower order needs. Both satvic and rajasic personalities may show simultaneous existence of lower needs along with their prime goal i.e. "self actualization" for satvic and "esteem needs" for rajas. Tamsic works only at fulfilling basic needs. They are not motivated to any higher levels of motivation as indicated by significant negative correlations with higher order needs.

While Ayurveda has already contributed too much to modern medicine (reserpine, gugulipid, plastic surgery), its real contributions are yet to be made, (Svoboda, 1998) the mechanistic model which served biomedicine well for many years is gradually collapsing, thanks to the efforts of dedicated researchers who have looked beyond that model's flaws. Networks of chemical communication exist between the nervous and immune systems and that prayer at
a distance can positively affect the conditions of those who are seriously ill, even when the prayer and the patient are not known to one another. Another participant in this exciting climate of change and ferment is Ayurveda, India's ancient medical system. Marutham, Balodhi and Mishra (1998) developed a personality inventory based on the concept of triguna in ancient Indian philosophy. According to this theory, the presence of 3 factors, sattva (essence), rajas (motion) and tamas (inertia) are seen to comprise the temperamental aspects of human personality. The 120-item inventory was called the sattva, rajas and tamas inventory. N=322, 22-25 years old male and female college students with Hindu and Non-Hindu religious preferences. Results showed that the inventory had content validity and that each item assessed a specific aspect of triguna factor. The three factors were independent to a certain extent with a general trend for sattva and rajas predominance over tamas, though rajas guna was more predominant than sattva.

Mohan and Kataria (1998) conducted a study on delinquency proneness in adolescents in relation to adjustment and triguna a personality. A total sample of 280 male and 280 female adolescents in schools were administered Jesness Inventory to identify delinquency prone subjects. There were 49 males and 38 females in low delinquency group and 48 males and 42 females in high delinquency prone adolescents. These extremes groups were administered Bell’s Adjustment Inventory and Triguna Personality scale (Mohan and Sandhu, 1986). The results showed that there were highly significant differences on Bell’s Adjustment; high delinquency prone males and females showed poorer home, health, social, emotional and total adjustment. All the F-ratios were significant beyond .01 levels. On the triguna a personality scale, both the sexes showed significantly higher sattvic personality scores in low delinquency prone group. On tamasic guna both male and female of high delinquency prone subjects showed significantly higher scores. On rajasic guna, only male delinquency prone subjects showed significantly higher scores. This study shows that mal adjustment is an integral part of delinquency prone behavior. Sattvic guna would exist more in non-delinquent children, whereas tamasic guna would be more prevalent in delinquent children.
Mohan and Kalia (1998) has done a small survey on 49 different rank police personnel from Punjab and Chandigarh cadre to study the self-perception of leadership styles, motivation and personality. Results show that subjects scores high on sattva guna and almost the same for both senior and junior levels, followed by rajas and tamas. It is also found that predominant style of leadership is authoritarian, nurturing style is less and delegate style is absent. Police personnel have scored quite high on lower three needs (physiological, safety needs, affiliation needs) than upper two (self esteem and self actualization).

Sharma (1999) studied usefulness of triguna in the area of work life on the sample of 74 subjects of varying ages and jobs. Sattva and rajas personality were found to be positively correlated with self-concept, but not with job satisfaction. But tama.s personalities did not significantly correlate with either self-concept or job satisfaction. The results showed positive correlation between sattva and self-growth items but rajas was not significantly correlated with self growth.

Das conducted a 3-group study in 1999 and Wolf in 2000 on the effects of chanting the hare krisna maha mantra on stress, depression, and the three modes of nature- sattva, rajas, and tamas- described in the Vedas as the basis for human psychology. Sixty-two subjects, self-selected through newspaper advertisements in a Southeastern university town, completed the study. Average age was 24.63 years, with 31 males and 31 females participating. Stress was assessed with the Index of Clinical Stress, depression was assessed with the Generalized Contentment Scale, and the modes of nature, or gunas, were assessed with the Vedic Personality inventory. Subjects were tested at pretest, posttest, and follow-up, with testing times separated by four weeks. Participants were randomly assigned to a maha mantra group, an alternate mantra group, and a control group. Subjects in each of the chanting groups chanted their mantra approximately 25 minutes each day. The researcher concocted a mantra as the alternate mantra, though subjects in the alternate group thought it was a genuine Vedic mantra. Primary hypotheses of the study were based on Vedic theory, and stated that the maha mantra group would increase sattva and decrease stress, depression, rajas and tamas, significantly more than the other two groups. ANCOVA results,
controlling for gender and age, supported these hypotheses at p<.05 for all dependent variables except rajas, with effect sizes (eta2) for the four variables whose results supported the hypothesis ranging from .21 to .33. The author suggests that the maha mantra has potential for utilization in clinical areas similar to those where other interventions of Eastern origin have been successful, such as treatment of stress, depression, and addictions.

Some researchers have merged tridosha and triguna theories to derive psychosomatic constitutional viewpoint, e.g., Tripathi (2000), Mishra, Singh and Dagenais (2001).

Tripathi (2000) has suggested electro chemical parameters for objective monitoring of doshas/humour. In Ayurvedic system of medicine, it is considered that a living system is made of panch-mahabuta, in the form of vatta, pitta and kapha at the physical level and sattva, rajas and tamas at the mental level. This covers the psychosomatic constitution and commonly known as the Tridosha theory. The imbalance in the body humors is the basic cause of any type of disease manifestation. Till date, several objective parameters have been proposed to monitor the level of these basic humors but none of them is complete.

Mishra, Singh and Dagenais (2001) considered the disharmony of mental doshas (Satogun, rajogun and tamogun) and body doshas (vatta, pitta and kapha) as the major cause of illness. They thought that the goal of illness management in Ayurveda is to bring back harmony among the doshas. The management includes clinical examination, diagnosis, dietary and lifestyle interventions and treatment. The clinical examination consists of Astha Sthana Pariksha (8-point diagnosis: pulse-diagnosis, urine, stool, tongue, voice and body sound, eye, skin and total body appearance examinations) and examination of the digestive system and the patients physical strength. The treatment consists of cleansing (Panchkarma), palliation (improve digestion, remove toxic waste, fasting, observe thirst, exercise, sunbathing and meditation), mental nurturing, and spiritual healing depending on the disturbed doshas and the patients constitution. The preferred use of bhasms and herbal formulas over the respective metallic salts or the single herbs is discussed. This review suggests a great potential for integration of Ayurvedic therapies into the health care system in the United States.
In the first decade of the current century, two researches have appeared which relate sattva, rajas and tamas to psychological wellbeing. In the first study, Zaidi and Singh (2001) have explored direct and stress moderating effects of positive life events and sattva, rajas and tamas on psychological wellbeing. The findings of the study obtained significant effect of sattva and rajas gunas on depression, the former leading to low depression and latter to high depression. Further the moderating role of all three gunas was found in the relationship between negative life events and depression. High sattva, low Rajas and high Tamas groups reported higher psychological well being. Again the moderating effect was seen in the relationship between negative life events and well being.

Wolf and Abell (2003) conducted a study on the effects of chanting the Hare Krishna Maha Mantra on stress, depression, and the three gunas. The hypothesis of the study were based on Vedic theory, and stated that the maha mantra group would increase sattva and decrease stress, depression, rajas and tamas, significantly more than the other two groups. Sixty one participants with age of 18 to 49 years were tested at pretest, posttest and follow-up, with testing times separated by 4 weeks. ANOVA results, controlling for gender and age, supported these hypothesis at (P<0.05) for all dependent variables except rajas, with effect sizes for the four variables whose results supported the hypothesis ranging from 0.21 to 0.33. The author suggests that the maha mantra has potential for utilization in clinical areas similar to those where other interventions of Eastern origin have been successful, such as treatment of stress, depression and addictions. Further, it is recommended that the maha mantra be integrated into a spiritual approach to client care in social work and related fields. The findings, however, suggested to the transient nature of gunas and put the theory against question mark. Should the personality feature be state or trait?

Sebastian and Mathew in 2002 conducted a study to find out the relation between personality dimensions to PSI (Parapsychological Investigation) experience on the sample of 200 male and 200 female around the age of 19 to 25 years. Results reveal that PSI experience was found to have a significant relationship to personality variables of activation and stability in the case of
women. And in 2003 he further studied *gunas* and PSI beliefs. Results show that PSI belief was found to have a significant relationship to personality variables of activation and stability in the case of women and men.

In 2003 an investigation was done by Narayanan and Krishnan to see the relationship between *gunas*, *karma-yoga* and transformational leadership using a sample of 105 pairs of managers and subordinates of a large banking organization in India. Finding shows that three *sattva* dimensions (sympathy, motivation to work and accepting pain) enhance transformational leadership and two *rajas* dimensions (attribution and right and wrong) reduce karma-yoga.

In another research conducted by Rastogi (2004) an attempt was made to seek gender and age differences in *triguna* and to relate it to seven constructs of psychological well being from western perspective. These seven constructs included self acceptance, positive relations with others, autonomy, environmental mastery, purpose in life satisfaction with life and personal growth. The results report that gender and age wise significant difference exist only in *rajas* where the interactive effect of the two variables has also emerged to be significant. Besides, *sattva guna* is found to be most dominant, followed by *rajas* and then *tamas* in the whole sample. A revealing observation of the present research is that *tamas* is found to be negatively and *sattva* to be positively correlated with all the seven constructs of psychological well being. The relationship of *rajas* with these constructs vacillates from negative to positive. *Tamas* has yielded significant relation with environment mastery, personal growth, self acceptance and satisfaction with life. *Rajas* is found to be negatively correlated with all the dimensions of psychological well being inventory i.e. self acceptance, positive relation with others, autonomy, environmental mastery, purpose in life and personal growth. Positive relationship between *sattva* and environmental mastery, purpose in life, personal growth, self acceptance and satisfaction with life emerged significant. The obtained findings are consistent with *Samkhya* theory’s explication of *sattva*, *rajas* and *tamas* and conclude that psychological well being is nested strongly in *sattva*.

A study conducted by Gupta (2005) on the subjects of Hindi certificate course in four months yogic studies admitted at Bihar Yoga Bharti,
Munger. The sample included 100 (65 males and 35 females) subjects. The method of sampling was incidental cum purposive sampling. The age range of subjects lies between 20-50 years. For this Hindi adaptation of Eysenck Personality Questionnaire (Adults) prepared by de and Thakur was used for measuring five aspects of personality such as Psychoticism (P), Neuroticism (N), Extroversion (E), Lie (L) and Superstition (S). Subjects were tested twice i.e., before yogic practice and after yogic practice on each of above stated variables. Findings showed that a significant change occurs due to yogic practice and the change is towards the reduction of neuroticism which is indicative of better mental health. These changes are due to the practices involved in Raja Yoga. The major point in the practice of Raja Yoga is an understanding of the three modes of nature (the three gunas) and the way they operate in human personality. Results also showed that there is slight increase in the extroversion tendencies. As practice and study continue, one can understand and control these modes of nature for sure progress in personality integration.

Tripathi and Pandey (2005) conducted a study on a sample of 100 cancer patients admitted to S.S. Hospital, Banaras Hindu University, Varanasi. Their mental behavior was assessed on a self-devised psychological Performa in relation with Ayurvedic concept. For such studies, a standard Performa containing 133 items based on Ayurvedic tests. This study indicated that the patients belonging to rajasic and tamsic mentality were more prone to cancers. The data enabled to conclude that the cancer arising from various types of physical and mental behaviors, the depression and antecedent life stresses playing a part in the etiology of cancer. Some of the Sattvic patients accepted their disease as a punishment of their "previous birth effect".

Sreelakshmi and Manay (2006) conducted a study spread over a period of four years. The sample was divided into experimental and control groups by assigning them randomly. Both the groups were fully aware of the nutritive value of foods and its role in diet to maintain normal health. They were also aware of health parameters like the ideal body weight/height and body mass index (BMI). The experiment on rajasic diet was conducted in the month of September followed by the intake of sattvic diet in month of October. Both the
group’s EEG was taken before the commencing of *rajasic* diet and at the conclusion of the *sattvic* diet. The data for weight, physiological and psychological vibration were recorded before and after each diet schedule. The experimental group was introduced to the concept of quality of food and their vibratory states with two hours of talk per week totaling 24 talks. This was spread over three months. The experimental group was asked to retain the higher emotions and to observe which diet (*rajasic/sattvic*) helped them retain these “feelings”. The study has demonstrated the link between the nutritive quality of food and affective, cognitive and physiological experiences. In particular the consumption of *sattvic* food had clear positive effect contributing to the well being of the participants. The positive physiological and psychological vibration feeling’s felt by the experimental groups during the consumption of *sattvic* food. It was noted that a majority of the participants of experimental groups indicated a higher percentage of Alpha activity, as compared to control groups.

Pannaga, Murthy and Kumar (2007) said that in general, the statistical findings show that the three gunas have certain degree of correlation and cannot be considered as independent dimensions. This seems to go with the traditional view, which posits that the three gunas exist together and co-constitute prakriti.

The concept has been examined theoretically (Boss, 1966; Misra et.al., 2001; Parameshwaran, 1969; Rao, 1926) and empirically (Das, 1999; Kapur et.al., 1997; Marutham, Balodhi and Misra, 1998; Mathew, 1994; Mohan and Shandu, 1986, 1988; Pathak, Bhatt and Sharma, 1992; Rao and Harigopal 1979; Sebastian and Mathew, 2002; Sharma, 1999; Singh, 1972; Sitamma, Sridevi and P.V.K. Rao, 1995; Uma Lakshmi and Parameshwaran, 1971; Wolf, 2000). Also, in an extensive survey of the literature, the present review didn’t find any representative work conducted in India or in foreign, on the relationship between *triguna prakriti* and different aspects of health as physical, mental and spiritual. All this is sufficient in itself to realize the necessity of filling in the gaps in knowledge and conducting an exhaustive research study on the relationship between *triguna prakriti* and health.
With this much background, the investigator may now pass on to the next chapter dealing with the problem and hypotheses of the study.