A review of related literature hopefully would provide insight into the possible relationship between vocational preference and other factors of the problem under study. It contributes for an understanding of the problem and also makes the researcher be aware of the importance of the study. In addition, it paves way in formulating the research design, specifying the objectives, developing theoretical background, adapting the right methodology for the purpose of obtaining accurate inferences and making meaningful conclusions. In order to fulfil these, relevant literature has been reviewed and presented in this chapter. The computer search on the on-line-search made of the literature pertaining to the key terms used in this research made by the internet has been quite useful in compiling this review. This may throw some light on the factors associated with vocational choice. The previous research studies show that a number of personality factors have influenced the vocational preference of the adolescents. In spite of these, further studies indicate that environmental factors such as social
and structural factors have also influenced the vocational preference. Those studies are also reviewed herein.

The relationship between personality and vocational choice was studied by several investigators. Elton and Rose (1967) point out the significance of personality in the vocational choice of female freshers.

Personality and Vocational Groups

The studies conducted by different eminent social scientists suggested that there exist personality differences among various occupational groups.

Triggs (1947) in his study viewed that there is a significant relationship between personality traits and vocational interests.

Roe (1953) in her investigations on scientists, pointed out different personality patterns characterising people working in different areas.

Gupta (1971) suggested that those scoring high on neuroticism preferred sedentary type of occupations like teaching, writing, painting etc. On the other hand
extroverts preferred outward oriented type of occupations like salesmen, commerce and trade, press reporting, army and foreign services.

Harrison et. al., (1955) who carried out a study using the projective technique, clinical interview and a personality inventory to study the personality of mechanical engineers found that they have a unique pattern of temperament, and were emotionally stable, goal oriented, realistic in approach to problems and socially responsive.

A study conducted by Leeds (1956) inferred that teachers were found to be more restrained, emotionally stable, objective, friendly and tolerant.

Music teachers were found to be more friendly, self sufficient, sensitive and to avoid vigorous physical activity (Michael et. al., 1961).

In his study relating to vocational choice and personality of engineering students, Pal (1970) found that they had a tendency towards introversion, good impulse control and practical mindedness.
Roy (1969) found that self-preference, academic proficiency, altruism and self-assertion were the decisive personality factors of the Journalists while the choice of Journalism was made.

Grotevant (1986) tested the hypothesis that adolescents who explore a variety of career alternatives will make career choices that are more congruent with their personality styles than will adolescents who explore less broadly. A sample of 57 female and 45 male high school seniors completed an ego identity interview, from which each occupation they were reportedly considered was coded for 4 dimensions: occupational prestige, substantive complexity, interest environment and gender dominance. Subjects also completed the Strong Campbell Interest Inventory and a verbal ability measure. Two indices were constructed to assess the degree of congruence between the subjects' primary career choice and personality style. Regression analysis indicated that breadth of exploration in the 4 career dimensions particularly in gender dominance exploration was predictive of congruence for males and females.
Interest and Vocational Choice

Regarding the career expectations of the school students, Astin (1967) found that the students' who measured interests and expressed career choice at the ninth grade level were the best predictors of career outcomes at the twelfth grade level.

Henderson (1958) attributed the similarity of interests between fathers and sons to the identification of the sons with their fathers. Crockett (1961) observed the same for downward mobility among those whose fathers were at low levels.

Grotevant (1977) and Grotevant (1979) reported that the environment created by the parent interest similarity affected the degree to which the interests of children come to resemble those of parents. In short, similarity of parental interests increases the resemblance between children's interests and both parents.

Intelligence and Vocational Choice

A number of studies have been conducted by using adolescent student sample to study the association between
intelligence and vocational choice. Wrenn (1935) has observed several comparisons of high and low intelligence groups which indicated much differences in their vocational choices.

It was found that high intelligent boys chose professional and administrative fields, whereas low intelligent boys chose lower civil service occupations (McGuffin, 1958).

Hollender (1967) reported that vocational choice became increasingly realistic with age. In another study Hollender (1971) reported that intellectual ability was positively related to vocational decisiveness for both boys and girls. Significantly, more females (69%) than males (59%) reported a definite vocational choice.

Self-esteem and Vocational Choice

Another factor associated with vocational choice is self-esteem. A few studies have lent support to the theory that individuals' vocational choice is an effort to implement a concept of himself (Brophy, 1959; Shiner, 1964; and Oppenheimer, 1966).
Arthur (1977) conducted a study among students to investigate the vocational aspiration process and self-esteem. The results indicated a positive relationship between these two.

Anxiety and Vocational Choice

The relationship between anxiety and career choice has been the subject of some studies in the later half of the present century. Most of the studies have focused on career decision making and the individual's current state of anxiety. Hall (1963), for example, studied the interrelationships among manifest anxiety, vocational choice certainty, and choice behaviour and found that there exist a positive relationship between the general anxiety level and career indecision.

The study by Kimes (1974), conducted on 829 undergraduate students of all classification attending East Texas State University, showed that the students who were completely undecided about a career were significantly more anxiety-prone than were students who had chosen careers. The results also indicated that a possible inverse relationship between trait anxiety and satisfaction with career decision.
In a study on college students, Hawkins (1977) found that general anxiety or anxiety about choice of a college major and choice of a vocation were related to educational vocational decidedness.

**Need and Vocational Choice**

There is evidence from many studies that personal needs are related to vocational choice. High achievement need was related to business (McClelland, 1955).

Garrison and Scott (1961) noticed a greater need for achievement with high school teacher and a greater need for nurturance with elementary school teacher.

Suziedelis and Steimel (1963) concluded that endurance need and achievement need were higher with scientists and higher need for dominance with salesman.

The concept of need is an important individual difference variable that should be considered in the career choice process. Vocational choices when they are in correspondence with work needs, increase the likelihood of subsequent satisfaction in the occupation (Dawis and Lofquist, 1984).
Value and Vocational Choice

Research on value as a determinant of vocational choice has been done by several investigators.

Sarbin and Berdie (1940) and Warnath and Fordyce (1961) have reported that there is relationship between value system and vocational choice.

Fretz, (1972) studied occupational values as discriminants of pre-professional student groups. 11 occupational values were entered in a stepwise discriminant analysis of the responses of students in the 2nd level courses in medicine, engineering, business and education. Five variables provided significant discrimination: pay received, advancement, working condition, fringe benefits and prestige. Medical students were most clearly distinguishable from business students on enterprising variables and from education students on security variables.

Bhattacharyya (1973) conducted a study on value systems of different occupational groups. 112 non-gazetted employees of 21 different jobs were interviewed on 15 variables pertaining to different occupational value systems. Three
variables viz., intellectual stimulus, security and way of life were identified to be significant indicators of value system nurtured by different occupational groups.

Locke (1976) suggested that job satisfaction is partially determined by the degree to which the work environment allowed or encouraged values. The work values emphasised within an organisation, may influence the attractiveness of work environments to individuals.

Zedeck (1977) found that advancement opportunity emerged as the most important attribute, followed by salary, flexibility and assignment duration.

Feldman and Arnold (1978) reported that pay and benefits had greater influence of job choice than did opportunity to use important skills and abilities, autonomy and independence, responsibility, provision of essential services and products or flexibility in setting work schedules.

Work values play a role in the career choice process. Females who chose traditional occupations value clean
forgiving and helpful as more important. Women aspiring to innovative occupations value courageous, imaginative and independent as more important (Young, 1984).

Cochran (1986) tested the hypothesis that occupational preference is based on harmonious career values within a decision scheme, with most least important ones. 84 10th and 11th graders and 353 high school seniors rated 10 individually selected occupations on 10 career values. Results supported the hypothesis. The findings suggest that developing organised decision schemes are involved in determining the prioritization of values and occupational preferences.

**Sex Difference and Vocational Choice**

Many investigators have studied the sex differences and vocational choice.

Traxler and McGall (1941) in their study found that boys average higher in the mechanical and scientific areas and girls average higher in musical, artistic and clerical areas.
Roeber and Garfield (1943) found that boys were interested in aviation, engineering and farming. Girls preferred nursing, teaching and housework.

Shoemaker (1959) found that persuasive, musical and social service areas were rejected by boys and mechanical scientific and outdoor areas were rejected by girls.

Krippner (1962) determined that boys preferred medicine and engineering and girls preferred teaching and secretarial work.

Hazanovitz (1982) found that regardless of sex, Social-Artistic interests were associated with mothers and Realistic-investigative interests were associated with fathers.

Currie (1982) examined the extent to which a sex differentiated labour market existed in Australia, with males being concentrated in different types of occupations from those of females.

Wilson (1982) conducted a study among 25 male 30 female gifted school students to determine their chosen careers and
to investigate whether gifted females intended to enter traditionally male fields in numbers comparable to gifted males. Gifted females and males chose to enter a variety of careers in largely male dominated fields. While there was a difference between the most common ideal and actual job choices for both sexes, medical doctor and engineer were frequent actual job choices.

In a study on the various factors determining the career choice of the female students Fassinger (1990) found sex role attitude as one of the variables that predict the career orientation of an individual.

Profile of women who make non-traditional vocational career choice is different from women who make traditional vocational choice. Prediction of traditional choices among college students is easier than prediction of their non-traditional choices based on the knowledge of background variables and sex-role orientation. Women who make non traditional choices do not present a clear descriptive profile (Murphy, 1990).
Sex - Stereotypes and Vocational Choice

There are studies which show that the vocational preference of the boys and girls appears to be influenced by the occupational sex stereotypes.

Bordin, Nachman and Segal (1963) and Tipton (1966) in their study found that in the process of making a career choice, one expresses in terms of occupational stereotypes the kind of person that one is rather than other factors.

While discussing career development in women, Bem and Bem (1976) have quoted a phenomenon known as the homogenisation of the American women, which is applicable not only to American women but also to women in other countries. According to them, women are socialised to pursue the same roles regardless of their individual capabilities and talents. It is found that a woman's life roles and vocational choices are predictable not on the basis of her characteristics as an individual but on the basis of her sex.

Employment and career issues are shown to be affected by the sex stereotype. Sex stereotyping also seems to affect the current distribution of males versus females in a
job category. Occupational sex-typing and sex-stereotype types serve as barriers for women aspiring to positions with high pay and prestige. Performance evaluation is biased in favour of females performing well in masculine activities. Male success is attributed to stable personal attributes while female success tend to be attributed to unstable causes such as effort or luck. Thus a series of sex stereotype types seem to operate as barriers and eliminate many competent women (Ruble, Renne and Ruble, 1984).

Women graduates in traditional female careers are less likely than pioneer subjects to change careers in ten year period and more likely to move in the household or downward career direction. Pioneer groups are more likely to move from lower to higher careers (Betz, 1984).

The occupational choice processes among 10th graders in four rural country school systems in the South Eastern United States was examined by Lee (1985). It was found that the occupational aspirations indicated that females, regardless of ethnicity, aspired to and expected to attain high level occupations than males. Most males, regardless of ethnicity, aspired to and expected to attain intermediate level occupations.
Female performance expectancies are very much influenced by occupational sex dominance. Females report lower expectancies for themselves for male dominated occupations and higher expectancies for female dominated fields (Bridges, 1989)

Family and Vocational Choice

Since the family plays an important role in the socialisation process, it is not surprising to find considerable attention directed to the influence of family characteristics on the occupational choice. Kroger and Louffit (1935) studied the influence of parents on the choice of occupations of their children found that majority indicated choices higher than those of their fathers.

Barclay, Stilwell and Barclay (1972) found that parental occupation was associated with a broad range of student behaviours. They assessed the elementary school children and classified them as types and subtypes using parental occupation. The study suggested that parental occupation encouraged special outcomes in children.
Werts and Watley (1972) compared parental occupations with children's nonacademic leadership, scientific and artistic achievements in the school. The results implied, that children excelled their fathers' occupational skills.

Viernstein and Hogan (1975) found parental occupational type to be significantly related to the level of childrens' occupational aspiration.

The attitudes and motivations that underlie career aspirations and decisions of women have been found to be products of social norms and socialisation (Santamaria, 1985).

While studying the factors determining career choice among young students Wolfel (1987) found that family plays a key role in influencing the vocational choice of the children.

Occupational aspirations of female aspiring for sex atypical occupations and females choice of non-traditional occupation is definitely related to parental values and education (Nummenmaa, 1989).
Young (1992) examined parents' intentions associated with critical incidents they undertook in the career development of their children illustrated that parents although are not influencing for a particular occupational choice, were active agents in influencing their children in a broad range of areas in career development.

Peterson (1982) studied 183 families for evidence that traditional sex-role attitudes are reflected in family decisions regarding the career goals of teenagers. Attention was focused on 96 of these families, each having both a male and female 14-18 years old. Results indicate that family decisions favoured the career goals of adolescents.

Significant Others and Vocational Choice

As the family members influence the children in their vocational choice, the significant others (popular persons) also influence the children. Sewell, Haller and Portes (1969) have supported this statement through the findings of their study. For example a teacher is also considered as a significant person.

Peterson (1986) identified the significant others who influenced the vocational choice of 273 low-income white
youth from rural areas of southern Appalachia and 117 Black youth from rural south using longitudinal and cross-sectional data. Results indicated that parents were the most frequent choice of these youth as significant others for career decisions.

The impact of educational personnel (significant others) on career decision making was studied by Houser and Garvey (1983) found that the non-traditionals consistently received more support and encouragement than did the traditionals.

A study was conducted by Kidd (1984) to find out how young people perceive the processes by which their occupational preferences are formed. Semi-structured interviews were carried out with 15-16 year olds. The interviews revealed the powerful role that the subjects perceived significant others as playing in their career development. Six ways in which the influence of significant others was transmitted are identified, including influence as source of information about the self, as communications of the suitability of occupations and as models.
Social Class and Vocational Choice

Social class is another variable while considering the vocational choice of the children. There are studies which support this statement. Rosenberg (1957) related the economic position of the family and the students' occupational choice. He found that majority (71%) of the students whose fathers' annual income fell under the higher income bracket tended to enter law and medicine compared with only 38% of the students whose fathers' annual income fell under the low income bracket.

Pierce Jones (1959) in his study found that the students of relatively high status background tended to select more aesthetic, scientific and literary pursuits rather than the more mechanical outdoor selection of his peer.

Grewal (1973) compared the occupational hierarchy in India, Ethiopia and America and found that Government occupations are placed at top and unskilled occupations are placed near the bottom. He also found that occupational prestige is not affected much by the economic and industrial advancement of a country.
Urban - Rural Background and Vocational Choice

Urban-rural background is considered to be another important factor in influencing the vocational choice of the adolescents. Menger (1932) conducted a study among the adolescents from both rural and urban areas in America. He found that the urban-rural background influenced the vocational choice of the adolescents.

A study conducted by Patel (1974) on the urban-rural background and vocational choice found that the urban/rural background has an influence over the vocational choice of the adolescents.

The influence of locality such as metropolitan, urban, semi urban and rural in the occupational choice of the adolescent boys by Reddy (1978) shows that locality differences do influence the vocational choice of the adolescents.

STUDIES RELATED TO HOLLAND'S THEORY OF VOCATIONAL CHOICE

Holland (1959) has proposed a theory of vocational behaviour which relates personality characteristics to behaviour in the educational, vocational and social domains.
The theory proposes that persons, occupations and environments can be described by using combinations of six clearly defined categories and that, from their interactions accurate predictions can be made about their occupational choice. The studies bearing on this theoretical approach are presented below.

Parental influence play an important role in vocational choice of the children. Holland (1962) showed that a students' high-point VPI code was significantly related to the values and goals that fathers held for their sons and daughters.

Lopez (1962) used a sample of 124 supervisors and employees to explore Holland's six occupational scales. The results tended to support the relationship between job satisfaction and four of the occupational scales, realistic, investigative, social and enterprising.

Holland's (1965) vocational preference inventory was administered to employed women by Werner (1969). He was of the opinion that the employed women were found generally to be in the six main categories as expected.
A study among college students on the basis of Holland's theory by Folsom (1969) indicates that significant differences do exist among the different personality types.

The relationship of clergymen's actual work roles to the VPI scales was studied by Osipow (1970) and the findings showed that a substantial proportion of the clergy studied reported jobs which emphasised tasks having only modest relationship to the vocational orientation.

Posthuma and Navran (1970) tested the hypothesis the students whose interests were congruent with the faculty would get better grades than students with incongruent interests. Their findings tend to confirm this prediction.

An attempt was made by Lacey (1971) to extend Holland's theory to a sample of employed men, representing each of the six types described by the theory. The VPI and the occupational activity engaged in by these men were consistent with the theory except for those individuals classified as realistic.
Using a small college student sample, Elton (1971) shows indirect evidence about the interaction of types and environments.

Andrews (1973) designed a study, to test and expand Holland's vocational theory to a population of 89 college students for personality comparisons between both present and future job choices. Significant and positive results were obtained.

Rokeach (1973) has provided substantial volume of evidence about the values of females and males, according to social class, race, occupation occupational choice and role.

Nafziger, Holland and Gottfredson (1975) discovered that Congruency of student type (high point code of SDS) and major field (categorised according to the Holland's classification) was significantly related to satisfaction with the environment (students, professors and activities in major fields) but congruency did not predict satisfaction with the total college environment.

A study was conducted by Horton and Walsh (1976) by administering VPI and SDS to working women. The results of
the analysis across the six Holland's scales for each of the two inventories tended to support the hypothesis that there were differences between the six occupational groups. The multivariate test for the main effect of groups was found to be significant, indicating group differences across the scales. In the univariate analysis for each scale, the test for the main effect of groups was found to be significant for all six scales for both inventories.

The validity of Holland's vocational typology in terms of multiple classification systems was examined by Gottfredson (1980). He found that Holland's typology correctly predicted variance in work activities and job requirements and differential predictions about the six vocational types were supported by the data.

Costa (1980) examined the relations between Holland's vocational typology and the Neuroticism - Extroversion - openness model of personality. It was found that young and old groups were similar to college students in most vocational interests.

A study was conducted by Lunneborg (1982) among female college graduates employed in non-traditional areas such as
engineering and architecture. Five types of influences parents, siblings, teachers, friends and others were found to exert significant influence on the women to pursue non-traditional careers.

Gottfredson, Holland and Ogawa (1982) demonstrated that the ratings of occupational demands or requirements for 12099 occupations were usually consistent with the characteristics of the six environment models of Holland.

Rynes (1983) examined the role of pay and market pay variability in job choice decisions. In the examination of salary, location, promotional opportunities and type of work, it was noted that pay was an important determinant of the job attractiveness.

The hexagonal model of Holland has obtained strong support from the study conducted by Eberhardt and Muchinsky (1984).

The role of self concept in vocational choice was assessed by Grove (1983) and the results indicated the relevance of self concept and several vocational choice theories.
Slaney and Brown (1983) examined the effects of race and socio-economic status on career choice in college male students using the Holland typology. It was found that there were differences in vocational preference inventory types related to race and socio-economic status.

An analysis was done by Bolton (1985) with 69 occupational groups based on Holland's six types. Three discriminant functions were identified which enabled the correct classification of 75% of the groups into the Holland types. The 16 PF profiles for the six types were consistent with Holland's categorisation, a two dimensional plot of group centroids corresponded exactly to Holland's hypothesised ordering of types.

Nasim Shaukat (1990), made efforts to validate Holland's theory among college students in Pakistan and found that the study was consistent with the theory.

From the studies quoted above, it is clear that a wide ranging assortment of promising research issues in the vocational preferences of adolescents in the western context is available. But in the Indian context, they are very few and limited. That the conditions of the person in terms of
personality configuration, sex, sex stereotypes and his conditions within the family, social class, urban-rural setting and significant others such as educators will prepare him in directing his vocational preferences. And such factors most probably influence the individuals' choice of certain occupations as his preferred ones. The present study aims at examining the significance of the factors of sex, urban-rural setting and the teachers' vocational personality in the vocational preferences of the adolescents in the light of Holland's model in the Indian context.