

CHAPTER - III

REVIEW OF RELATED STUDIES

There have been studies on various facets of vocational maturity since Super's 1955 paper on dimensions of vocational maturity but findings are largely inconclusive, preliminary and tentative. The researches on vocational maturity, discussed in this section, are mainly on western samples and evidence applicable to our culture is still scant. In this chapter researches done in the last decade have been reviewed which will throw light on the relationship of career choice attitudes and career choice competencies variables of career maturity to various personal social factors and the need for further study of these factors in the Indian samples. Each variable has been taken up separately for discussion.

Grade

One assumption of the concept of career maturity is that, as one gets older, one is more able to discriminate effectively and realistically among available courses of action (Crites 1974 a). Thus it has been assumed that career maturity increases monotonically (incrementally) across age and grade levels. In general, research with Career Maturity Inventory has supported this assumption.

A number of studies on various aspects of career development have reported that level of career development increases systematically with age over the high school years. Jordaan (1974) reported that from grades IX to XII boys in the Career Pattern Study became more aware of the significant characteristics of occupations with interest in them and developed more specific plans for obtaining further education, job training and on-the-job experience. Jepson (1975) showed that students in XIIth grade had more complex information search strategies and more elaborate rationale supporting their occupational choices than they had in the IXth grade. Gibbons and Lohness(1964) reported growth from grades VIIIth to Xth in various aspects of readiness for vocational planning.

Recent studies, such as that of Westbrook and Parry Hill (1973) found that scores on all the areas of cognitive vocational maturity test increased across grade levels, thus, providing support for the claim that vocational maturity behaviours are developmental ones.

Cross-sectional data, collected by Crites (1973) for the Attitude scale, shows increases in test scores with increases in grade levels.

Super & Forrest (1972) also showed that scores on Career Development Inventory (CDI) show systematic, uniform, substantial and statistically significant increase in test scores from cross sections of VIIIth, Xth and XIIth grade

students. Similarly, Super & Thompson (1979) reporting on the results of 10 year research on CDI, show that vocational maturity is developmental in nature. Results show higher scores on the CDI scales for eleventh graders than for ninth graders.

Hansen & Ansell (1973) compared the VDI and RVP scales when both were administered to the same sample. Analysis of co-variance, with intelligence controlled for, indicated that both instruments show overall progression in vocational maturity at different grade levels.

Parlikar (1973), on the Indian sample of school students of grade VIII, IX, X & XI, found the mean scores yielded by choice attitudes to be gradually increasing from grade VIII through XI. However scores on Competence test did not show this and IX grade students scored higher than other grade levels.

Smith (1975), on XIth & XIIth grade rural & urban samples, found that the mean VDI scores increased in both rural and urban samples.

Achebe (1975) surveyed the vocational development patterns of students in the East Central State of Nigeria to determine the applicability of the vocational maturity theory (Super). He found that in adolescence vocational maturity increases systematically with both age and grade.

The attitude scale and Occupational Information and planning subtests of the competence test were administered to both boys and girls of grades seven to ten. The overall VM of the Nigerian sample showed a pattern of progressive increase by age, and especially by grade.

Ansell & Hanson (1971), on 375 male students of grades VIII through XII, found that VM increased with age.

Kelso (1975) also found that vocational choice attitudes were linearly related to grade in a sample of VIIth to XIIth grade students.

Herr & Enderlein (1976), on a sample of 1553 high school students, found that vocational maturity scores increased by grade levels and students becoming more mature at the end of grade twelve. Only in one sample the process of vocational maturity appeared to have peaked by grade ten and showed a plateau or slight dip in maturity by grade twelve.

Mintzer (1977) investigated whether the vocational maturity of secondary school students varies between or within grade levels. Taking 480 girls and boys from grades VII, IX, & XII and using the attitude scale, he found that vocational maturity was a developmental process.

Reddy (1974), on Indian sample of 1671 high school boys of grades IX & XI, found a clear developmental trend

with increasing grade levels with regard to choosing right occupations in terms of students intellectual capacity.

Kelso (1977), on the Australian sample of 2019 boys, drawn from grades V-XII, lends considerable credence to the view that vocational development, as reflected in vocational choice realism, is a positive function of grade. His results are largely in accordance with the formulations of Ginzberg et al. (1951) and Super (1953, 57) both of whom emphasized that vocational development is a continuous process.

However, some researches have also shown a discontinuous pattern of vocational development.

Alexander (1977), on Alabama's disadvantaged children from grades IX to XII, found that grades XI and XII had higher career choice attitude scores than tenth graders while students in grades IX and XII did not differ significantly. Thus, with the disadvantaged, the pattern of vocational development is not a continuous one.

Similarly Bourke (1976), in a cross cultural study of Japanese and American high school students, found that with Japanese subjects the growth manifested in IXth & Xth grades did not continue into the XI and XII grades. In a similar study by Huang (1974), on American and Chinese students of sixth, ninth and twelfth grades, it was found that within each culture maturity of career attitudes increase with grade

level. For Americans the growth pattern was upward linear but for Chinese the pattern in some dimensions of career maturity was not pronounced.

Noeth and Prediger (1978) collected cross cultural data from VIIIth, IXth and XIth graders to assess various aspects of career development. This study provides further evidence that career development systematically increases over the high school years, and students became more knowledgeable about the career planning process, seek more information, take part in self career exploration activities and better focus their exploratory behaviours on occupational preferences.

Etulain (1979) studied career maturity of freshmen and Juniors of high schools at Alaska and found significant differences in career maturity levels of freshmen and Juniors.

Gadzinski (1979) on two samples of high school students found that older students did better than younger students in career maturity attitudes. Moracco (1976) compared the vocational maturity of Arab and American high school students. Regardless of nationality, eleventh grade mean scores were higher than IXth grade means. Thus, the study supported the contention that CMI is related to grade and age.

Both the studies corroborate the earlier findings showing a high level of consistency in maturational and

developmental differences of career maturity between different age and grade levels.

Sex

Sex related differences in occupational attitudes have been reported by numerous studies. A commonly cited potential cause for differences in occupational attitudes, as a function of sex, is the manner in which the child is socialized (Douvan & Adelson 1966).

Lehman & Witty (1936) found differences in occupational attitudes of boys and girls. They found that vocational attitudes of boys appear to change more frequently than those of girls.

Longitudinal data with CMI attitude scale over a period of 6 years (VIIth through XIIth grades) indicates that there are sex differences in both the elevation and shape of the career maturity curves. In VIIth grade no statistically significant difference exists between males and females, but thereafter, the latter are reliably more mature in their attitudes toward career decision making process (Rathburn 1973). Furthermore, in XIIth grade, according to Crites (1976), the females reach the apogee of their career maturation, whereas the males actually regress significantly to a point equivalent to the Xth grade. Crites explains that males are apprehensive about entering the unknown or even potentially hostile to world-of-work than the females (Crites 1965).

Many other researches have shown females to have more mature career attitudes than boys. Howard (1976), with high school Juniors, found female students scoring higher than males in terms of self appraisal, occupational information, planning and problem solving.

Herr & Enderlein (1976) found that females began with greater vocational maturity in ninth grade and widen in vocational maturity by twelfth grade. This is apparently another manifestation of girls maturing earlier than boys and advancing further than boys during the adolescent period.

In the Smith & Herr (1972) study of VIIIth & Xth grade students, it was found that at both grade levels girls possessed more mature attitudes toward work and career planning than do males in these grades.

Currie (1974), Omvig and Thomas (1977), Froke (1976) in their studies have reported females more career mature than males.

Marganoff (1978), on a group of 130 high school students, found a significant difference between males and females with regard to readiness for career planning, with females being more ready than males for career planning. He explains this in view of the influence of current media presentations or changing female role perceptions and career expectations and the tendency of high school males to lose self confidence as they face important life decisions while

females, having more restricted choices, do not experience a similar loss of confidence.

Wilson (1975), on high school students, found females obtaining significantly higher scores than males on the problem solving test and the attitude scale. They also reported engaging in significantly more information seeking behaviour than males.

Smith (1975), on a sample of XIth & XIIth grade students, found urban girls scoring higher than boys on attitude scale.

Mintzer (1977) on samples of VIIth, IXth & XIIth grades, found girls scoring higher than boys on career choice attitudes at every grade level.

Similarly, in Haung's (1975) study of American and Chinese students, it was found that females are more mature in career attitudes than males. American girls showed significantly more mature career attitudes than boys at the sixth grade level. Sex differences tend to decrease at grade IXth & XIIth with boys and girls evidencing about the same degree of development. In contrast, the career attitude maturity of Chinese girls seems to be most like that of boys at the sixth grade level. However, girls become increasingly more mature than boys at the ninth and twelfth grades.

Seik (1978), on a sample of Xth, XIth and XIIth grade students, attempted to determine a relationship

between CMI attitude scale and competence test and the variables of sex and grade. It was found that females scored significantly higher on the competence test, where no male/female differences were found on the attitude scale, whereas Hansen & Putnam (1978), and Medowell (1978) in their studies found females higher on the vocational maturity attitudes than males.

Sheilds (1979) gave CMI to 84 gifted students of XIth & XIIth grades and found girls scoring higher than boys on all but one of the six separate parts of the CMI.

Super & Thompson (1979) concluded, from their 10 year research on Career Development Inventory, about the nature of career maturity at the secondary school level. According to them, it is difficult to make a definitive statement concerning sex differences. There is, however, a tendency for male students to score higher than females on the Attitude scale.

Westbrook, Cutts, Madison & Arcia (1980) while testing the validity of the Crites model of Career maturity studied the relationship between career maturity and sex on two samples; a sample of 312 ninth graders, and another sample of 200 technical, vocational and general education students of a public technical college. In the first sample females attained significantly higher scores than males on all the competence test, subtests, as well as the total score, but

females did not score higher than males on the attitude scale. In the second sample females scored higher than males on all the measures, with the exception of goal selection. All the differences were statistically significant.

Northrop (1976), in undergraduate college students, found that women did score higher than men on vocational maturity attitudes, though these differences were not statistically significant.

However, some studies have also shown no sex differences on the CMI such as William (1976), in a sample of black high school students, did not find any sex differences in career maturity attitudes. Gadzinski (1979), in a sample of high school students, also did not find any difference in males & females.

Alomari (1978), with VIIth, VIIIth and IXth grade students of Arabic and non Arabic backgrounds, found that there were non significant differences among sexes for the six parts of the CMI, except for self appraisal.

A few studies, on Indian samples, have shown boys higher on various aspects of career development than girls. Srivastava (1972), on IX, X & XIth grades boys and girls, found that as the boys moved higher on the educational ladder, or grew older in age, they showed more familiarity with the

world of work and acquired greater insight into their assets and liabilities. He found that even in grade XI, the girls choices were more imaginative and fanciful as against the boys of same grade who seemed to be more realistic. As the boys were getting older the gap between father's expectations and students preferences became wider, showing that boys, as they get older, become independent in their choices and realistic in their placement. The differences, between girls mean preference levels and their father's suggested occupational levels for them, were not significant within any grade. Despite their moving higher on the educational ladder in age and experience, the girls prefer almost exactly the same what their fathers suggest. The findings affirm that in our culture girls are not encouraged to have their own say in social and personal affairs and, thus, lack maturity in career related tasks.

Stansbury (1977) did not find any significant differences between males and females on the attitude scale.

Holland (1979) did not find sex to be a significant source of variance on the CMI attitude scale.

Most of the researches on CMI attitude scale, discussed above have indicated that females do better on career attitudes than males whereas the evidence is still lacking on the competence test. There is hardly any research on the Indian sample to arrive at any conclusion regarding

the sex differences in Indian school students which necessitates the study of this factor.

Socio-Economic Status

Lo Cascio (1964, 1967) suggests that the continuity of the vocational development process may vary with socio-economic status. Much of the research on career planning indicates that adolescents are unrealistic about their occupational ambitions. Moreover, low income youth are especially unrealistic in their occupational choices, aspirations and expectations. Social class seems to be the underlying factor for this phenomenon.

Super & Overstreet (1960) and Crites (1965) reported that vocational maturity is associated with living in a culturally stimulating environment. Super & Overstreet also found that socio-economic status assessed by parental occupational level was significantly related to orientation to vocational choice indices.

The work of Hollingshed (1949) has shown the effects of socio-economic differences in the relatively static community of Elmtown and upon the kinds of vocations young people entered. Reynolds & Shister (1949) have also shown that playful types of behaviour are encouraged at the higher socio-economic levels.

Other studies such as that of Hyman (1956), Sewell, Haller & Strauss, (1957), Pavalko (1965), have related SES to various aspects of career development. Shappell (1971) found

that perceptions of the world-of-work were differentiated by socio-economic status.

The studies of Roe and Siegleman (1963), Chopra (1967) and Grebow (1973) have all attributed to the importance of socio-economic variables.

Studies of vocational development of disadvantaged adolescents have shown that such youths score lower on measures of vocational maturity than students from more favoured environments.

Schmedeing & Jenson (1968) compared the vocational development of American Indian (disadvantaged) students with a comparison group of caucasian students. The disadvantaged American Indian group was found to have lower scores than their comparison group. It substantiates that disadvantaged American-Indians have delayed vocational development.

In another study of rural disadvantaged, Asbury (1969) administered Vocational Development Inventory and Occupational Aspiration Scale to the boys. The disadvantaged appalchian sample's VDI mean was significantly lower than the mean of the standardization sample of Crites (1965).

Maynard & Hansen (1970) assessed the vocational maturity of black & white inner city youth. 450 eighth grade students were given vocational development inventory. Results indicated the white suburban boys to be highest in vocational maturity followed by two white inner city groups. The lowest scores were for two black inner city groups. The

large differences in the inner city and white suburban group supports the contention (Galia 1966) that VM is associated to certain cultural and socio-economic factors. The low socio-economic groups seem not to be aware of the factors considered important for vocational planning at the VIIIth grade level. The students from urban schools only, had the expected degree of "planfulness" or vocational maturity.

Ansell & Hansen (1971) on a sample of VIIIth and XIIth grade students investigated the rate and level of vocational maturity in lower & middle class adolescent boys. The Readiness for Vocational Planning was used to assess VM. It was found that middle class students earned the highest scores at each grade level followed by lower class. Vocational maturity for middle class represented a steady progression from VIIIth to XIIth while lower class made highest increases in the last 2 years. It was concluded that disadvantaged high school students are slower than their middle class counterparts in developing the ability to select an occupation. According to vocational development theory, students in the VIIIth grade should be in capacity stage. It was found that when middle class students reach capacity stage, the lower class students remain behind in fantasy stage. This also seems to support Lo Cascio's (1967) suggestion that vocational development may be quite discontinuous for disadvantaged youngsters.

Breshnan (1976) in a study on ninth grade black and Puerto-Rican disadvantaged youth also corroborates other studies which have shown that disadvantaged youth are developmentally behind middle class counterparts in terms of vocational maturity.

In another study, Hansen & Ansell (1973) with school students found that there were significant socio-economic differences on VDI and readiness for vocational planning scales.

Gambell & Parson (1972) examined comparative readiness for vocational planning of 2,370 disadvantaged and non disadvantaged junior high school students representing 4 geographical regions of U.S.A. It was found that important differences between disadvantaged and non disadvantaged students were observed but these differences did not constantly favour one group. Contrary to earlier findings, differences sometimes occurred in the direction that favoured disadvantaged i.e. they had higher vocational maturity scores and higher vocational aspiration scores.

Picou & Curry (1973) explored the relationship of selected structural, interpersonal and behavioural factors to the occupational choices of 1,341 female high school students. Residence and socio-economic status were positively and significantly related to occupational choice, indicating the formation of class origins important for the formation of occupational orientation.

Reddy (1974) studied the nature of vocational development of high school boys of grades IX and XI in the southern states of India to investigate possible socio-economic variations in the pattern of vocational development, on a sample of 1103 subjects. Findings showed that middle SES group had knowledge of distinctively higher number of occupations than high or low SES group. The realism of occupational choice was more in upper socio-economic groups. There was increasing integration between student's value orientation and choice of occupation, and increasing integration between their self concept and chosen occupation with increasing socio-economic status.

Currie (1974) also found that middle class adolescents were significantly higher in their vocational awareness and vocational maturity than lower class adolescents.

Dillard (1976a), on a sample of sixth grade students from urban lower, urban middle and suburban middle socio-economic groups found that suburban middle socio-economic males were highest in career attitude maturity followed by urban middle and urban lower.

In another study by Dillard (1976b) on sixth grade students, it was found that subject's socio-economic status was strongly related to vocational maturity and social class was found to be a good predictor of vocational maturity on attitude scale.

In a study by Hamdani (1975), it was found that developmental deficiencies exhibited by disadvantaged youth can be ameliorated, though not eliminated by programs designed to foster self and occupational exploration.

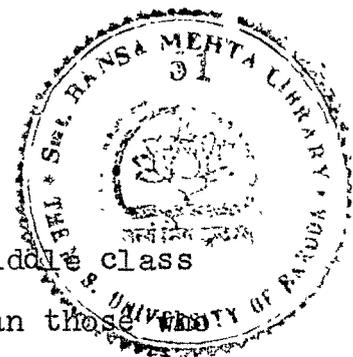
Grooms (1976) on college seniors found significant differences in vocational maturity of different socio-economic groups.

McLaughlin (1976) with 17 year old high school girls reports that lower SES women continue to want and need help with career decisions. His results indicate that women with low SES have a low aspiration level towards both educational and occupational possibilities.

Majumdar (1973) postulates that children from lower socio-economic classes do not gain as much from school programmes as their middle and upper class counterparts, particularly in the area of vocational development. A 9 week programme of vocational guidance and counselling, designed for 22 disadvantaged high school students gave significant gains in the experimental group.

Thomas (1976) found that black & white low income boys expected to enter occupations at their SES levels.

Smith (1976) studied the relationship between reference group perspective and career maturity. It was found that



lower socio-economic black students with a middle class orientation tend to be more career mature than those evidence a lower class orientation. As a group the lower SES black students fell below the percentile norms reported by Crites (1971).

Holland (1979) investigated the relationship between a measure of career maturity and socio-economic status on a sample of 300 sixth grade students using CMI attitude scale. Socio-economic status was found significantly correlated to the attitude scale.

Lawrence & Brown (1976) on a sample of twelfth graders used CMI attitude scale and five parts of the competence test. It was hypothesized that by knowing the subjects SES, the prediction of career maturity could be improved for twelfth graders. However, this was not found, for SES neither significantly improve the prediction of career maturity for the total group nor for three of the four subgroups on the six dependent variables. It only improved the prediction of scores on one criterion, occupational Information for the black males.

Intelligence

Research has largely shown that higher intelligence contributes to better handling of vocational development tasks & thus to higher vocational maturity. Terman's studies

of intellectually gifted, show that his highly intelligent subjects in general, adjusted well in various areas of life-vocational, marital etc. (Terman & Oden 1947). Studies by Grace (1931), Sparling (1933), and Wrenn (1935), have demonstrated a positive relationship between intelligence and appropriate vocational goals.

Importance of intelligence in career development and in achieving career maturity has also been scrutinized by other researchers (Holden, 1961; Davis, Hagan & Strouf 1962; Chansky, 1965) and findings have supported that intelligence contributes positively to generalised measures of career maturity.

Although Crites designed the vocational development inventory to assess the non intellectual aspects of vocational maturity, a number of studies e.g. Asbury 1969; Cover 1968; Dutt 1968; Hoyt 1962; Maynard 1970; Tamminen & Miller 1968; Super & Bohn 1970, have shown it to have intellectual component. Dutt calculated an r of .42 on a group of 257 ninth grade male students. Cover reported a correlation of .45 with the co-operative school and college ability test (SCAT) for 162 male students in Grade XII. Tamminen and Miller obtained an r of .40 with Minnesota Scholastic Aptitude Test in a sample of 1116 twelfth grade students. Hoyt found correlations ranging from .25 to .53 on a sample of vocational training schools. These findings agree with those found by Super & Overstreet (1960) on the indices of vocational

maturity and Gibbons and Lohnes (1968, 69) on Readiness for Vocational Planning scales (RVP). They also corroborate the expectation that verbally expressed career attitudes should be related to verbal intelligence or aptitude if the attitudes mediate the decision making process (Crites 1971). Crites (1969) in his research on VDI demonstrated that VDI scores were positively correlated with intelligence.

Maynard & Hansen (1970) showed a significant correlation ($r = .47$) between vocational maturity scores and intelligence. Because of the strong relationship, a univariate analysis of co-variance using measured intelligence as the co-variate was conducted. The results showed that when intelligence is controlled the null hypotheses of no difference between 5 groups of VIIIth grade boys of different SES was supported at .05 level.

Dilly (1965) on high school students found that decision making ability was associated with intelligence.

Hollander (1971) on 5200 students in grades VI through XII found that increasing intellectual ability assessed by scholastic aptitude measures was associated with increasing vocational decisiveness for males and females.

Scheri (1972) on 181 male eleventh graders using VDI found a linear relationship between IQ scores and vocational maturity scores ($r = 0.46$).

Parlikar (1973), on an Indian sample of 600 students of grades VIII to XI, found intelligence associated with overall VM of grades IX and X.

Smith (1972), with VIIIth & Xth grade students also found that intelligence is a good predictor of vocational maturity.

McGee (1973), on high school students enrolled in vocational programmes, found that VDI appears to be related to the developmental characteristics of age and intelligence.

Kelso (1975) on 1484 male high school students ranging from grades seven to twelve found IQ correlated positively with both vocational choice attitudes and realism. The study shows that intelligence is a critical mediating variable in vocational development. The differences in vocational choice attitudes and the three stages of leaving school were heightened by the influence of IQ; it served a moderating role when confounded with realism. These findings give general support to the view that intelligence is an important determinant of occupational outcomes.

In Lawrence and Brown's (1976) study, the best set of predictors for the total group with attitude as the criterion were intelligence, self concept and race ($R = .62$). The only predictor which contributed significantly to the prediction of attitudes for the subgroup black males and white females,

was intelligence ($R = .32$) and ($R=.47$) respectively. For the subgroup black females, IQ and self concept made up the best set of predictors, for the subgroup white males, it was self concept and IQ ($R=.57$). Thus the study indicated that intelligence was significantly correlated with career maturity as measured by the CMI. Some aspects of career maturity e.g. planning and problem solving are more highly correlated with intelligence than self appraisal which would be expected.

Reddy (1976) studied the Indian sample of 3600 students drawn from metropolitan, urban, semi urban and rural localities, to find out whether there was any significant relationship between the occupational choices of adolescents and their general mental ability. It was found that so far as subjects from metropolitan and urban localities were concerned there was a significant relationship between the level of their mental ability and the occupation they have chosen to enter, but there was no significant association between the two in the case of subjects hailing from semi-urban and rural localities.

Wilson (1979) on a sample of 100 school juvenile offenders, found that career attitude scores of the CMI showed a significant interaction with I.Q. scores. Therefore, it was concluded that higher career attitude scores are a function of I.Q. scores.

Wintersteen (1979) on a sample of 132 eighth grade students found that a strong positive relationship was found to exist between intellectual ability and vocational maturity.

Contrary to findings so far, Mintzer (1976) found, intelligence a statistically significant but a weak predictor of vocational maturity, a weak correlate and not developmental, but major researches discussed above have shown intelligence contributing positively to career maturity.

Level of Vocational Aspiration

It seems reasonable to assume that the vocational level to which an individual aspires reflects his achievement drive. Furthermore, it may be proposed that an individual's achievement drive is related to his vocational maturity. Super & Overstreet (1960) with 105 ninth grade boys found, that four orientation to choice indices were significantly related to the level of the vocational preferences. The boys who paid more attention to vocational choice in the ninth grade tended to be those who aspired to occupations at a high level. On the other hand the use made of orientation resources was not related to level of vocational aspiration.

In a study Jalkanen (1971), on 762 students from four different grade levels (VI, VIII, X, XII), compared students who had been exposed to a structured career guidance programme and those who had not been exposed to such a structured career

guidance programme. Student scores on both vocational attitudes and aspirations increased by grade level. Since an increase in aspiration scores was also found, Jalkanen contends that it raises a possibility of future use of aspiration scores as a component of vocational maturity to assess vocational development on a continuum of normal vocational growth.

Halpern (1972), on a sample of 225 black & Puerto-Rican high school students of tenth grade, found that correlations between scores on the Attitude Scale of VDI and Vocational Aspiration Scores (VAS) were significant at .01 level for males, females and black females. However, all correlations were less than .30.

Walls and Gulkus (1974), studied the relationship of vocational aspirations and expectations to vocational maturity. The subjects were 149 vocational rehabilitation clients and 51 University graduate students (males & females). Analysis of variance yielded findings that more vocationally mature individuals tend to display greater vocational aspiration.

Fielding (1974), with 332 high school seniors also found that occupational knowledge questionnaire was significantly correlated to realistic occupational aspiration.

Holland and Gottfredson (1975) on a sample of 1005 high school juniors, 692 college juniors, 140 employed adults and a second sample of 624 college students, studied over 1 year interval, show that the degree of coherence or similarity among an individual's vocational aspirations provides a potentially useful index of his decision making ability.

Bathory (1967) correlated CMI attitude scale with the occupational aspiration scale (Miller & Haller 1964) which is a measure of realism of Aspiration. In groups of students in Grades IX (N=79) and Grade XII (N=58), he obtained significant r 's of .39 and .37 respectively between vocational maturity and level of vocational aspiration.

Participation in School activities and out of school activities

Super & Overstreet (1960) studied participation in school activities and out of school activities and their relationship to vocational maturity. They postulated that success in dealing with various developmental tasks of adolescence contributes to success in handling various vocational developmental tasks. It was found that participation in activities tended to be correlated with vocational maturity as judged by choice orientation indices. Acceptance of responsibility for choice and planning, specificity of information and specificity of planning were all significantly related to participation-in-school activities, and the concern

with choice and acceptance of responsibility for choice and planning were all significantly related to participation in-out-of school activities. But, use of resources was unrelated to the two measures of participation in activities.

Dilly (1965), made an instrument measuring decision making ability and studied the relationship of scores on this instrument to intelligence, achievement and participation in extracurricular activities. The DMI was administered to 174 high school students. It was found that high DMI scores were associated with high frequency of participation in extracurricular activities.

Personality

Since Dodge's (1938, 1940, 1943) early studies of clerks, sales persons and teachers and even before (Fryer 1931) there has been a lively interest in the relationship of personality to vocational behaviour. A large body of the literature of vocational psychology focuses on the relationship between personality characteristics and vocational choice. Since Ginzberg's (1951) study, there has been an increasing emphasis upon the role of the ego processes or functions in vocational choice. According to Segal (1961), vocational choice is not just a peripheral decision of the individual but a complete expression of the personality development within the frame work of environmental pressures and opportunities with which the individual is confronted.

Therefore, the same theoretical factors that are helpful in understanding personality development should be applicable to understanding vocational choice. Psycho-analytic concepts such as identification, sublimation and other defence mechanisms can be used to gain insight into the personality characteristics of individuals who make a specific vocational choice.

Two studies have explored the part played by the ego processes in choice. The studies deal with task of how an individual accomplishes achievement of a vocational goal in which his needs may be satisfied in a socially acceptable way. Segal (1961) analysed various personality factors which seem to be involved in the choice of accounting and creative writing students. Consistent with the generally accepted stereotypes of these occupations, Segal notes the confirming tendencies of accounting students which appear to stem from their almost complete identifications with their parents, and the rebelling attitudes of the creative writing students, which seem to arise from their inadequate identifications with their parents. As a result of these kinds of early parental identifications and related emotional learnings, different ego defenses are developed by the two groups and are used by them to choose a compatible occupation.

Another study of vocational choice and the ego processes was conducted by Small (1953) who compared the job concept fantasies of better and poorer adjusted boys and found

that they differed in the extent to which their first and second choice reflected "environment involvement" or "environment avoidance". In most of their fantasies about their first choices, which were the more realistic ones, the better adjusted boys expressed needs such as order, achievement, recognition and affiliation. In contrast, the poorer adjusted boys had significantly stronger needs, such as inward pain and tension discharge which reflected their inadequate relationships to social realities and inability to compromise.

Bohn (1966) attempted to understand vocational maturity and its significance to personality variables. He found that individuals with high interest maturity scores would have need profiles appearing more mature than individuals with low interest maturity scores.

Bartlett (1968) hypothesized that vocational maturity scores would be related to personality variables which reflect maturity such as, goal orientation, independence and realism. The study was an attempt to better understand vocational maturity as defined by Crites, and its relationship to personality variables on adjectives of the Adjective check list. It was hypothesized, that 81 female and 69 male Manpower Development Training act trainees, with high VM scores would score higher on personality variables that reflect maturity than trainees with low VM scores. The subjects were divided into 3 groups with high (> 40), middle (30 through 40) and

low (< 30) attitude scale scores. It was found that students with higher career maturity scores also scored higher on Adjective check list (ACL) scales for Self Confidence, Achievement, Autonomy and Dominance, and lower on Deference and Abasement. He concluded that those who are more vocationally mature are more assertive, persistent, goal oriented, forceful and independent.

Similarly, Hollander and Schalou (1965) have reported the correlations between the Attitude scale and the ACL for 112 male and female counseling clients, which are: achievement (.21), endurance (.26), order (.21), intrarception (.32), and aggression (-.22). They also obtained these correlations with the MMPI: Depression (-.30), Psychopathic deviate (-.22), Psychasthenia (-.27). In short clients with higher attitude scale scores were more task oriented (Heilburn, 1960) and better adjusted. In still another study, Schalou (1965), found an r of .31 between the ACL Achievement scale and the Attitude scale in a sample of 102 male vocational educational clients.

Sevens (1973), developed a job placement success scale which evaluates the individual's transition from school to work along seven dimensions. She found, that in a group of job seeking males and females, placement readiness was associated with certain personality characteristics. Those who were ready for placement were dominant, tough minded and

less neurotic, whereas those who were not ready, were submissive, sensitive and more neurotic. Thus, these aspects of personality were directly related to initial career adjustment and indirectly correlated with career maturity in adolescence.

Wigent (1974), found only one variable affiliation on the EPPS to be significantly related to career selection certainty. A significant negative correlation between succourance and career certainty of females was obtained.

Barton & Cattell (1972), tested 309 Newzealand high school seniors on 16 PF in 1965 and again in 1970 after leaving school for employment. Analysis was done for a possible selective personality factors associated with job promotion or job change. Results indicate that the incidence of job promotion was higher in Ss who scored high on such personality variables as warmheartedness and group dependency. The lowest incidence of job turnover was found in Ss who were more practical and down to earth. Subjects who were promoted showed a decrease in dominance and guilt proneness and an increase in shrewdness. A drop in guilt proneness occurred in subjects who kept the same job.

However, Ryan (1978) administered 16 PF Questionnaire to college students. It was found that personality characteristics as measured by the instruments in this study, were not related to either seeking a career counseling

experience or making a career decision. It was also concluded that there are no peculiar personality attributes that can be isolated which will facilitate the career decision making process.

Bergwall (1975), investigated Super's construct which states that vocational maturity is linked to personality adjustment, and that changes in one aspect of adjustment, personal or vocational, affects the other. The attitude scale of the CMI was administered to 425 eleventh grade students in a high school. It was found that general maladjustment, psychosis, neurosis, personality disorder and personality integration correlated significantly with vocational maturity.

McGee (1973), also found VDI related to Adjective checklist variables of achievement, dominance, order and change.

There have been studies showing relationship of anxiety to vocational maturity. Lee (1975), found no relationship between vocational maturity and anxiety for Xth grade students. Northrop (1976), on 242 male and female undergraduate students found that those who were more mature in career attitudes were low in anxiety and the influence of others was of little importance (independence).

Amitin (1979), using CMI competence test on sample of black women, found that higher the level of career development

among the subjects in the sample, the higher the employment seeking skill, desire for recognition, and belief that one can control the outcome of one's life and vice-versa.

Birdie and Hood (1963), investigated the relationship between certain personality factors and student's post high school plans. Both boys and girls planning to attend college indicated greater social needs and more social competencies than the students planning to enter jobs.

Chapin (1975), studied personality correlates of vocational maturity on high school students of grades eleven and twelve. Stepwise multiple regression analysis showed conscientious, trusting, adaptable, imaginative and forthright nature predictive of career maturity. In this study, personality accounted for 34% variance in vocational maturity.

Chauhan (1975), on a sample of male & female undergraduates in Rajasthan, found negative correlations between extra-version and vocational maturity for males, but opposite was the case for females.

Patni (1975), on the Indian sample of undergraduate students in Rajasthan, found low positive correlations between rigidity and vocational maturity for 1st year students but for 3rd year students a negative correlation between these two variables emerged. There was positive correlation between self control and vocational maturity.

Gupta (1973), found significant differences in occupational choices of extroverts and introverts.

Kathuria (1974), on a sample of 1000 female undergraduates in Rajasthan, did not find any significant difference on the anxiety scores of vocationally decisive and indecisive.

Studies reviewed on the relationship of personality variables to various aspects of career decision making are largely inconclusive, especially evidence on the relationship of career choice attitudes and career choice competencies to personality traits is almost negligible which necessitates study of these variables of career maturity in relation to personality.

Need for further study of the Variables

Researches discussed above and showing relationship of career maturity to grade, largely indicate that career maturity increases with increasing grade. Some studies conducted in the underdeveloped societies, however, are also indicative of a discontinuous pattern of career development across grade levels. Most of the studies discussed rely heavily on samples of young American students drawn from an educational system which provides a generous amount of time for the individuals to discover their vocational selves. This raises the possibility that these findings merely mirror the exigencies of the U.S. educational and social

system, and may not account for the vocational experiences of the adolescents in general. Therefore, it was decided to study the pattern of career development in Indian students to find out the applicability of the developmental view of career behaviour by studying its relationship to grade. Findings, such as those of Crites (1965), show that the educational system is a primary agent of what might be called "vocalionalization" and, thus, stages in the maturation of vocational attitudes seem to be primarily associated with the transitional points in the educational system. The three grade levels which were chosen to study also happen to be terminal points in the Indian educational system. At the end of class X, several different curricula are offered from which the adolescents must choose. Those who want to leave the school system, have to decide whether to take up some job or take a vocational training. Similarly at grade XII, which is the school leaving stage, students have to take important educational and vocational decisions. Class VIII is also considered as transitional as it marks the entry from childhood to adolescence and influence of personality and environmental factors at this stage may have useful implications for further career development. Knowledge of such factors which may enhance career development at this stage can be used to identify developmental inadequacies at an early stage. In India, there is a considerable dropout of students after grade VIIIth and many have to leave school and look for jobs due to economic

reasons. Hence, career maturity has been examined at three grade levels, VIII, X & XII.

Major theories of career development, especially that of Super (1960) and Ginzberg (1951), have used males as subjects. Even though Shappell, Hall (1971) & Crites (1969, 1973) find that sex is not a factor in differentiating perceptions of careers and career decision making competencies, there is a need for further illumination of the relationship between sex and career maturity.

Various researches reviewed (Smith & Herr 1972; Currie 1974; Rathburn 1973; Omvig & Thomas 1977) have also shown the possibility of sex differences in career choice attitudes and competencies. Most of these studies indicate that females are higher than males at school leaving stage in choice attitudes. Some of the studies on Indian samples, however, show that boys are more mature than girls on certain aspects of vocational behaviour. With reference to the attitudes of women toward work in India over the past few decades (as already mentioned in the 1st chapter) and differences in the child rearing practices of boys and girls, sex differences could also be expected in the career maturity of Indian school students. This is also brought out by Vroom (1964) who states:

"the different values and occupational choices of men and women undoubtedly stem at least in part, from differing patterns of socialization. Conceivably boys, through identification with

their fathers, are more likely to learn the desirability of being good provider for one's family, while girls may be more likely to acquire socio-emotional concerns of their mothers."

Lehman & Witty (1936) have also shown that sex differences in vocational attitudes are due to differences in the experience of sexes resulting from differences in social customs, mores and taboos. Thus, differences in the socialization of boys and girls may have implications for the differences in the development of career choice attitudes and choice competencies. Therefore, sex differences in career maturity have been taken up in the investigation.

Super (1964) has defined vocational maturity as the "readiness to make vocational decisions called for by the society, revealed by the method of coping with developmental tasks." Central to this interpretation is the idea of societal influence on career behaviour. Research studies based on Western samples indicate that lower SES black youth obtained lower vocational maturity scores than their white counterparts (Maynard & Hansen 1970; Hansen & Ansell, 1973; Vriend 1969, and Crites 1971). The basic conclusion of many of these studies is, that socio-economic status of these youth contributes to their low vocational maturity. These studies show the relationship of choice attitudes to social class factors but the choice competencies have not been studied much. This lack of choice competency studies

therefore, necessitates further investigation. In India majority of students come from economically depressed areas and major barriers to development confront them in the form of unhygienic living conditions, insufficient family income resulting in an inability to meet the basic necessities of life. To negate the problem of wasted manpower, it will be helpful to know whether maturity in career decision making is related to the social class factors in India, as it may provide guidelines to policy makers on how to meet the needs of those who come from socio-economically depressed environments, in a better and more fruitful way.

Similarly, studies throwing light on the relationship of intelligence to career maturity, largely show that intelligence contributes to generalised measures of career maturity. However, it may be emphasized that role of intelligence in the career development of Indian adolescents is not well understood, especially in relation to choice attitudes and competencies.

Evidence on the role of personality traits in career maturity is really scant. Crites (1978) recommends the study of personality correlates of career maturity. The researches reviewed are also largely inconsistent and inconclusive, which warrant the need for studying the relationship of personality traits to career maturity.

The reviewed studies also show Level of Vocational Aspiration (Super & Overstreet 1960; Super, Kowalski & Gotkin 1967; Bathory 1967; Halpern 1972) to be a determining factor in career development. Level of Occupational Aspiration has been defined as orientation towards occupational goal (Haller & Miller, 1963). The LOA is considered a concept which is logically a special instance of the concept of level of aspiration. The measure of Occupational Aspiration that has been used in the study provides an index of the extent to which the individual aspires to occupations with high social prestige. Occupation in India, is a means of security, status, financial rewards and respectability. Therefore, there may be a tendency in adolescents to aspire to higher level jobs due to the prestige and economic benefits attached to them and setting higher level vocational goals may perhaps be related to their greater involvement in career related activities. Therefore, career maturity, in relation to level of occupation aspired to, is included in the present study to examine whether it proves to be a useful predictor of career maturity of school students.

Findings of the CPS (Super 1960, Super, Kawalski and Gotkin 1967, Jordaan 1974) data have shown participation in extra-curricular activities at school and leisure hours contributing positively to career maturity. Super (1957) interprets adolescence as a period of cultural adaptation during which the individual makes the transition from child-

hood to adulthood by engaging in a process of exploration of self and the world of work; the exploration which takes place in the home, the school and work place. As Super (1957) observes

"the home is a hotel, a restaurant, a recreation centre, a school, a laundry, a carpentry shop, an electrical shop, a farm and a variety of other industrial, educational and agricultural enterprises!"

In the school, the young person supplements the knowledge gained in the home with exploration of self and work through his performance in various extracurricular activities, and his informal associations with peers. In an attempt to answer as to what extent maturity in choice attitudes and competencies is related to participation in school and out of school activities in India, these variables have been examined in the study.

Various researchers (Betz 1977; Harren, Kass, Tinsley & Moreland, 1978; Jones & Jung 1978; Osipow 1973, Elkins 1975) have recommended research on the factors influencing career decision making. Osipow (1973) recommended research on the influence of social and situational variables on career decisions. O'Neil, Ohlde, Tollefson, Barke, Piggott and Watts (1980) have recommended research to identify the correlates of career decision making, as such factors can potentially influence, restrict or limit personal and career development. They point out that more research needs to be done to understand how these factors affect student's career decision making by sex and grade levels.

Largely, the literature and the studies reviewed on samples in the west, have shown intelligence, social class, level of vocational aspiration and participation in extra-curricular activities contributing positively to various aspects of career maturity at various stages of development. Therefore, a positive relationship between these factors and career choice attitudes and career choice competencies is hypothesized in the Indian samples also. But the evidence on the relationship of personality to career maturity is lacking hence no direction of relationship has been hypothesized with personality variables.

Researches in vocational choice, especially in India, have mainly been concerned with what is chosen and not with how the choice is made and hence career choice process variables have not been the subject of much research. In west also there has been considerable research with career choice attitudes but competencies have not been studied much, which indicates the usefulness of studying these variables of career maturity.

Western studies show that various personal social factors play an important role in determining the level of career maturity attained at a particular stage. However, attempts to extrapolate from those findings to a culturally different society may be premature as the factors may act in a different way in our socio-cultural set up. Studies

done in the underdeveloped societies have obtained findings which are contrary to those of highly industrialized societies. Studies such as those of Osuji (1976), Achebe (1972), Harbison & Myers (1964), Augustiobo (1966), Harbison (1968), Gutkind (1969), Olayinka (1973) and Hinchcliffe (1973) suggest that environmental and socio-economic determinants of vocational choice in developing countries may act in ways different from those in highly advanced western societies. Moreover, lack of research in this area in the country underlies the importance of studying these variables in Indian samples.