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PSYCHOLOGY OF WORK:
INDIVIDUAL IN ORGANISATION

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ORGANIZATION

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PSYCHOLOGY OF WORK
(Individual in Organizations)

1 INTRODUCTION

Work is an important aspect of life and behaviour. Most active part of people's lives go in work and work-related activities. Hence it is but natural for psychologists to study this important dimension. A lot of research is available in India and abroad on different dimensions of work and work-related behaviour. Comprehensive and depth studies of the behavioural phenomena involved in work have been conducted by scientists abroad. Such studies have been systematically reviewed and presented through books like Psychology at Work edited by Warr (1971), and Work in America by a task force set for this purpose in U.S.A. These and several other books have attempted to put together research literature on areas like hours of work and the twenty four hours cycle of rest and activity, skilled performance and stress, learning in practice, man-machine systems, accidents, selection, occupational choices, judging people at work, motives at work, employee participation and job redesigning etc. In the book on Work in America research on issues like the problems of American workers, functions of work, impact of work on health and other aspects, redesigning jobs etc. were examined. Research literature ^{on} work presented in these books and other books of this kind gives a lot of

insight into some basic questions such as 'what motivates people to work?' How do people choose different kinds of work? How does work-socialization takes place? What are the effects of work? How can work be made more interesting? How can work situations be designed to lead to higher productivity?' etc. However, these researches conducted abroad provide clinical insights into work-related behaviour which is very useful for those involved in applying such generalized clinical knowledge in managing work or work-related behaviour. For example, Maslow's theory on the hierarchy of needs or Herzberg's hygiene-motivator theory will help an industrial manager understand people who work with him and design strategies of tapping their motives that lead to higher productivity. In order to do this the manager should have theoretical insights which he can get through reading Maslow and Herzberg. Besides, he should have the ability to diagnose the motives of people who work with him. In order to acquire this ability he needs some training. But acquiring ability to understand others' needs and ones own motives is not sufficient, if his job does not give him the autonomy to design and implement the strategies of motivating others. Very few positions or jobs in India give the opportunity to acquire such abilities and autonomy to implement such innovative work designs. Even in modernized companies with participative management very few people have such autonomy. While an understanding of what motivates people to work on the basis of researches abroad is useful, what is more relevant may be an understanding of "what do people look for in India when they work?". "What do they find actually when they start and settle down to work?" and "How do they react to what they face while working?". These deal with the issues of the motives to work, process of adjustment to work, work itself and the impact of work.

Psychologists in India have been attempting in the past to answer these questions. Evidence to this effect is available from the survey of research in educational, military and industrial psychologies presented respectively by Buch (1972), Sinha, D (1972) and Sinha, A.K.P. (1972) in the first Survey of Research in Psychology.

The review by Buch (1972) indicates that the education sector is distinct in contributing to the psychology of work. He presented researches dealing with teachers, their attitude and adjustment, headmasters and their orientations, teacher training, students and their study habits, correlates of their academic achievement, their career choice patterns and curricular preferences. These areas continue to hold the attention of psychologists. The present survey of researches in past five years indicates that researches on teaching, teachers and teacher behaviour, students and their study patterns have generated a great amount of research keeping with the tradition. New and important work-areas like administration, extension and research continue to be neglected. Work in industry forms a significant amount of work-life in India.

Perhaps ^{due to} the ease with which researches can be conducted in organised sector and the practical utility to which they can be put, to researchers have continued to concentrate studying the work-life in industry. The first survey by Sinha (1972) indicates that extensive researches are available in vocational choice, selection and placement, performance and job-satisfaction, and human engineering. A few studies have also been reported dealing with unemployment, work analysis, training etc. The trend seems to be changing somewhat in the sense that studies in industrial sector in the past five years have more or less tended to deal with job-satisfaction and work-motivation. A few researches testing Herzberg's theories have

appeared. The trend is also in favour of studying workers more than the top management. Sales side continues to be neglected. As Sinha (1972) pointed out researches on unemployment and the problems of unemployment have practically disappeared. In place of that the number of researches on self-employment and entrepreneurship have increased tremendously necessitating a separate section to be included in this review.

Since the beginning of the extension researches in IARI in the early 60s a numerous amount of research literature has appeared through ^{ing} insights on the work-related behaviour of farmers. A few studies on farmers have been reported in sections dealing with socio-cultural factors in personality, social change and programmes and group processes in the earlier survey. The survey has not depicted farming behaviour as a distinct entity. Partly because the number of researches were not so many at that time and partly because of the communication gaps between research in agricultural settings and other researches—particularly university researches. The researches on farming behaviour, knowledge **acquisition** and adoption ~~process~~ have increased so much that a separate section on agriculture had to be included in the present study.

Work in the area of health and family planning also continues to be neglected except for a few systematic researches done by a team of social scientists at the National Institute of Health Administration and Education. While there is an enormous amount of literature available on health and family planning behaviour of people in general, very little has been done to study the work behaviour of health and family planning workers.

Researches on development agents have also been on the increase. Researches at the national Institute of Community

Development and Indian Institute of Public Administration are likely to throw more light on this. A few researches have been reported on the village level workers, block development officers and extension workers. These have also been included in this survey. Researches on women at work are rather few. One would have expected a great number of researches during International Women's Year. The few researches available do not throw enough light on work-behaviour of women.

The categorization of researches in this survey is based on broad occupational categories and sectors of work such as those discussed so far. Unlike in the earlier survey this outlook of presenting the trend report has been chosen due to (1) a belief that the nature of work is so different in different occupations probably separate modals of psychology of work may emerge for each category of people; and (2) a desire to project the neglected areas of research.

It may be acknowledged that both the objectives may not have been achieved for atleast two reasons: First, the researches presented in each area are so incomplete, probably very few generalizations could be made. Secondly there are so many spheres of work in India that a complete volume may be written on the nature and diversity of work in India. However, broad and critical areas needing attention are pointed through the classification system and wherever possible in the text. An attempt is made in the last section of this survey to gather a few important dimensions of work and work-related behaviour that the present survey has pointed out and ^{to} draw out trends that may be meaningful to psychologists.

TEACHING

There are atleast 29 research studies reported in the past five years on the psychology of teaching. These researches cover a wide range of topics. They attempt to answer questions like, "how do people choose teaching?; what is the nature of teaching?; what happens during preparation for this vocation?; what determines effective teaching?; what are the personality and value patterns of teachers?; what is the job-satisfaction or work-motivation of teachers?; how do they react to the system in which they are in?; what is the impact of teaching work on others?; and the like. Some of the results from these studies are presented below.

There are three studies dealing with the choice of teaching as a career. Verma (1971) in a study of 300 school teachers in U.P found that a desire for intellectual growth, lack of other opportunities or jobs, lack of fitness for other jobs, a desire to serve, desire for financial stability and a need to keep oneself engaged in some activity or other were the main factors influencing the choice of this profession. In another study on 150 men and women student teachers from Jaipur and Banasthali Vidyapith, Verma (1974) observed that love for teaching, service and love for children are the three important factors influencing the choice of this career. Family influence and economic reasons were marginal. Socio-economic status had negative correlation with attractive profession and service idealism and positive correlation with love of

teaching, love of subject and family influence. Shamsuddin (1971) found socio-economic status, to be an important determiner of this career choice. A majority of teachers in his study came from lower and middle class families. However, female teachers in his sample were from upper middle class. These may have taken up the profession to fill time and also to add to the family income as we generally observe in urban areas.

The nature of teaching (work) as it is done is so well known and well accepted, probably it needs no research. However recent advancements on the analysis of teaching behaviour by Flanders (1970) has attracted so much attention all over the world that it has influenced the Indian researchers too. There are several researches conducted in the past five years on classroom behaviour of teachers. The lead was taken by Mehta (1968) at the NCERT and Pareek and Rao (1970, 1971) at the NIHA. This was followed by attempts by a group of researchers at the CASE, Baroda exploring this field of classroom behaviour. As the researches at CASE tried to correlate classroom teaching behaviour with other variables these are cited at appropriate places.

Pareek and Rao (1970) studied the pattern of classroom influence behaviour of Class V teachers of Delhi using Flanders interaction analysis technique. Each teacher was observed over 3 half-hour periods on 3 different days. Their study revealed that 55% of the total available time was spent in teacher talk, 14% of the time was spent in student talk. Their study also revealed that about 62% of the teacher talk was lecturing, 16% was asking questions, 10% was giving directions, 3% was criticizing,

5% was taking ideas from students, 4% was encouraging them and almost no time was spent in accepting their feelings. The indirect/direct influence ratios reveal that teachers are mostly of authoritarian than of democratic type.

There is a great need for experimenting with the new roles the teachers have to play in response to the national needs and demands. The role of the teacher as transmitter of information from prescribed text books to the students in the classroom has been taken so much for granted that it becomes very difficult for making the teachers play more creative and proactive roles in the society. For example in rural areas where the rural masses do not see the present day education as helping them any way, the teacher is required to search for alternatives to provide to the community. How could he be prepared to play this role of a change agent in a community through his teaching skills? A few experiments are in progress by at the Indian Institute of Management, Ahmedabad under the sponsorship of ICSSR. A lot more has to be done in this area of proactive roles by teachers. Similarly nature of teaching work in higher education, and professional education has been a grossly neglected area by researchers. A variety of tasks are performed, for example by teachers in medical schools. These have not been subjected to studies. Different spheres of teaching work need to be explored in future.

The impact of teacher training on attitudes of student teachers has also been a subject of study. In one study Kakkar (1970) found that teacher training helps the student teachers develop more liberal attitudes

towards children. In another study Kakkar (1970) found that teacher trainees changing their attitudes due to the training programme they received were more conformists, benevolent and obtained higher course achievement scores. The teacher trainees showing greater teaching effectiveness also showed greater conformity. In another study on teacher trainees, Sharma (1970) found low but positive and statistically significant correlation between teaching skill and marks obtained in B.Ed. theory papers.

There is not much work available on the nature of preparation for teaching work. Again no innovations are reported. Teacher training appears to be as mechanised as teaching. The training required is determined by the nature of work and correlates of good work. The studies below give some insights about correlates of teaching effectiveness.

Raina (1970) investigated the relationships between some dimensions of creativity and success in teaching. Using a non-verbal form of the Torrance test of creative thinking on 55 teacher-trainee students he observed that the coefficients between fluency, flexibility and total creativity and practice teaching marks were positive but low and statistically not significant. Originality was negatively related to the criterion score.

In a study of 320 teachers, Samanthroy (1973) found that teaching efficiency was positively related to teacher-adjustment and teacher attitudes. He used a teacher attitude scale and Bell adjustment inventory.

Singh (1971) observed that a few motivational agents tried on teachers have failed to bring about any change in their classroom behaviour. He concluded that Indian teacher is not basically inferior to any one, but he does not have the awareness of his definite role, the pace of the time and has no positive philosophy and is not committed. Quraishi (1974) studied personality, attitudes and classroom behaviour of 200 teachers. Flanders Interaction Category system was used for observing and recording teacher's verbal behaviour. Thurstone Temperment Schedule was used to assess the personality traits, and various attitude scales were adapted to measure attitudes. The results of this study indicated that teacher's verbal behaviour in the classroom was related to his personality and attitudes. Their attitude toward democratic classroom procedures were correlated significantly at .05 level with I ratio D (proportion indirect behaviour to direct behaviour) and i/d ratio (proportion of motivating behaviour to controlling behaviour). Sociable trait was also significantly related to student initiation. The best predictors for I/D ratio were reflective trait and attitude toward democratic classroom procedures and that for i/d ratio, reflective trait, attitude toward democratic classroom procedure and management and sociable trait. Teacher's accepting behaviour of students ideas could not be predicted significantly. For student initiation the best predictor was sociable trait, which predicted to the extent of 2.25.1. T/S ratio (proportion of Teacher talk to student talk) could not be predicted significantly by any of the 15 variables on the seven personality traits direct and indirect teachers do not differ significantly.

Nair (1974) from his study on B.Ed. students found that intelligence of a teacher alone cannot be a predictive criterion for teaching ability.

Sharma (1974) studied 173 B.Ed. students on cattell's 16 personality factor inventory and correlated the scores with teaching effectiveness ratings. Intelligence and total personality scores were positively related to teaching effectiveness.

Using Flander's interaction analysis technique, Sharma (1972) found that aptitude test scores of training college students were associated with their classroom interaction behaviour

Koul (1973) studied the values patterns of 100 popular and 100 unpopular teachers in Haryana and found that they differ significantly with respect to all the six values viz., theoretical, economic, aesthetic, social and religious.

Brar and Adhar (1972) studied the socio-economic problems of primary school teachers and found that lack of promotion chances cause professional inefficiency in the block. Petty government officers getting greater respect in society caused apathy in teachers.

Kale, (1970) studied the career of 105 secondary school teachers from 15 schools. For this purpose an interview was conducted. It was revealed that heterogeneity of social class and ethnic background in the classroom made the situation difficult for teacher. Government rules developed professional problems for them they emphasized discipline more than interpersonal relations, and fact acquisition more

than skill or understanding. Communication pattern was more teacher-centered and the individual teacher's position in relation to colleagues varied with his age, sex, experience, etc.

Singaravelu and Feroze (1972) studied the difficulties of school teacher in completing the fifth standard syllabus. It was found out that male and female teachers did not show any difference with respect to the number of problems faced by them. Teachers from rural areas experienced significantly more problems than those from urban areas.

Goyal and Sharma (1974) found that increase in teachers' pay scales has evidently brought about a corresponding healthy change in their attitudes toward profession. Following the pay revision, the teachers than their duties according to the administration. In general parents had a sympathetic attitudes towards teachers.

Shah (1974) has described micro-teaching as a mechanism for improving teaching skills.

Verma (1972) in a study of 305 teachers from Meerut district found a positive high correlation between teaching efficiency and job-adjustment. Men-teachers from private schools were found to be more dissatisfied than any others.

These studies indicate that both environmental and personality factors contribute to teacher effectiveness. A few investigators have attempted to survey the values and attitudes of teachers.

Gupta and Singh (1972) studied values, attitudes and motivations of 154 teachers and 36 Gramsevak and found that a majority of them were ready to accept responsibility; worked very hard, and showed positive attitudes toward the importance of work.

Kakkar (1972) in a study of bureaucratic orientation correlates of 45 elementary rural school teacher found that low and high work environment preference groups were significantly different on mean scores. Low group showed high ego-centric and on concomitant submissible factors.

Verma (1971) studied job values of 300 school and college teachers and found that for college teachers self improvement was of important but to the primary teachers secure job and respect were more important.

Marr and Mathur (1973) studied job satisfaction of 366 secondary teacher educators from five states viz., Kerala, U.P., West Bengal, Maharashtra, and Punjab and found that the respondents felt their job as 'interesting'. However, they were dissatisfied with their advancement and earnings.

Roy (1973) demonstrated that classroom behaviour of teachers can be changed through feedback interventions. In an earlier study of on Delhi teachers Pareek and Rao (1971) also demonstrated that feedback on interaction analysis can bring about lasting changes in classroom verbal behaviour of teachers.

Mehta (1971) investigated the attitudes of student teachers of primary basic teachers, training institutions towards community-life and craft.

Nanda¹⁹⁷¹ studied the attitudes of 90 basic training college lecturers of Punjab towards basic education. For this purpose attitude scale and questionnaire were used. The results showed highest degree of neutral attitude prevailing in them, towards basic education, which reflected the attitude of institution as a whole.

Mathew (1970) studied classroom climate through observation of teacher behaviour. About 37 teachers of standard IV, 50 teachers standard VI, 50 teachers of standard VIII, 40 teachers of standard IX were observed each for 45 minutes. Who were rated on authoritarian trait. An adapted version of the minnesota Teacher Attitude Inventory was used to measure the attitude of teachers towards teaching, discipline etc. A 25 item sentence completion test was used to test the unconscious attitudes of teachers towards parents, religion, early experience and vocation. The results revealed variations in the authoritarian trait by teachers. The behaviours of the authoritarian teachers included restricting freedom of movement in the class, ridiculing and scolding, threatening, suppressing creative responses of pupils etc. The primary school teachers were found to be more authoritarian than the high school teachers. Regarding experience more experienced teachers were more authoritarian than the less experienced.

Men teachers were more authoritarian than women teachers. However in the attitude inventory women teachers were more authoritarian and conservative than men teachers. A few authoritarian teachers showed permissive attitudes in the inventory. It was revealed by the sentence completion test that the authoritarian group were status and power oriented in their attitudes towards vocation.

Anand (1974) studied school teachers perception of their principals taking 126 teachers from Delhi and found that more women, rather than men, expected strong character in the ideal principal. Teachers viewed their principals lacking ideal characteristics of a principals. They perceived them as dishonest and bureaucrats.

Thus different dimensions of job attitudes and satisfaction were studied by investigators.

Dasgupta (1973) observes that entire orientation of the educational system is elitistic, anti-manual labour and anti-working class. The only value that the educational system imports is that of 'competitive self-interest'. There is little or no involvement of universities in national efforts. The consequences of this gap between national needs and aspirations of the masses are: student explosion often misdirected aimless teaching and careerist utilization of research for personal ends.

Singh (1974) studied teacher behaviour as determinant of pupil behaviour and achievement taking 226 students of X class and found that

pupil achievement was highly correlated with different dimensions of teacher behaviour rather than pupils' intelligence. Total teacher behaviour was strongest independent predictor of achievement.

It is difficult to conclude anything about psychology of teaching work from these few studies although these studies do indicate certain trends. The questions raised earlier have not been completely answered by the researches mentioned above. For example, the role played by teachers in changing student values, career patterns and his socialization or professionalization were not studied adequately.

Teaching in higher education does not seem to have attention of the behavioural scientists so far. The different types of teaching roles of the teacher roles have also not been subjected to research.

S T U D Y I N G

As teaching is work for teachers, studying is work for students. Several researches have been conducted on the work habits of students, their attitudes towards studies, and related behaviour in their student roles. Researches on students and studying also dealt with a variety a of dimensions like in teaching. A number of studies are available on the correlates of student achievement. Studies also have been conducted on the impact of academic achievement on other behaviours of students. Student curricular interest patterns, study habits, adjustment patterns and attitudes to subsystems of education have also been studied in the past five years.

A majority of studies in this section have been done on the correlatis of student achievement.

Sinhai (1970) studied 200 high achievers and 200 low achievers. Their achievement degrees were decided from two consecutive final school examination marks. It was found that fathers occupation was significantly associated with their scholastic achievement. Social class did not bear any relevance.

Wig and Nagpal (1972) conducted a Psycho-Social study of low achievers. They found that low achievers were comparatively older, had a poor academic background, came from less educated parents, was complacent and not will integrated emotionally.

Kakar (1970) studied popularity, intelligence, economic status and academic achievement in 210 elementary and secondary school students. Sociometry and IPAT's culture fair intelligence tests were used. Results indicated that popularity, intelligence, economic status and academic achievement were positively correlated. The magnitude of correlations was, however, not as high in case of the secondary students as in the elementary school pupils.

Narayana (1974) studied 240 freshman engineering graduates for academic over and under achievement and occupational status and found that over and under achievers did not differ with regard to past performance verbal ability, initial level of performance and scholastic and intelligence. Under achievement may be attributed not to lack of ability but to adjustment and personality factors to a large extent.

Rastogi (1974) studied intelligence, achievement and value system of students in different professional courses (medical, engineering, pharmacy etc.) and found that those superior in scholastic achievement were also high on intelligence. Engineering and medical students showed higher n Acts than the pharmacy and draughtsmanship. All the four groups scored high on scientific values.

Sinha (1970) studied the need for achievement and academic attainment of 200 high achievers and 200 low achievers of classes X and XI and of age range 12-16 years. Non achievement was found to be related to academic achievement.

Sinha (1970) studied academic achievers and non-achievers in the university of Allahabad 375 university students and 110 teachers were included in the sample. His study revealed that high achievers were younger in age, mostly unmarried, and stayed with family and they were found to be regular with their studies, superior in intelligence, had lower anxiety level and better general adjustment. They were also more persistent but had lower aspirational level. Low achievers had a better self-image. There was little difference found between the groups with regard to the reported impact of praise, reward, proof and punishment.

Kulkarni and Naidu (1970) studied the relationship between students socio-economic and attitude variables and their mathematics achievements. Their investigation on 1681 school students from central

schools of Haryana and Gujarat school indicated no relationship between socio-economic status and achievement score in mathematics. In central schools, level of father's occupation had definite influence on their ward. However, parental education was not related to student achievement. Positive attitude to mathematics was found to be associated with student achievement. Most of the students felt that school education was not a waste of time.

Mohan and Mohan (1970) studied the effect of examination results on sociometric choice. Social preference questionnaire was administered two times to 28 students of psychology in Punjab University, with a gap of an year in between during which time examination was conducted by the university and results were declared. The results of the study indicated that the examinations seem to have affected only to a little extent the choices of study patterns.

There are few studies on student leadership and motivation. They are in students of higher education.

Ramalingaswami A et al (1972) studied 135 UG medical students for leadership style and motivational orientation and showed that leadership style was significantly related with participation in student activity. About 60% of the students had strong motivation orientation this individual orientation had no relationship to his leadership style.

King (1970) studied 180 students of IIT final year class. Interview and content analysis were used. The ambitions of these students when they joined IIT were found to be of a varied type and

so were their salary expectations, job preferences and future aspirations. The given reasons for studying engineering were good job opportunities, genuine interest, high status and good rewards. The academic environment was believed to be the best. More than half of them preferred management and administration as their career.

Rao (1976) studied the professional hopes and fears of 466 medical students from seven medical colleges. A majority of them expressed their future aspirations as serving others, specializing and doing post-graduation, earning money, a good job and a comfortable life. Only 8% aspired to work in rural areas. Students from different colleges were found to differ on their aspirations. A study of their work values (Rao, 1975, 1976) revealed that independence, social status and creative aspects of job dominated their preferences. Academic work, work in rural area and security were least valued aspects in the job.

Mehta, Pareek and Sharma (1972) studied 12 activist students from Udaipur University by using various inputs in the forms of games, exercises, small group discussions, inventories and tests. Significant shifts in self-image was noticed after a laboratory training programme on these students. Researches by Mehta (1969) on school students have indicated that laboratory programmes on innovation go a long way in helping student development.

Hafeez and Shantaniam (1972) studied 150 engineering graduates and 233 engineering diploma holders for relationship among introversion, extroversion and neuroticism and found that significant

In a study of secondary school boys and girls Praharaj and Sinha (1973) found differences in their preferences of occupations. Boys were higher on the job values of security, friendly, working people and variety while girls were higher on social position and cleanliness. There were no sex differences on this.

Kulshrestha (1969) studied vocational interests, occupational choices, socio-economic status and intelligence of 250 students of 11th class. For this purpose following tools were used: Chatterji's non language preference record Kuppaswamy's socio economic status scale, Jaloto's test of intelligence and a questionnaire prepared for this study. The results indicated that their socio economic status and occupational choices were not related to their vocational interests. Intelligence was found to be related to congruity between vocational interest and occupational choices, and latter had no relationships with their parents education or occupation.

Sharma (1972) studied relative vocational preferential. For this purpose he selected 140 male school students and administered Chatterjee's non language preference record. All the following comparisons were found to have significant negative r: fine arts with science, medicine, technical and crafts, literature with technical, crafts, out door sports, and mechanical with fine arts, crafts, out door sports and household interest.

Desai.K.G (1972) tried to answer the question who should make the vocational choice. The selected 216 pupils who had a vocational career and 124 an academic one and administered the questionnaire to them. It was found out that about two-thirds of pupils and parents believed that it should be make by the pupil, his parents and teachers. All the groups were in agreement not to take the decision without pupil. The pupil independence was appreciated, but they felt that he may received the guidance of elders.

difference between graduates and diploma holders in respect to their non achievement scores on set favouring the graduates. Extraversion showed negative relationship with introversion. There was a positive but inconsistent relationship between non achievement and extraversion.

Singru (1972) studied 62 students (21 girls and 41 boys) for their relationships between achievement motivation and test anxiety and found significant negative relationship between test anxiety and verbalized need achievement test.

In a cross-cultural study of achievement motivation and self-esteem Husaini (1974) studied 115 USA students and 67 Indian students. Non achievement was found to be positively correlated with self esteem for Americans but only slightly for Indians. It was also revealed that non achievement showed relationship to different actual ideal self esteem dimensions such as kind, happy and competitive in both the samples.

De and Priya (1972) studied some personal and academic correlates of achievement motivation taking 140 male students of PG standard and found significant differences between science and arts students between science and commerce, between highly educated parents sons and less educated parents' sons, and high income vs. low income students.

Jawa (1972) studied level of aspiration and achievement motivation of 57 under graduate students. The n Ach showed positive relationship with future aspiration. Only when the past and present positions when viewed together were positively related to future aspirations. High n Ach group scored low on sociability. Mahla (1968, 1970) and Desai have done pioneering work in the

area of achievement motivation in schools.

Desai (1972) studied 445 students for the development of n Ach through the curriculum teaching. The specialised designed curriculum helped to develop n Ach among the school boys. It was observed that all the schools gained in terms of pupil performance to the extent of 11.4% of marks. Other categories of n Ach were also found to be significantly higher in boys as compared to the pre-test scores. In another study by Trivedi and Desai (1972) achievement motivation training was found to contribute to high academic performance by students.

In another study Desai (1972) studied 1000 pupils for n Ach. He found highly positive relationship between n Ach and intelligence scores, SES, school achieving status, ward's education, and between AI and AR scores and AMIM and n Ach scores.

For a detailed discussion of various studies on achievement motivation in India, see Mehta and Mehta (1975). A significant amount of literature has been reported recently dealing with the occupational choices and vocational interests of students at different levels. This has been one of the topics of educational psychologists and educationists. A number of these studies attempted to assess the factors associated with occupational preferences. Research on student preferences for different subjects they study, their reading habits, their general attitudes to their roles have also been investigated.

Singh (1970) compared meaning of occupations for 394 students from Lucknow and 323 students from Bangalore. He used an occupational differential. The result suggested that effective meanings related to occupations could be defined in terms of three major bipolar dimensions, namely, efficiency work morality and appearance.

Grewal (1973) studied occupational prestige of 110 Indian students and faculty members at the Ohio State University and found government occupations were ranked at the top and unskilled at the bottom. Occupational prestige was independent of economic and industrial development of a country. Authority and power are the dominant values for higher placement. Economic gains derived from a job affects less the perceptions of the respondents while rating an occupation on a given scale.

Prasad and Sinha (1972) studied post graduate (N=30) students and found that money and prestige were important for high fear avoidance students than low fear avoidance. Altruism, job freedom security and self-realization were found to be of greater significance for low fear avoidance students.

Sharma and Kausal (1972) studied 75 boys and 85 girls in the State College of Education, Patiala. They administered a check list containing 11 probable motives for joining B.Ed. course. The motives of both boys and girls were identical. A majority of respondents (67%) did not have love for the teaching profession, 13% joined the course to earn eligibility for M.A./M.Sc. Only 9% candidates had chosen it just to earn a degree in teaching and reserve it as a standby for rainy days.

Anand (1972) studied job satisfaction of 87 teachers of B.Ed. correspondence course and found that women teachers were more satisfied than men teachers. Young people did not find job satisfaction in teaching. Designations meaning better salaries and promotions give job-satisfaction. Academic career and attainments were not related to job satisfaction.

Srivastava and Palo (1970) studied occupational choices of high school boys in relation to their fathers' occupational level. The sample studied was from Bhubaneswar consisting of 218 boys of class XI. The results indicated that mean level of father's suggested occupation was at the highest. The boy's preferred mean occupational level was higher than their fathers' actual occupational level (CR significant at .001 level). Fathers' expectations about their sons' occupational placements were significantly higher than their sons' occupational choices as compared to their fathers' actual occupations.

Sharma (1971) compared cross-cultural occupational values of business management students from USA and India and found that Indian business students presented themselves as youngmen striving to get ahead in life - to be successful, to learn good deal of money and to ensure a secure future. They trust in human nature. The two groups of students were highly indential in their occupational goals and faith in people but differed in their 'choices' of means for achieving their goal.

Rao (1974) studied work value pattern of Indian medical students taking 394 students and found that an average Indian medical students had a work value pattern dominated by independence, social, creative and status values. Students from different colleges seemed to have similar value profiles. Inter-institutional variation was high with regard to certain work value dimensions such as rural, work, status, security, and co-workers and low with regard to certain other values as creativeness, independence and work conditions. The medical students were also found to have a high esteem for their profession.

Das and Sarkar (1970) studied the expectations of agriculture and science students from job. 687 students rated their preferences for different aspects of work including salary, security, responsibility, opportunity, nature of work, freedom, prestige and colleagues. Both the agriculture and science students had high preferences for good salary. No urban rural differences were found. Other important factors included: good colleagues, responsibility and opportunity for advancement.

Bose, Sinha, Chatterji, and Mukherjee (1970) investigated the interest patterns of 628 students in science, humanities and commerce streams at the higher secondary level. Significant differences were found between students of different means.

Pande's (1975) study of 183 students indicated that personality plays a significant role in the choice of a job. He compared extroversion and neuroticism groups for their job-factor preferences. The neurotic group considered holidays and leisure, good natured colleagues and sympathetic boss and security and stability in job as more important. Holidays and sufficient leisure and scope for showing authority and power were significantly different in terms of sex differences in high extroversion group. In high neuroticism group good natured colleagues and sympathetic boss, security and stability in the job and scope for showing authority and power were significantly different. While comparing the entire sample, holidays, and sufficient leisure, security and stability in the job and scope for showing authority and power were found important factors differentiating the groups.

STUDYING

Sandhu and Sinha (1970) studied the job preference between teaching, research and extension by 166 undergraduate students of 3 agricultural colleges of Punjab. The results indicated that research was the most preferred field by the respondents. Extension and teaching were second and third choice respectively. Perhaps these findings are true with most of the agricultural colleges. It may be worth investigating the reasons behind such preferences for research in agriculture. Kaul and Sohal (1973) studied the attitude of final year agricultural students to extension education. The students showed different attitude of final year agricultural students to extension education. The students showed different attitudes under different teachers, and these differences continued in a linear fashion, as teaching progressed. The communicator effects were significant in 15 out of 27 possible combinations of the groups. One teacher could be clearly demarcated as fostering the slowest growth of negative attitudes.

This study

points out to the impact of teachers on students in developing their attitudes to different aspects of their study materials .

In a study of 400 youth Sudarshan (1973) found that by and large they are lying latent and dormant and even their level of consciousness is quite at a low ebb. They do not know what they really want and what they should want. They are just marking time and have no high ambitions in life for themselves, for others, and for the nation. Whatever little consciousness and **urge** they have is only limited to immediate objectives like education, job or money. This state may be ascribed to the conditions of existing deprivations, ignorance, and attitude of indifference. Banerjee, Dutta, Chatterjee and Mukerjee (1970) investigated the interest pattern of deaf children. They studied 100 boys and girls of 14 to 18 years from two schools for deaf and dumb children in Calcutta. They used Chatterji's Non-language Preference Record (CNPR). The results indicated that the average of the scales for the group of deaf children were significantly higher than the corresponding averages for the normal school children on scales like fine arts, agriculture, outdoor sports and household work. The averages of the normal children were higher than those of the deaf children on the scales like scientific, medical and technical. Almost similar preferences were expressed towards literary work. Deb (1967) investigated interest pattern of high achievers in natural science course. The sample consisted of 395 students aged 17-18 years, who have passed higher secondary examination. They were from west Bengal. Strong's Vocational Interest Blank (modified form) was used and **t ratios were worked out.** The results showed that there was a definite pattern of interest among the higher achiever group of natural sciences course. They were interested in occupation and activities which required scientific knowledge and some proficiency in mathematical manipulation.

Ahluwalia and Mohan (1969) conducted a study of reading interests of rural and urban high school teachers. The results indicated that most of the teachers read newspapers and periodicals of general interest. Most of them did not read any book. Urban teachers read professional literature but rural teachers ignored it. All the teachers complained about lack of financial resources and were busy in family engagements. They also reported that their schools had no good libraries. Kansal (1971) indicated the following ways of inculcating extra reading among students. Libraries and reading rooms should be made more attractive and fascinating, facilities of drinking water and toilet should be forthcoming, the question papers in the examination should be library oriented, the teachers should introduce the new books to the students in their classes, discussions and review of important books should form a part of our tutorial and group meetings. Book exhibitions and book fairs should be organised.

Jamaur (1973) made an attempt to construct a study habits inventory suited for students. Out of 300 students 100 high and 100 low achievers were retained. Of 51 items 24 items were selected for final form. The inventory did not have predictive validity. The obtained reliability by test-retest method and by the random sub-test method were found to be very low. Thus it was concluded it can be reliable as a measure of group trends and can be assessed only as such. Jamaur (1974) found that some personality and background variables influence only study habits of students. He discusses the educational implications of his findings and suggests some remedial measures.

A research team from Tata Institute of Social Sciences studied 440 students' perception of social work. It was found that art and social work were preferred by female students while in medicine both males and females preferred social work.

Social work experience was found to be associated with social service leagues in colleges. Social work students formed a separate group and scored high in understanding the term social work.

Ramachandran (1972) studied students changing views on social work. For this purpose the first stage questionnaire was completed by 172 students, the second by 127 and the third by 107 students. Results indicated that they all placed the goal of solving social problems in the community at the top and the furthering of understanding between different communities at the bottom of the list. **Except** for the specialists role, the majority of them at each level of training tended to hold the same views.

Badami and Badami (1974) investigated the educational attitudes of 297 college students. The arts, science and commerce groups significantly differed in their attitudes towards education. Males and females also differed significantly on the same point. The female students expressed more favourable attitudes and male students expressed more unfavourable attitudes towards education. The arts group expressed favourable attitudes, the science group favourable and the commerce group was found to have more or less neutral type of attitudes towards each aspect of education. Sohal and Gupta (1972) investigated the attitudes of staff and students in Ludhiana towards trimester system of education. The staff and students were found to have either positive or undecided attitudes. In the absence of any favourable attitude, it was concluded that this system of education was accepted as desirable both by staff and students. **Attitude** towards the teacher is an important determiner of student learning. It may be expected that students learn more from teachers they like. But, how do students get to like or dislike teachers? Passi and Malhotra (1974) studied some dimensions of this question. His study on 8 teachers and their students revealed that the sex of the teacher had a significant influence upon the linking

of the students. Young teachers were more liked by students than old teachers. The trained teachers were also more liked by the students than untrained teachers. Young female teachers were liked by the students while old female teachers were at least liked. Boys liked the female teachers more while girls liked the male teachers more. Young, trained teachers were most liked and old untrained teachers were least liked. With increase in migration from one state to the other more and more students are required to study in schools where the instruction is in a language other than the one in which the child was socialized early. This bilingualism creates problems of adjustment in students. Rao (1974) has done a considerable amount of work on bilingual children. He found that bilingual children experience a considerable amount of difficulty in adjustment and the extent of their maladjustment is related to the extent of the second language attainment.

These studies indicate the lack of systematic work on students. There have been many studies on personality and achievement which are not reviewed here. These studies are in abundance and tell us the factors that are correlated with student achievement. More studies to answer questions such as, "what motivates students to join particular profession (medical, engineering etc.) rather than the other, how does he acquire the values, attitudes, skills etc. that are related to and required to perform the professional roles later? What are his aspirations during studenthood and how does these influence his student behaviour etc. are required. There are particularly no studies on these dimensions specially students of higher and professional education. Ramalingaswamy et al (1972) and Rao (1976) studied the medical students, their leadership styles aspirations, attitudes towards their profession and work-values. These are the only two studies on medical students from this angle. Rao's (1976) study indicated that

medical students do not value teaching and rural jobs from the beginning of their MBBS studies. They get socialized even before they join the college and college has very little impact on their work-values. Courses to impart such value based education were suggested in this study. This study also revealed that students look for urban living, private practice and financial benefits. They have a very high esteem for their profession which increases their interest in it. More such studies may be useful.

EDUCATIONAL ADMINISTRATION

An important role performed in educational settings is the administration of educational institutions. In our country we have at the Headmaster, Principals, Inspectors of Schools, District level Education Officers, Directors of Social Education, Extension Officers, University Deans, Directors, Vice-chancellors, Registrars and their office staff, and other institutional heads of academic institutions. These educational administrators constitute a significant population for studying as they play an important role in setting directions of movement for education in the country.

Some of the administrators have done very innovative work, introduced change, and managed it very effectively. No study is available to indicate how they operated, perceived their role and their environment and planned their strategies of work. A great problem the administrators face in their work is in relation to their rule-orientation. Some get so much obsessed by the rules of the institution that they

create more rules or make their role as managing faculty and students, from rule breaking. Some others are so machiavellian that rules for them are only hurdles to be crossed. Some innovative administrators have made institutions evolve a culture by their faculty that suits their institution and managed them effectively. Unfortunately there are no studies on the work behaviour of administrators. One study worth mentioning is on the institutes of management by Heyns et al (1973). This study points out some aspects of institution building behaviour. There is a lot of scope for research and experimentation in this area.

EXTENSION

Extension role is integrated into the agricultural universities. In this role scientists are expected to disseminate their research findings and educate the villagers so that the work done by the university is used. The state departments of agriculture have extension departments in different regions to perform this function exclusively. This concept of extension is also used in teacher training colleges and with the school systems. In some states, there are educational extension officers who are attached to the block offices in order to guide the primary school teachers.

While there is a lot of work done in agricultural extension which is reviewed later, there is no research done on the nature of educational extension as such.

RESEARCH

Research work takes away a significant amount of time in the educational settings. The number of researchers in various fields is increasing day by day. The feeling that the quality of research is decreasing is growing more and more. Recently many have started questioning the use of research as it is being done. How do people choose research topics, what satisfaction do they get, what motives or needs are satisfied, the patterns of their working, their involvement, their impact etc. need to be investigated. Reliability of research findings, the data they gather specially in rural areas needs immediate attention. For example data collected in family planning researches has been found to be generally unreliable. The researchers' behaviour may have something to do with these. Studies are needed in these directions.

The study by Chandra (1970) on 524 scientists working in research institutions and universities revealed that they are disappointed due to lack of promotional opportunities, social isolation, public indifference and lack of funds. Thus on one hand there is lack of concern to do quality research and on the other hand lack of facilities. It may be interesting to find out the work motivation of research scientists in different organizations under constrained conditions.

WORK BEHAVIOUR IN INDUSTRY

The second category of work relates to industry. There are various roles and jobs performed in the industrial sector. Workers, supervisors and foremen, managers, administrators, and sales personnel are some of the categories of people who predominate the industrial sector. Entrepreneurs who start industries also form a significant area of study. As the concept entrepreneurship has been broadened to include entrepreneurs from non-industrial sector, a separate section on them is included in this review.

Any researches on work-behaviour in industry should deal with issues such as the attitudes of people in industry to work their job-satisfaction, their aspirations, their productivity, commitment, performance patterns, factors affecting work, nature of work and so on. A great amount of work has been done in this area in the past as reported in the first ICSSR survey. There are some researches conducted in the past 5 years dealing with these issues. These are reviewed below for different categories of industrial personnel.

Worker Behaviour

Researches on worker behaviour in the past 5 years dealt with issues such as their attitudes to incentives, commitment and motivation, job satisfaction, factors affecting work, problems of workers and so on. Some interesting findings have been reported by these studies. One of these studies is on government employees and is included here for its relevance. As some studies compare workers with supervisors etc., they are also reported. Tripathi (1974) interviewed 1100 workers from U.P. The results indicated that permanent workers were more satisfied than

temporary workers; workers with high salaries were more satisfied than those with lower salaries; lower caste workers were more satisfied than the upper caste workers and the attitude towards economic incentives was positively related to their age. The level of incentives for urban workers were found to be higher than those for workers with rural background, although urban workers were less satisfied.

Singhal and Upadhyay (1972) studied employees perception of job incentives taking 110 (88 workers and 22 supervisors) and found that workers irrespective of their age, income, education, unionization etc. perceives the opportunities for promotions as the most meaningful incentives. While supervisors ranked competent and sympathetic boss and congenial team work as significant job security was important for supervisors. A significant positive relationship was found between the number of dependents and need for security and between n Ach and opportunities for promotion for workers ($r=.29$) and supervisors ($r=.23$) respectively.

Sinha and Agrawal (1971) studied job satisfaction and general adjustment of white collar workers taking 60 workers from government offices and found that workers who had more satisfaction tended to have better score on adjustment and those who were less satisfied were generally lower in their adjustment. Three areas of adjustment viz., home, social and emotional were positively and significantly related to job satisfaction. Those who perceived their job favourably were found to be more satisfied on job.

The highly skilled and unskilled personnel indicated that occupational level was an important variable in employees level of satisfaction. Rao and Ganguli (1971) studied 82 highly skilled and 95 skilled personnel and found that highly skilled workers were more satisfied than the skilled workers. It was also found that both motivators and hygines contributed to satisfaction and dissatisfaction of either of the occupational groups. But both the groups differed in their perceived importance of various

factors -- the hygienes being more important than the motivators for skilled workers.

Taking skilled, semi-skilled and unskilled employees, Paliwal and Paliwal (1974) studied need importance in relation to personal characteristics of industrial employees. Need for job security was expressed the most important need followed by need for signified behaviour. Third in hierarchy was the need of participation in personnel management. Need to work under a helping supervisor was ranked fourth and least one was housing facilities.

Apte (1971) studied textile personnel's perception of conditions affecting production. 148 persons were selected from a textile industrial organization industry all levels from managing directors to shopfloor operations. All the subjects were interviewed by unstructured interview method in order to achieve detail information. There was significant difference in the perceptions of conditions affecting productivity by people at different levels. The perception differences increased as the difference between the levels increased. The perception differences between the levels do not change whether the conditions were taken together, influencing company wide, implementing only the department. Productivity variation showed a good relationship with perception difference. Higher the perception differences between immediate levels more were the production fluctuations over the year. The relationship of above mentioned variables was more apparent at the shopfloor levels.

Sharma (1970) discussed the industrial workers' realities which was based on 5 empirical studies in different researches. There were some beliefs that industrial workers in India are migrants from rural area, unexperienced, illiterate and the proportion of non Hindus and lower castes was higher. In this

study none of these assumptions was correct. Thus the knowledge of their reality help management for man-power planning and efficient selection policies.

Singh (1971) studied hopes and anxieties of 270 industrial workmen in Kanpur, Uttar Pradesh. Of the 270 mill workers studied, 90 were from pro-management, 90 were from pro-union and the rest 90 from neutral groups. Interview results showed that all the three groups of workers had similar hopes and expectations—wages ranking first, working condition second and job security, seventh. Working condition was ranked as the highest factor in making things happy.

In a study of 126 workers, 22 supervisors and 9 managers drawn from 8 small industries of Hyderabad, Chattopadhyay and Rao (1970) found that the aspirations and worries of these industrial personnel centered round their economic situation, personal character, job and family. The present living of the workers was quite dissatisfying to them. The workers thought that they were better off in the past than at present, but aspired for a better future. In contrast the managers and supervisors rated their present as slightly better than the past and aspired for a much better future. No significant relationship was found between level of aspiration (measured through Centril and Free's ladder technique) and productivity (measured through a work sampling).

Mathuchidambaram (1972) studied 501 male non-supersory, blue-collar workers for commitment and motivation. Workers studied were rational, realistic and positive in their thought process and decision making. They were as much 'economic man and make mizers' as their Western counterparts, given the stage of economic development and cultural environment.

Singhal (1973) studied communication and job satisfaction of 88 workers from a flat type of organization. The general pattern of communication was found to be L shaped pattern.

Information mostly traveled downward and sideway and seldom upward. High communicators preferred interpersonal relationships over job success while low communicators preferred job success equally well but important to other groups.

Sharma (1971) in a study of company satisfaction studied 262 automobile workers in Bombay found that there was positive correlation between company satisfaction and other measures of satisfaction but the two seemed to be different phenomenon. Commitment to work was primarily influenced by the content of job while company satisfaction is shaped more by the extrinsic aspects of the job.

Rao and Ganjuli (1972) studied job satisfaction of highly skilled personnel taking 82 male draughtmen and technical assistants. They found that difference between motivators and hygiene factors were not significant on both satisfaction and dissatisfaction scales. However, the presence of motivators was found to cause satisfaction to a great extent than the dissatisfaction caused by their absence.

Singh and Agrawal (1971) studied 434 white collar workers for their job satisfaction and job behaviour in banking industries and found that education, marital status and number of dependance did not seem to influence job satisfaction while age, length of service and income were significantly related. The smaller the size of unit, the greater the job satisfaction. Job behaviour was related to the levels of organization.

Mukherjee (1970) factor analysed the scores of 30 industrial workers on four job-satisfaction indices. His study revealed that three job-related factors explain variance in job satisfaction. These include: management, achievement, and job involvement. No general factor of job-satisfaction has emerged and thus the job satisfaction has been conceived as multi-dimensional.

Joseph (1970) investigated differential perception of factors in job attitudes of 19 semi-skilled production workers in the press and metal shop of an electric heaters manufacturing company in Lancashire. The results revealed that the satisfied and the dissatisfied workers perceived the importance of the job factors in different ways. The ranking of the factors by dissatisfied workers was comparatively unreliable as revealed by low degree of concordance and stability in ranking.

Jawa (1971) studied 70 randomly selected semi-skilled factory workers for anxiety and job-satisfaction and found negative ($r = -.66$) correlation between these two variables. Differences were also significant for low and high and middle and high anxiety groups.

Raman (1970) studied factors effecting personal adjustment among industrial workers. For this purpose 295 workers (skilled workers, clerks & supervisors) from two factories at Bangalore were selected. Results indicated that among the three classes of workers, supervisors appeared to be the most satisfied. It was found that 23.50% of skilled workers, 20.65% of clerks and 30.00% of supervisors were suffering from neurosis and were less satisfied with their job and vice-versa. The mean social adjustment scores of the neurotic groups were larger and significant than that of the other group. The study showed a significant relationship (at .01 level) between efficiency and job satisfaction. All the correlations between absenteeism and neurosis obtained for all workers were significant and neurotics had longer periods of absence than non-neurotic workers.

Sharma (1970) studied occupational aspirations of 262 autoworkers of Bombay using interviews. Workers with high occupational aspirations were young, had high education, were Hindu, came from urban background, had much seniority in the company, earned high wages or had jobs providing high status.

B.R.Sharma (1970) studied the correlates of absenteeism among 262 industrial workers. His study revealed that personal factors like age, marital status, career orientation, occupational aspirations and certain background factors such as religion, caste, socioeconomic status, level of education and occupational background were not related to attendance behaviour, whereas the number of children, rural-urban background and occupational mobility patterns were related to attendance behaviour. No significant relation was found between attendance behaviour and social factors like political activism, community involvement, participation in voluntary organisations, and family integration.

Sinha (1974) after reviewing the existing literature on job satisfaction and job behaviour concluded no clear cut causative relationship between job satisfaction and different facts of workers behaviour could be drawn using result of many Indian studies. But it can be asserted that on a long term basis degree of satisfaction is likely to affect productivity of people and more particularly their absenteeism, labour turnover, adjustment to work.

The review of studies made by Dixit (1971) on employee motivation and behaviour revealed that the problem of employee motivation can be better understood if viewed in the context of individual with his personal needs, interacting against the demanding situation of the organization at a given point of time is governed by the following forces at play: (1) individual employee motivation; (2) influence of informal groups; (3) organizational climate; (4) immediate supervisor's style.

Nath (1972) proposed a behavioural programme for motivating the workers. Redefinition of job, responsibilities, alignment of jobs in lines of promotion, systematic training, developing better job skills and perspectives, improvement in managerial climate and better understanding may be used effectively to motivate the workers for doing better.

Besides the studies reviewed here an interested reader may refer to an interesting survey of some researchers relating to factors in the job-satisfaction of Indian workers by Dolke (1974) and the previous survey of industrial psychology by Sinha (1972).

SUPERVISION

Supervisors as a category of employees and supervision as a distinct aspect of industrial jobs has been subject to study in the past. A few investigators have attempted to assess the factors that contribute to effective supervision and work-motivation and job-satisfaction of supervisors. However, very little has been done to study the nature of supervision, various dimensions involved in it and the intrinsic job factors in supervision. Roy and Raja (1974) have summarised very well the studies on work-motivation of managers and supervisors. A majority of the studies they have quoted are from the past 5-6 years. From their review of the studies they observed that it is difficult to make out any reliable inferences about managerial and supervisory motivation in Indian industry because of methodological draw backs in these studies.

Singhal and Upadyay's (1972) study indicated that sympathetic boss, congenial team work and job-security are important for supervisors. In Padaki and Dolke's (1970, 1970a) study, recognition, achievement, salary, promotion, responsibility, and growth were named as satisfiers by supervisors (N=150). They mentioned that lack of recognition, unfavourable superior relations, lack of technically competent supervision, unfavourable administrative policy and inadequate salary as dissatisfaction.

Dwivedi (1972) studied 54 supervisors on MMPI scale for their performance level and found that performance level had a positive and significant correlation with scores of psychopathic deviate and depression. 10 MMPI variables contributed jointly toward 31 to 34% of the predictability of the supervisory performance.

Kulkarni's (1973) study of 80 middle level employees reveals that adequate earnings and job security are the most important incentives of these employees.

Supervisory attitudes and morale has very important role in the output of subordinates. The study by Pestonjee and Singh (1973) revealed that industrial morale was highest among the diploma holders. Interestingly the highly educated group had the lowest morale. Income, work experience and age had no relation to morale. As number of dependents increased, industrial morale was found to decrease. Marital status was observed to be a non-significant factor in industrial morale.

Dwivedi (1972) studied 30 private and 8 public sector industries to know the extent and status of supervision and problems of supervisors. For this purpose a questionnaire was administered. The results indicated that all respondents considered supervisors as management, better leaders and having responsibility of maintaining relationship with others. They were found to spend maximum time on supervisor than planning work.

While these few studies indicate the concern of investigators about supervisory jobs and the job-satisfaction in these jobs, these still remain largely as surveys. We still do not know clearly the distinction or a demarkation between a supervisory and a managerial job. Most managerial jobs also involve a great amount of supervision. If that is so the results of this section are equally applicable to managers and the studies

on managers may also be relevant when one talks of the supervisors. Certain amount of responsibility is understood or assumed when one uses the word supervision. How industries / ^{first} create hierarchies and then develop a knack of snatching away such responsibility from supervisors at lower levels and create frustration may be an interesting topic to study. Similarly ways and means of providing more autonomy to supervisors needs to be investigated. Gopalakrishna's (1973) study showing that first the supervisors are more satisfied in private sector than in public sector indicates a good starting point for investigating the reasons for such disparities.

MANAGEMENT AND ADMINISTRATION

Like the studies on workers and supervisors, studies on management have also tended to concentrate on the motivational aspects of the managerial roles. The studies on managers are a few more than the studies on supervisors. They also attempt to answer questions such as personality traits of executives in certain professional services like engineering, background of the managers, dimensions of their work-motivation and job-satisfaction, their orientations to life, their interaction patterns, training needs, performance correlates and appraisal.

Several general articles on managers are reported in journals like 'Indian Management'. While they are highly valuable those which are not research based and do not deal with managerial work directly are not reported here.

Deb (1968) studied 300 successful engineers for personality traits and found that certain traits are necessary for success in engineering, extraversion, dominance, absence of neuroticism, sociability, self-sufficiency, self-confidence and intelligence.

Subramaniam (1971) in his book "The Managerial Class of India" showed that it was the middle class who dominates the public services. They include a much higher proportion of mathematics, science, and engineering graduates than the higher civil service. There is a recognized proportion of foreign educated public school educated man amongst the most successful in the manager's class. Outgoing qualities like extra-curricular activities also predominate in the managers.

Deb (1972) reported that to engineers autonomy and self-actualization were important job factors than security need. To medical representatives security need was of prime importance, autonomy came next. It was also true for clerical staff.

Pestonjee and Basu (1972) studied job motivators of 80 executives and found that significant difference existed between satisfaction and dissatisfaction scores of public (N=50) and private (N=80) sector executives. Motivators were found to contribute significantly more towards satisfaction. No significant difference was found between the two groups for both the measures of satisfaction and dissatisfaction. The study only partially supported two factor theory of job satisfaction.

Rao (1972) studied intrinsic and extrinsic factors in job satisfaction of male clerical employees taking 60 male clerks and found that dimensional dependence was supported but variable independence among intrinsic (motivators) and extrinsic (hygienes) and their directional role was not supported.

Dhingra (1972) studied 265 public sector managers for participative predisposition of public sector managers and found that largest group of managers (41.5%) had a 'moralistic orientation' whereas only 38.8% had a pragmatic orientation. Only 16.25% of the managers had clear participative predisposition. Also more 'line' and multi-functional managers had non-participative predisposition than the 'staff' managers. Medium sized firms had merely

66% managers with a participative predisposition but in the small firms more managers had non-participative predisposition.

Gopalakrishnayya (1973) studied 100 managers from public and 100 from private sectors for their job-satisfaction and performance. They were classified into three groups: (1) department heads, (2) section managers and, (3) first line supervisor. Job satisfaction decreased from group 1 to 3 for the private sector whereas it increased from group 1 to 3 in public sector. Group 1 supervisors of private showed higher satisfaction than their counterparts in government organization. Supervisors of the private sector were significantly different in their attitudes from those of public sector. Job-satisfaction and job performance were found to be related with organizational factors.

Philip (1972) in a study of management training needs in a steel plant identified four areas of training: (1) management principals, (2) organisational behaviour, (3) industrial relations and (4) planning and control system.

Dhingra and Pathak (1973) studied 63 managers from partinomial and 99 from bureaucratic organisations and observed significant differences existed between the managers of the two types of enterprises. The two groups of managers came from different families. Both groups of managers also differed significantly with regard to their personal values and work related attitudes and their behavioural preferences to certain stimulated job incidents.

With the increase in the complexity of organizations new managerial roles are emerging which need attention. Thomson (1971) traced the development which ascribed new role to office of business establishments through the years. During second world war new roles of the office manager were recognised. They became information manager. A case for

specilization in office management has been advocated. The role of an office manager i.e. of directing remained the same but it became complex and complicated.

Chatterjee (1975) discussed the traditional and modern approaches of appraisal of the managerial personnel on the principle of job and worker analysis. It is argued that matching job requirements with personal characteristics will lead to expected performance. Managerial appraisal has to be more than merely procedural in nature.

SALES

Marketing is another important function performed in the industry. Researchers indicate a rather limited interest in this area. Sinha's (1972) review indicates that the few researches available on marketing function upto 1970 deal mostly with advertisement and consumer behaviour. No studies have been reported on selling by salespersons. Probably interpersonal selling has not been a subject of study as selling has not been a subject of study as selling had not been a problem in the past for a majority of the industries. **After** ^{emerging} the trend in changing. It is expected that researches on effective sales strategies and styles will increase in course of time.

Recently Rao (1975) has developed a laboratory exercise to experiment with different sales styles. Four sales styles (viz: product-centered, customer-centered, company-centered and self-centered) were chosen to study their impact on consumers with different need-orientations. Preliminary research by Rao and Misra (1975) on student as well as sales groups in laboratory settings indicate that certain sales styles can be identified as having more impact on customers with different

dispositions. For example product-centered sales style was more effective with customers needing the product least while company-centeredness was found effective with customers having a high need for it. Customer-centered style was found to be uniformly effective.

4 WORK BEHAVIOUR OF ENTREPRENEURS

Self-employment is a need of the day for the progress of a developing country like ours. Various agencies have started encouraging entrepreneurs to come up. A great amount of developmental efforts are being put up for them. There is an increasing amount of research in this area and the past five years is a definite indicator of this trend. These researches have been attempting to answer questions like "how do entrepreneurs behave?" "What motivates a person to be an entrepreneur?" "Can entrepreneurs be developed?" etc. Some of these studies have been covered in the chapter on social change. Those studies dealing with entrepreneurial behaviour, and indicating the facts that contribute to entrepreneurial effectiveness are reviewed here.

McClelland (1961) has shown that n achievement is an important motive in leading any individual towards entrepreneurship. Like a high n achievement persons, entrepreneurs have been found to take moderate and calculated risks, assume personal responsibility at tasks they undertake look for feedback and gain from such a feed back. Researches conducted in our country on entrepreneurs have also attempted to test these and a few other behaviours of entrepreneurs. The new researches available are on small scale industry entrepreneurs or an agricultural entrepreneurs. In the agricultural sector, progressive farmers are often identified as entrepreneurs.

Singh (1969) studied the n achievement of progressive/traditional and successful/unsuccessful farmers in border villages

of Delhi (N = 80). He used thematic apperception test to measure this need. The results indicated that the progressive-successful farmers have high \bar{n} achievement than progressive unsuccessful, traditional successful and traditional unsuccessful groups. In the same study of agricultural entrepreneurs Singh (1970a) found that progressive successful agricultural entrepreneurs had a positive rating of their economic progress, likings for their present occupation, preference for agriculture as a profession for their sons if they so desired, a positive attitude towards modernisation and individual farming for the growth of agriculture in this country in comparison to traditional than unsuccessful agricultural entrepreneurs.

Singh and Singh (1971) in a study of motivational components of agricultural and business entrepreneur from Delhi area taking 80 successful and unsuccessful entrepreneurs found that the progressive successful agricultural entrepreneur showed high \bar{n} Ach scores as compared to other groups. No relationship was found between traditionalism and risk-taking behaviour. By and large failure was associated with anxiety among agricultural entrepreneurs—the traditional failed entrepreneur being more prone to anxiety than the progressive failed ones. Failure did, however, act as a deterrent on the risk taking behaviour.

Singh and Singh (1972) studied 80 agricultural and 80 business entrepreneurs from Delhi. The business entrepreneurs showed high risk taking behaviour as compared to agricultural entrepreneurs. Various categories of entrepreneurs (business) did not exhibit any difference in their risk taking scores, whereas their counterparts in agriculture did differ.

Christopher (1970) investigated the socio-psychological factors influencing the starting of a small industrial unit. The study was conducted in 1964 in Hyderabad and Secunderabad and the sample

consisted of 72 entrepreneurs. The results indicated that age, education, monthly income, rural-urban backgrounds, past experience, level of aspiration, need for achievement etc. were the factors associated with the individuals influencing the innovations in industrial units. Economic gain, our ambition, social prestige and social responsibility were found to be the reasons for starting of small industrial units. High demand for the products, experience in the line, friends and family are perceived as encouraging, and capital shortage, governmental red-tape were discouraging factors. In the adoption process, most of the respondents passed through the stages of awareness, evaluation and adoption.

Nandi (1973) in a study of entrepreneurial culture and entrepreneurial man reported that predictors of entrepreneurship differed from situation to situation. It also appeared that in an enterprising community, entrepreneurial exposure (father and family) contributed substantially to entrepreneurship. Father's entrepreneurship was found to be correlated with son's n ach, which on its part predicts entrepreneurship.

The researches by Nandi (1973) and Javillonar and Peters (1973) indicate that while n achievement may accelerate one to become an entrepreneur, it need determine whether he will be a successful entrepreneur. Factors dealing with successful entrepreneurship have been found to be different than those associated with entry into entrepreneurial work.

Rao et al (1975) studied the psychological factors associated with successful entrepreneurship taking 9 successful and 6 unsuccessful entrepreneurs. This study indicated that adequate planning behaviour and financial management were helpful in leading to successful entrepreneurship. No definite attitudinal differences were found in the two groups of entrepreneurs. An analysis of the case histories of these entrepreneurs

validated the developmental modal proposed by Rao (1975) for entrepreneurs. According to this modal entrepreneurs pass through identifiable stages of development where each stage leads to another. For example need, long term involvement, acquisition of resources, and support from the sociopolitical system have additive effects in moving a person towards self-employment, while a crisis may help him make a final move. Shah et al (1976) have developed an instrument to measure the entrepreneurial work behaviour. This interview schedule assesses the entrepreneur on his consideration of alternatives before decision-making, use of information sources, clarity of goals, achievement orientations, expansion-orientations and operations management. These dimensions have been found to be highly interrelated. Another important set of researches in this area deal with the impact of motivation training programmes on the development of entrepreneurs. Following the classical work by McClelland and Winter (1969) who demonstrated that achievement motivation labs can go a long way in creating entrepreneurs and enhancing their entrepreneurial behaviour, there is only one systematic study concluded recently. This study by Rao et al (1975) assessing the impact of achievement motivation labs of the Gujarat entrepreneurial development programmes used the concept of entrepreneurial movements. This concept developed by the author meant any occupational move in the direction of gain to the subject. The study revealed that those who had achievement motivation training showed more entrepreneurial movements than those who did not have such training.

Christophar and Jaiswal (1972) had discussed the development of entrepreneurial motivation through training programmes. They reported very encouraging results obtained through the training programmes.

Thiagarajan (1972) put forward the thesis that entrepreneurship can be motivated either by tapping the existing potential or by creating new entrepreneurial potential. This can be done with the help of developing some tests and other methods to identify them. He also suggested some changes in educational system and child-rearing practices to obtain this. Sharma (1973) has discussed more details of entrepreneurship in India.

This brief review reveals that the past few years have experienced a good amount of research on entrepreneurship. This is likely to grow in the near future and it is hoped that psychologists may contribute a great deal to this area.

5 HEALTH AND FAMILY PLANNING WORKERS

A great number of people are employed all over the country in the department of health and family planning. Doctors, nurses, paramedical personnel, social workers, family planning extension workers, health assistants, health administrators etc. are some of the categories of employees. Various national programmes have been running in the past to increase the health status of people and contribute to their development. There are national needs like increased requirements of doctors to work in rural areas, increasing the effectiveness of family planning workers, eradication of communicable diseases etc. We find that doctors are not willing to work in rural areas and the family planning workers have not been able to make a mark. The recent great achievement in the field of health seems to be the eradication of small pox. To what extent this is due to the strategy, infrastructure, resources and to what extent is the contribution of the various health personnel to achieve the zero point in small pox is yet to be assessed. The experience which is being documented may throw light on the behavioural dimensions of work in such national programmes. Significant contributions have been made in this area by social scientists working in the National Institute of Health Administration and Education (Timmappaya et al 1971 ; Agarwal 1973, 1975 ; Chattopadhyay and Agarwal 1976, 1976a). Timmappaya et al (1971) studied the organizational dynamics of hospital system of which the role dynamics of different categories of workers formed an integral part. A detailed study of the role perceptions and

work-motivation in hospital staff was done by Agarwal (1973). He presented a model of work motivation which takes into consideration the linkages between the society, self, role and status as influencing variables of work-motivation. He studied a total of 200 subjects including doctors, nurses, nursing orderlies and sweepers in Delhi hospitals. Self role perception was found to be greater in lower category roles. With increase in status of a role the distance between perception of self-role by incumbents and others in social system decreased. Six factors were found to explain variance in work-motivation. Dependence factor accounted for highest variance in each group of employees. Material incentives, job situation, intrinsic motivation and work group relations were found to be the other important factors in work motivation of hospital staff. In an earlier study Madan (1972) studied 37 registered medical practitioners of Ghuziabad. His interviews with the doctors as well as with 500 people of that town about doctors revealed that the doctors self-image is not shared by the public. A great majority of the public however, felt the doctors as useful. Private practitioners looked upon others as competitors.

Timmappaya and Agarwal (1972) hypothesized that the perceived hospital status in the community will have relationship with employee morale which is a significant dimension of work-motivation. Since the findings from the studies at NIHA have important conceptual implications, these are also dealt with in some detail while discussing work-motivation in later sections.

Besides these studies there are very few systematic studies on health workers. A few studies on family planning workers have been conducted by the National Institute of Family Planning. These few studies deal with the attitudes

of family planning workers to the family planning, abortion etc. rather than having to do with their working patterns (Pareek and Rao, 1974). The status review of behavioural sciences researches in population by Pareek and Rao (1974) lists a number of studies dealing with family planning.

With the India Population Project being launched by the government of India management training institutions are being increasingly involved in researches and experiments in the area of population dynamics. Contributions to the psychology of work are expected from the management experts in future. It must be mentioned that a few studies have already been started assessing the roles of various health personnel and experiments are being conducted to induce dynamism into some of these roles. For example, in one survey by the author (Rao, 1976) family planning workers have been found to lack completely any motivation to work, they had a sense of powerlessness, helplessness and lacked any skills of interpersonal communication. They had no faith in their own department and their policies and have developed various mechanisms of beating the system. A training programme to reorient them to their roles was felt extremely helpful but long term impacts of such training was questionable in view of their deeprooted attitudes.

A few studies are available on nurses but most of them are in the form of master's dissertations in a nursing school in Delhi. There has been a common belief that nurses spend most of their time in nursing activities than non-nursing activities. This common belief was challenged by Thomas et al (1972) in their study of nurses. Ward sisters ^{were found to} spend most of their time on clerical work. Health education, meeting spiritual and mental needs were the ignored areas by the personnel.

More researches on nurses may be helpful. ANMs as a category in rural areas also needs to be studied. Kerala contributes a great deal to the nursing population. Kerala nurses are employed in several places in North. Their work-orientations, problems and frustrations need to be studied. Community perception of this group may also throw insights about their working pattern.

Patient satisfaction and ward social system was studied in depth by NIHAE team (Timmappaya, A. et al; 1971). Patient satisfaction was high in 'good' and 'low' in bad hospital. Food, communication of diagnosis, discharge policy and behaviour orderlies and sweepers were variables of dissatisfaction. Literacy, good relation and length of stay were related to satisfaction. Doctors felt governmental interferences in their activities.

Neumann, Bhatia, Andrus and Murphy (1971) studied the role of the indigenous medicine practitioner (I.M.Ps) in Kerala and Punjab. For this purpose 72 I.M.Ps and 542 patients were selected. Interview and observation methods were used for data collection. It was found that the training of I.M.Ps was extremely varied. They treated all types of illness and were well regarded by the villagers. Many used modern medicines and injections.

Bhatia et al (1973) studied indigenous medical practitioners and their attitudes toward the proposed rural health scheme and found that younger practitioners below the age of 25 years were more willing as compared to the older age group. Those who had longer experience in profession, higher income and higher patient. Work load were not keen to participate in the scheme. More researches in health are expected in future that they throw light on issues unique to this profession. Behavioural dimensions of health people need to be studied in depth. One such study is on way at the Gandhigram Institute of Rural Health and Family Planning. This study may throw more light on the working patterns in primary health centres.

6 AGRICULTURE

The past decade has experienced an enormous growth of behavioural science researches in the area of agriculture. With the increased use of psychologists and other behavioural scientists by the agriculture faculties, particularly the extension departments behavioural science-oriented researches have increased. Perhaps agriculture is one area where behavioural science research has made a quick impact in a brief period of time. The challenge was in the situation requiring the agricultural scientists not only to be innovative in developing new farming practices and high yielding varieties but also in transferring the technology from the institutions to the rural farmers. This necessitated the study of farmers their values, attitudes to new practices, receptivity, effectiveness of different communication strategies, the work-behaviour of extension agents, characteristics of easy and quick adopters, factors contributing to adoption of innovations etc. Researches in this area in fact do center round these dimensions. The different researches in the form of thesis and reports in the extension departments have been listed by Singh et al. (1974). Singh (1970) has also presented an excellent review of the studies in communication. This section deals first with the studies on the acquisition of work-related information by farmers, followed by studies dealing with their attitudes, values and personality characteristics and then the factors associated with adoption of agricultural practices.

FARMERS

Acquisition of Work-related Information:

Quite a few researches are available dealing with the acquisition of agricultural and other information by farmers. A majority of them deal with the radio-listening habits, effectiveness of other mass communication strategies etc. and factors associated with the acquisition of such information by farmers. Radio and television have played a significant role in educating rural farmers. Bhandari (1970) studied the radio-listening habits of the villagers around Najafgarh. The study revealed that a majority of them purchased radios for news or recreation; 85% kept these sets at home; and a majority listened for 1-2 hours daily. Vividh Bharati, news and Haryana programmes were the popular programmes with the respondents.

Singh and Sandhu (1970) studied characteristics and listening behaviour of the radio owning farmers in Punjab taking 260 farmers. Majority of radio owning farmers had high risk preference, economic motivation, socioeconomic status, closeness with extension workers, large farms and relatively less social participation.

Singh and Sandhu (1974) studied 260 radio owning farmers about the programme preferences on farm broadcast and found that group cultivation, daily farming hints, weather forecast and market reports were the best liked aspects of the farm programme.

Sinha (1970) conducted a study of motivational factors in diffusion of farm information through television. For this purpose 96 farmers were selected of which 42 were televiewers and 54 non-viewers. Farmers having high n achievement acquired more knowledge from the farm telecast, but the acquisition of knowledge was significantly higher when they were provided more information through television. Socioeconomic status and education did not make any significant difference in their amount of knowledge.

Sinha (1975) studied the role of TV in diffusion of farm information with respect to motivational aspects. Farmers' n Ach. and change proneness were found to be largely responsible for their interest in TV.

Thus these studies indicate the possibility that it is the progressive type of farmer who benefits relatively more from the mass programmes. The less progressive one is less attentive while the impact of these programmes is in the desirable direction, strategies for influencing small and less progressive farmers may have to be tried out. The results of the experimental settelite programme are awaited and they may throw significant light on the mechanisms of influencing the work-related knowledge acquisition by farmers.

Patel and Patel (1970) studied the behaviour of 275 farmers in an agricultural and agro-industrial exhibition. Personal observation revealed that both literate and illiterate farmers took the literature distributed on different stalls and most of the farmers visiting exhibition were from 30 kilo metres radius. On an average a farmer spent 90 minutes in the exhibition. Small farmers spent less time than the big farmers. One third time was spent on farm machinery stall and one fourth on agricultural development.

Prasad and Sinha (1971) also studied farmers' characteristics and information source in the adoption process and found that size of land holding had no significant relationship with the use of different categories of information sources. Age, education etc. have significant effect on final decision.

Prasad and Sinha (1970) in their study on agricultural technology and farmers drummers found that farmers had been very selective in the use of different media of information and in adopting selected agricultural innovations and the first three important sources of information were obtained from the relatives and family members, farm neighbours and the village level workers.

Gaikwad and Verma (1970) studied the role of elected leaders as key communicators of agricultural practices. They studied 526 leaders and 540 nonleaders drawn from 135 villages distributed all over the country. Results of the survey indicated that a high percentage of leaders (55) and other farmers (44) directly depended upon the government functionaries. Farmers did not depend on any single source of information. The sources varied from practice to practice. Leaders having comparatively high contact with change agents high degree of social participation, high urban contact large land holding, high agricultural income, and high education had larger number of sources available to them.

Shukla (1970) in his detailed enquiry about the programmes in 10 villages of A.P. found that there was appreciable consciousness among the cultivators for the use of manures and fertilizers. His study also revealed the main problems restricting the active participation of the people in developmental programmes. They are lacking knowledge and non-availability of chemicals, lack of proper interest and enthusiasm on the part of the extension staff to create a sense of participation in the family community and inadequate supply of inputs by the block.

A few studies on characteristics of farmers are also available. Some of these have been already cited in the section on entrepreneurship.

Taking two highly developed and two under developed villages Sinha and Chambey (1972) found that developed villagers were high on n Ach than the old group of under developed villages. The younger age group of underdeveloped villages were high on n Ach than the old group of under developed villages. The younger age group of underdeveloped villages were high on n Ach than the old age group of the same villages.

Another study by Singh and Pal (1974) of 100 farmers from progressive and non-progressive farmers revealed a high correlation between n Achievement and socioeconomic status. Villagers from progressive villages had a high n Ach than those from the non-progressive villages. Education was related to n Ach while land size did not show any association. In another study by Sinha and Tripathi (1972) factors like education, income, and size of holdings of the farmers revealed statistically significant correlation between aspirations and personal variables. It appeared that the above personal variables were responsible for developing the level of aspirations among the farmers.

Kakkar and Sohal (1974) studied 200 farmers for their association of certain personal characteristics of farmers with their attitudes toward soil testing and found that respondents younger in age, higher in education, medium size holding carried more favourable attitudes toward soil testing than others.

Sinha and Mehta (1972) studied 42 farmers who happened to view the telecast programme on community TV sets. Varying levels of education did not show significant difference in farmers levels of n Ach. and change proneness. Middle level landholders showed greater motivation to achieve and greater readiness to change than both the smaller and bigger land holders. Landholding and age did not show relationship. Age was found to be an important variable for young farmers and size of land holding in case of older farmers.

Dave and Koushnamurthy (1973) studied motivational levels and risk taking of small farmers (N=400) of Mysore district and found that virtually there were no differences in risk taking behaviour of the farmers with low n Ach and those with high n Ach.

Singh and Sohal (1970) studied the value-orientations of 150 farmers from 15 villages of Punjab. The study revealed that the farmers of these area are more progressive and are quite agreeable to accept changes. Highest mean score among the five

value orientations studied is of progressive outlook and the lowest is of dignity of labour. Second, third and fourth place is of economic gain, achievements of goals and willingness to take risk respectively. This implies that the farmers of this part of the state have progressive outlook which motivates them to adopt new and improved farm practices for economic gains through achieving their goals of obtaining higher yields.

Supre and Sanorkar (1970) studied the work-values of 236 farmers and 100 agricultural students from Vidarba region of Maharashtra state. The results indicated that the agriculture students had high economic motivation than the farmers. Students also placed high value on scientific methods. Both the groups preferred independence to the same extent.

Thus, these studies indicate that variables such as age, education, place village status in progressiveness, value-orientation, need achievement and exposure to mass media are some of the important variables in agricultural work-behaviour. Studies on adoption of agricultural practices throw further light on the factors associated with farm effectiveness.

Sohal and Khosla (1970) developed and tested out criteria for identifying acceptors and rejectors. Their criteria are useful in identifying shy, cautious and reserved type of adopters.

Sohal and Prasad (1970) studied 83 farmers of Ludhiana district for the reasons associated with non-adoption of artificial insemination. The non-adopting farmers stated that artificial insemination was against nature. Low extension contact, no key village centre in nearby villages, and too many failures were found to be some reasons.

Patel and Singh (1970) investigated differential characteristics of adopters and non adopters of farm planning in Gujarat. The results indicated that farmers with larger size of holdings, more irrigational facilities, higher socio-economic status, higher

socio-economic status, higher education, higher caste, farmers having permanent labourers and higher understanding of farm planning adopted farm planning in significantly greater numbers than otherwise. Age and fragmentation of holdings were not found to be differentiating characteristics between adopters and non-adopters of farm planning.

Lakshminarayana (1970) in a study of 120 farmers of Mandya district, Mysore, examined the factors differentiating adopters of agricultural practices from the non-adopters. Farmers holding land between three to seven acres were studied. Socio-psychological attributes such as materialistic outlook and investment-proneness did not provide a basis for distinguishing between the two groups. Only educational aspiration for children and urban pull were found to be significant. Besides these, education exposure to mass-media and urban contact were found to be important characteristic of adopters.

Jaiswal, Singh and Singh (1971) studied innovativeness of 100 farmers and found that education, farm size, contact with extension agency, cosmopolitaness, risk taking and attitude toward change had significant and positive correlation with innovative behaviour.

Impact of package programme was studied by Pathak and Dargan (1971) taking 100 respondents from West Bengal. The adoption of practices was found to be associated with the intensity of the programme works. No association between the adoption of these practices and farm size was found.

Chattopadhyay (1963, 1974) studied some psychological correlates of adoption of innovation in farming. Results indicated that almost three-fourth of the farmers were low adopters, rest were medium-low adopters, with a few as medium adopters. The farmers had varying attitudes towards change. It was found that a small number of respondents had high

aspiration in each of the areas under study and the majority had low level of aspiration in different areas. Regarding value orientations they were/general more intented toward conservation, were neither strongly scientific, and held non-authoritatian values. Adoption behaviour was found to be significantly correlated with change-proneness, level of aspiration conservation, fatalism and anthoritatianism.

Singh and Sinha (1970) studied farmers' characteristics and the patterns of decision-making process in the use of artificial fertilizer and vegetable cultivation among 142 farmers from two villages of Kanjawala Block of Delhi territory. They studied the pattern of decision-making at 4 stages namely (a) all steps followed, (b) all steps except one followed, (c) more than one step skipped over, and (d) made negative decision. The results indicated that age and caste of farmers had significantly influenced decision making on both the practices. Size of holding and social participation had influenced the pattern of decision-making process of artificial and vegetable cultivation respectively. Other characteristics had no significant influences.

Prasad and Yousf (1973) in a study found that both economic resources and attitudinal factors were important for acceptance of agricultural innovation, but the economic factors being more powerful than attitudinal. Land holding and modernity were significantly correlated, while religiosity was independent of innovation acceptance and economic resourcefulness.

Dubey (1970) in a study of 600 villagers from 60 villages found that older age, higher education, large size of the family better financial position and large size holdings were found related to adoption of four selected improved farm practices. Adoptors were satisfied with new innovations whereas non-adoptors were dissatisfied about their usefulness.

In a study of 220 farmers of Midnapur district, Das and Sarkar (1970) found that the farmers adopted the farming practices only for the economic gains. The socio-cultural factors influenced the farmers to adopt it and favourable attitudes towards improved farming practices were found related to high economic motivation.

Rajendra (1973) in a study of socio-economic status and adoption pattern found that adoption index and economic status was positively and statistically significant for scheduled caste and high caste groups. Educational also showed significant positive relationship to adoption pattern. Size of holding was related only for backward and high class people.

Das, Chakrabarty and Gupta (1973) studied 196 Muslim cultivators and found that adoption behaviour of farmers in the field of health, family planning, and home innovativeness may play an important role in enhancing the agricultural adoption behaviour of the farmers.

In a study of incentives of adoption behaviour, Rajguru and Satapathy (1973) found that educated farmers, family size, aspiration for children's education and advising ability of the farmers were significantly related to adoption attitudes of respondents. Other variables like caste, type of family, membership of an organization and newspapers reading habit had no effect on adoption behaviour.

Pandey (1973) in his study of 224 cultivators from 16 villagers of Bhagalpur district found that religious knowledge was a source of material for development of beliefs and practices—but the process of translating knowledge into beliefs and practices are influenced by many socio-psychological and other external factors. Hindu religion still comes out to be a critical factor for economic life in India.

Patel and Kale (1972) presented an analysis of the training needs of farmers on the basis of their study of 302 farmers. A majority of the farmers had a training need in subjects like use of fertilisers; pests and diseases, and their control measures, soil analysis and improving soils; preparatory tillage; various animal and poultry diseases; and curvative measures; and types of feeds or concentrates and their recommended ration scale.

Supe and Singh (1975) presented a modal of rationality in decision-making of Indian farmers in their book on "Decision Making Among Indian Farmers". This modal may help to extension teachers to understand the factors associated with rational behaviour of Indian farmers while adopting new technology as the quality of selection decision depends upon rational behaviour. If the diffusion of technology is to take place among farmers, it is necessary that change agent should understand the process of decision making of farmers and help them in making a rational selection of means in order to attain maximum profile.

Sinha (1974) studied 137 farmers of two villages of the Kanjhawala block, Delhi territory. The results indicated that age, family, size, prestige, educational status, farm size, value orientation and formal social participation of the farmers were significantly related to each stage of the adoption process. No significance difference was found between educated and illiterate in awareness interest, trial and adoption stage. The two former groups were significantly superior to the illiterage group in all stages of the adoption process. There was no significant difference between the mean scores of traditional and highly traditional groups in any of the stage.

Mbulik (1975) observed from the researches during 1960-70 on Kanjhawal block villagers that they were favourably committed towards farm innovations. However, their commitment was deterred by unhappy past experiences and high expectations. Caste, high status, attitude to innovations, knowledge about innovations, closeness with extension agents etc. were found to be associated with their adoption behaviour.

Mbmi and Sohal's (1975) study of 200 farmers indicated that low risk was an important factor in adoption of innovations while cost was found to be least important. Non-compatibility and complexity were also found to be important reasons for their non-adoption.

The process of adoption is discussed by Sinha & Mehta (1971). They argued that awareness is not a stage in the process of adoption. Adoption starts only after awareness. The first distinct stage after adoption starts in the acquisition of information about the innovation. N Ach coupled with change proneness is not a stage in the process of adoption, but a pre-requisite for the process to start.

Singh (1974) discussed the theories of diffusion and regarded as the theory of modernization at analytical, theoretical and explanatory level. When these two are combined we have a theoretical framework which is more powerful in so idiological terms which provides answer to the total phenomenon of socio-cultural change.

The various studies on adoption conducted in different parts of the country indicate somewhat of a definite trend of results. The essential factors influencing work-behaviour of farmers seem to be the availability of knowledge on new practices and new work-patterns. Extension agents, local leaders and mass media seem to play a significant role in contributing to the knowledge of farmers. However, the impact of small educational efforts are differentially received by different farmers depending on their background, attitudes

socioeconomic status. Their attitudes to various aspects of life, personality, need achievement and value-orientations have been found to influence their dispositions to learn and benefitted by these programmes. When the actual adoption behaviour is taken background variables like socioeconomic status, nature of the farming community, urban contacts, education, availability of mass media, attitudinal variables like modernity orientation, cosmopolitaness, overall modernity orientations, attitude to change, investment proneness and motivational variables like need achievement, educational aspirations for children etc. were found to influence their adoption behaviour. Perhaps the analytical modal presented by Pareek and Rao (1974) in relation to the population research holds good equally for agricultural research. In this modal individual variables, family variables, community variables, agency variables, communication variables, practice or work characteristics etc. form different chunks of variables predicting adoption behaviour. Like in family planning research, agriculture research also is extensive in studying these variables. Perhaps researches in agriculture are more systematic than in family planning. It is time that scientists in this area take stock of the researches and start posing new problems than to keep on beating the same track.

7 DEVELOPMENT WORKERS

Development workers play an important role in rural development of our country. Various developmental roles have been created in the past by the government out of concern for the development of rural areas and other underdeveloped regions. Roles like the Block Development Officer, Agricultural Extension Officers, and village level workers, play an important role in contributing to development. Besides these, other government officers like the civil servants and other administrative officers play equally important and responsible role. A few researches have been done on these workers and their work-behaviour. One would expect that the researcher would again investigate the nature of these roles, scope offered by these roles to do innovative and challenging work, work-stress experienced in these roles, scope for experimentation by these workers and factors contributing to the role effectiveness of employees in these categories. However, much of effort has gone into the study of role perceptions and job-satisfactions of these employees. A majority of these studies have also attempted to study the factors contributing to the effectiveness of these workers. Some of the studies available are presented below.

VILLAGE LEVEL WORKERS

The village level workers (VLWs) are attached to the block office and have the role of facilitating development in villages allotted to them. He is the 'doer' in the sense that he is actually in touch with the villagers, and keeps helping them through distribution of fertilizers, giving advises and participating in other developmental schemes. Success of the developmental schemes depend to a large extent on them due to their mediatory role between the farmer and the development office. There are atleast a dozen studies available on these roles. The National Institute of Community Development at Hyderabad has been doing a lot of work on these roles. Mehta (1970) investigated the role of the village level workers in Rupar block in Punjab. The upper socioeconomic group of villagers perceived the VLW as a key communicator about the activities of block development and panchayat samiti. The upper-middle and middle socioeconomic groups are stated as the greatest beneficiaries of VLW's activities. The lower socio-economic group looked upon VLW as an adviser and guide. Villagers expressed greater tendency on the part of the VLW's to work more willingly with rich, agriculturists and youth.

Dudhani (1970) interviewed 97 Gram Sevaks from seven community development blocks of ponna district to investigate their social participation. Effective Gram Sevaks guided and participated more in voluntary organisations, and developmental projects. The effectiveness of the Gram Sevaks and their social participations were found inter-related.

Patel (1972) studied the work behaviour of 222 VLWs from Surat and Mehsana districts of Gujarat. The results indicated that VLWs judged to be 'more effective' used film shows, posters, communication channels, etc in disseminating information about

improved farm practices to a significantly greater extent, than those judged to be 'less effective'. They were also judged to be 'more effective' used various items of procedures assumed to be essential to effective execution of various channels to a significantly greater extent than those judged to be 'less effective'. There was no significant relationship between communication effectiveness and order in the use of various channels in initial and later stages of promoting behavioural change. Findings indicated that greater the number of communication channels employed by a VLU, greater the likelihood of his being effective as communicator. The more personal the form of communication the more impact it has in influencing farmers to make changes in farm practices behaviour.

Saigaonkar and Patel (1970) studied the factors contributing to the success of gram sevaks in Kaira district of Gujarat state. Their investigations revealed that the success of gram sevak was related to his age, dress, caste, rural background, duration of pre-service training, number of villages served by him and the monthly visits of block officials to his circle area. No significant difference was found when the successful were compared with the less successful on their mental status, physical height, the type and number of alternatives available to them while joining this job, level of education, training background, previous experience, tenure of service as gramsevak, location of their house in the village, weekly visits to non-headquarter villages, average daily working hours, and the distance of the headquarters villages of the gramsevaks from their respective block headquarters.

Shetty and Murthy (1970) surveyed determinants of job effectiveness of 121 gram sevaks. Caste and intensity of training undergone in technology were found to be two major factors contributing to their effectiveness.

Tripathi, Dubey and Srivastava (1970) studied the attitude of 100 Gramsevakas towards community development programme. The results indicated that out of all aspects of community development programme included in the study, the attitude scores of Gramsevakas were above average as regards interpersonal relationship, concept, principles and philosophy, their role perception, extension teaching methods, programme contents and people's participation whereas their scores were lower than average as regards working conditions, programme planning, research in agriculture, adoption of practices and programme evaluation. However, the attitude scores showed a leaning trend towards neutrality.

A study of attitudes of trainees in refresher and higher centres revealed that the influence of instructors on their students was the main cause of the differences in their attitudes (Ramasomayalyu and Somasundaram, 1972) toward curriculum. Training had an impact on their attitudes.

There are a few studies on job satisfaction of village level workers. Kolte (1972) first time test the dual factor theory of Herzberg taking 100 VLWs. He found that a satisfaction and dissatisfaction were not necessarily distinct and separate. The VLWs were not satisfied with their dual roles, targets, unfairness of policy and administration etc. As promoters of change, they were wedded to the use of democratic and educational means for producing desirable changes in the behaviour of people. It was felt that VLWs should not be involved in the activities of collection of revenue.

Prasad and Sandhu (1974) studied the communication skills of village level workers of the Panjab state (N=144 VLWs) and found that majority of VLWs had 'medium' level of communication skill. VLWs from rural area were found to have larger contacts with information outlets, high, sociability score and higher contact with farmers.

The exact role performed by the VLWs need to be investigated as questions about improper use of their services have been raised by a couple of researches cited earlier. Experimenting with new roles they can play and the linkages they can establish with other potential roles such as teachers in the village etc. need to be investigated.

AGRICULTURE EXTENSION OFFICERS

AEOs are attached to the block development office and their role is focussed at helping the villagers in agricultural matters. Educating villagers in relation to new agricultural practices, collecting statistics, distribution of high yielding varieties, fertilizers and giving advise are some of the functions they are supposed to perform. With passage of time this role seem to have assumed less significance than the scope it offers. Probably a great amount of their time is spent in office work, and collection of agricultural statistics. They feel probably so powerless that they do not seem to be enjoying their jobs. Very little research is available on these roles. More investigations are needed.

Reddy and Patel (1972) studied characteristics of agriculture extension officers (AEOs) in eight districts of Gujarat. For collecting the data a structured mailed questionnaire and personal visits were used. It was found that more effective group of AEOs used group meetings, discussion, crop competition, office calls etc. than less effective AEOs. The offices of 30 to 40 years of age were judged more effective than those of

any other age group. Promoted AEOs, trained, having rural background and holding agriculture degrees were found more effective in their job.

Singh and Sinha (1971) studied personal factors which are associated with the professional competence of agriculture extension officers of Punjab. 18 block development and Panchayat officers, 18 agricultural extension officers and 90 village level workers were studied through questionnaires. It was found that the factor of resourcefulness was considered most important for the professional competency of AEOs by all the three categories of respondents. Expression power and education were considered as less important factors by VLWs and AEOs.

Dass (1971) in a study of expectation from the job of extension workers found that all the categories of them had first preference for salary. Good colleagues, advancement, opportunity and freedom to work were some other preferences.

Sinha, Mann, and Prasad (1970) studied the attitude of the extension personnel towards extension education in Punjab. A sample of 149 extension personnel including 14 extension education teachers, 10 block development and panchayat officers (BDPOs), 50 agricultural extension officers (AEOs), and 75 VLWs. Results showed that all the concepts were rated by the respondents positively. The concepts were power, practical, acceptable, good, purposeful etc. (all related to extension education). Attitude towards extension education was found to be more favourable in VLWs and AEOs than in BDPOs.

Sinha (1971) in a study of 154 BDOs and Panchayat Officers, AEOs, and VLWs studied the attitudes of extension personnel towards IADP and CP approaches in agricultural development in Punjab and found that AEOs did not have favourable attitudes towards administration, planning, involvement of rural institutions, execution and development of local leadership. The VLWs possessed

unfavourable attitudes towards administration, planning involvement of rural institutions and co-ordination of block development and panchayat officers towards coordination, training and timely supply of service etc. The respondents did not show significant difference in their attitudes toward CD approach.

DEVELOPMENT OFFICERS

Helping the various developmental workers play a productive role in the field depends partly upon the critical role of the block development officers. As an overall incharge of the block office besides supervising and guiding various employees in his office, he could play a critical role in generating economic activities for the villagers initiating schemes and working out strategies of implementing these schemes. A few researches are available studying the nature of work done by these employees, factors contributing to their effectiveness etc.

Muthayya (1970) studied job tension among block development officers in Andhra Pradesh. Prevalance of job tension is low among these. Tension was expressed to a great extent, in certain of the job aspects such as lack of required authority, or a sense of autonomy, too much of work load, incompatible demands by referred groups, dearth of required information, taking action against one's conviction, and lack of a sense of feeling of achievement in one's job.

Mathur (1970) studied bureaucratic thinking of BDOs. For this purpose a survey questionnaire was used. The results showed that bureaucrats come from a rural background and had strong desire to move to urban. They reported that they would not join government service and not let their children follow them.

Some BDOs were found to be pessimistic. Sociocultural variables failed to predict effective variation in seven major dimensions of their perceptions.

Prasad (1970) in a case study of 8 BDOs in Bihar found that practice of appointing reserve officers on agricultural specialists as BDOs was not at all helpful to development. Most of them were untrained. Neither they could supervise and coordinate various activities nor they could keep contact with the rural people. The BDOs perceived Panchayati Raj as beneficial and desirable for rural development. They felt that superior officers were not listening to them.

Prasad (1970) studied the role of the Block Development Officers in Bihar. He pointed out that the training programme concerning community development proved essential for giving BDOs an understanding of that programme. The untrained BDOs hardly made any contribution to the welfare of the area in which they operated.

Gnanakhannan (1973) studied 92 BDOs from IADP and non-IADP districts of south India. The BDOs in IADP and non-IADP districts did not differ in job satisfaction in Mysore and Kerala. In Tamil Nadu the BDOs of IADP districts were found to be more dissatisfied than those in non-IADP districts. The BDOs of Mysore were more dissatisfied in personal aspects than those of Tamil Nadu and Kerala in both districts. They did not differ in personality characteristics. BDOs of Kerala had a higher need achievement and of Mysore in the non-IADP districts they were found more dominant and introverted. In social intelligence they did not differ to a significant level, however, in independent comparison in IADP districts, the BDOs of Kerala were more socially intelligent than those in Mysore and Tamilnadu, while in non IADP districts, they did not differ to a significant level.

Singli (1974) studied Block Development Officers (BDOs) of Eihar. Their performance on the whole was observed to be average to good. There was no significant difference between the level of performance of the BDOs of IAOP and those of IAAP. The level of performance of the BDOs with an M.Sc (Agri) degree was significantly superior to those with a B.Sc (Agri) degree. For three personality traits namely initiative, need for power and need for self actualization, the level of performance was not found to be related, and that was found to have significant relationship with supervisory ability, decisiveness and self-assurance. The correlation analysis revealed that there as significantly negative correlation between the level of performance of the BDOs and the two personality variables, viz., achievement motivation and working class affinity. The prediction analysis revealed that their performance was significant and positively related to their supervisory ability and significantly and negatively related to achievement motivation. Supervisory ability about achievement motivation were found to have variability in the performance (34.60%), so with the elimination of the three variables, dimensions, self-assurance and working class affinity, there was no reduction in the predictability of the remaining two variables.

OTHER ADMINISTRATIVE AND GOVERNMENT OFFICERS

Besides these studies on the development officers, a few studies have been conducted on the other administrative and government officers. These deal with various role.

Muthaya (1970) studied 66 administrative officers to investigate their personality and orientations to certain aspects of the life situation. The sample studied was found to be introverted and emotionally stable as per the comparative 'norms' of Extraversion-introversion and neuroticism. No relationship was found to be between their personality and assessment of occupational achievement, occupational satisfaction, occupational problems and 'hopes' for the future of the country.

Panandiker (1975) studied 911 I, II and III categories of officers who dealt with development work. These officers reported favourable attitudes towards accepting more responsibility for the work in their present positions. They were found to have been assigned less responsibilities than they were willing to assume. The results pointed out not only to poor manpower utilization but also to limited opportunities available to civil servants for their growth and development in day-to-day work. Only 35% of the civil servants had superiors delegating to them as much authority they desire. Most of them felt that their supervisors are positively inclined to them.

Bhattacharya (1973) studied 112 non-gezzetted employees and found that the value intellectual, stimulus discriminated clerks and stenographers over peon/daftary, while the values intellectual stimulus and way of life were highly discriminating over scientific personnel-operators, and sweeper/mali with peon/daftary. Security received highest importance by almost all the groups whereas comparatively low rankings were noticeable on creativity, management, achievement, surrounding and altruism for most of the groups. Superior relation, aesthetic and prestige got frequently high rank by all the groups.

Mathur (1972) studied 82 civil servants of Rajasthan for training and attitudinal change and found that there was overwhelming general satisfaction with training programme among the officers. Some variation was also noted between trained and untrained officers on economic conditions, past orientation and authoritarianism. However training had little impact on their outlook, mental and general attitudes.

Mathur (1972) studied organizational environment and political pressure in Rajasthan taking 176 administrators. Interpersonal behaviour, moral qualities, competence, intelligence and strong decision were described as the qualities of a good administrator. They perceived unfairness in promotion, posting and transfer, low salary and problem of political interference.

8 WOMEN AND WORK

Working women and attitudes of men to work have also attracted the attention of researchers in the past five years. A few surveys have been conducted on the attitudes of working women towards work, the reasons for their choice to work and problems of working. These few studies hardly form any basis to draw conclusions. However, it appears consistently that women from high socioeconomic status families are encouraged to work for reasons like challenge, use of one's educational skills etc. whereas those from lower socio-economic status families work more for economic reasons.

Janhari (1970) studied 250 Hindu working women from Lucknow city. The data for this study were collected with the help of questionnaire observation and case study methods. It was found that most common reason for taking up of job was financial difficulties followed by making use of education and stimulated by ideal of service. The economic reason was found most common in married women and that also with children than without children. For unmarried girls also economic necessity was more important than the desire for career. The correlation between earning and education showed that the quantum of earning was not proportional to the level of educational qualifications. The spending of money was dependent on the percent of responsibilities they had in the family. More than fifty percent women were not happy with their work. Unmarried girls indicated a strong desire for marrying. Working women were found to occupy a respectable position in the family. They prefer the mother's or mother-in-law's care for their children followed by servants care. The most common leisure time pursuits among married women was home affairs and that for unmarried movies. More than fifty percent were found to

think that despite all social progress, increased education and wider outlook society is highly critical of them, others had no such feelings.

Nath (1970) studied female work participation and economic development in 15 states of India. The findings supported the expectation of a falling female work participation in India in the coming decades. Even then it could be expected that withdrawal of women workers from agricultural and non-agricultural occupations may not lead to any significant reduction in output in these sectors because in a situation of labour surplus women will be replaced by men.

Sharma and Singh (1970) investigated the participation of rural women in decision making process related to farm business. For the purpose of their study 170 farm women from ten villages of National Extension Service Block, Jabalpur were randomly selected. The results indicated that rural women participated in decision-making with regard to four farm operations, seed storage, winnowing, care of animals and harvesting. Majority of women were always consulted for seeds storage, care of animals, selection of seeds etc. whereas they were never consulted for the use of pesticides, application of fertilizers and manures and use of weedicides. Age, education, caste, type of family and urban contact did not affect the extent of participation in decision making, while social participation and size of holding significantly affected the extent of participation in decision making.

Paranjape (1974) surveyed married and unmarried employed women graduates to study their socio-psychological problems and attitudes. Results indicated that improved educational opportunities and economic conditions have raised women's qualifications as well as their participation in the economic world by taking up jobs. They faced more problems in acceptance of jobs than they faced at their educational stage, and for

married women these problems were still more diversified. The study pointed out that married educated ladies were required to adjust themselves at every stage, which results in a change in their personality. The situations and facilities which are provided to educated employed ladies in foreign countries are entirely different from those in India, so educated ladies have not crossed the boundary of professions, like clerks, teachers and doctors.

Ranade and Ramachandran (1970) studied the attitudes of women towards employment and in particular towards part-time employment. The studies revealed that in Bombay 94% relatives or husbands of employed women favoured women's working. Nearly 90% parents and parents-in-law favoured it, and 70% of grand parents approved it. In Delhi 88% of women's relatives favoured women taking up employment. The reasons for favourable disposition were found to be income, career opportunities, and improved matrimonial prospects. Most married women opted for full time work.

Singh (1974) studied 161 working women and 150 non-working women for their attitudes towards women's education and employment. The percentages of the ideas for suitable education for girls were 6%, 33%, 14%, 46% and 1% for medical, house craft, occupation oriented, any and no education respectively. As regards the percentage for the amount of education for girls it was 6% for below matriculation, 3% for matriculation, 32% for graduation, 27% for still qualified, and no responses were given by 32%. Very liberal attitude were found of women, towards women's employment, before marriage and after marriage, without children but working women had comparatively more liberal attitude towards women's employment before marriage and non-working after marriage without children. Opinions regarding economically independent versus dependent women showed, that more of non-working (58%)

than the working women (44%) considered the status of a working and non-working women as equal. The women when asked to specify the jobs which they considered suitable for them, it was found that, women are capable of taking up all types of jobs, hence there should be no restrictions. Contrary to this, women considered only teaching and medicine as the most desirable jobs for them.

Rani's (1975) study 150 married working women revealed that their main motive behind seeking employment was to make use of their education. Service was the least influencing motive in their choice for working.

Karlekar (1975) studied the professionalization of women teachers. Few teachers were positively motivated towards teaching. Their primary interest was in having a respectable job. Unsatisfactory relationships at work place were found to reduce involvement in profession. Those who were committed to teaching were from the economically privileged strata of the society.

Medicine, home science, nursing, telephones, secretarial services etc are some professions that attract more women. Some of these occupations may have unique problems. Working women may also experience role stress where they have heavy family responsibilities. A few women study a lot and earn degrees but do not use their education later resulting in wastage. On one side we have the problem of unemployment and on the other side the problem of wastage. These issues may need attention of future researchers.

9 TOWARDS AN UNDERSTANDING OF
WORK BEHAVIOUR

9 TOWARDS A PSYCHOLOGY OF WORK

The researches surveyed so far indicate the trend of interest by behavioural scientists working on different categories of people. Any attempt to outline a psychology of work should take into account and answer the following questions:

- 1 How do people end up working the way they work in settings where they work?
- 2 How do early experiences people have in their lives influence their later work behaviour?
- 3 What is the process by which people understand, interpret and reinterpret, modify, react and undertake the various activities related to work?
- 4 What are the processes^{es} that are common to various occupations and work-settings in understanding the psychology of work?
- 5 What are the effects of work on people?
- 6 Can selection and development strategies be used to bring about effectiveness in work?

Answers to these questions are partially provided by the researches reviewed in the earlier sections and from the conceptual models of work-motivation offered by researchers like Smith and Cranny (1968), Patchen (1970), Porter and Lawler (1968), Lawler (1971), Maslow (1954), Herzberg (1966), McClelland (1971), Agarwal (1973), and Pareek (1974).

A. Role of Motives, Early Socialization and Training

Researches by McClelland (1961), McClelland and Winter (1969) have clearly demonstrated the influence of childhood socialization on adult behaviour. From these early researches on entrepreneurs and the recent researches on managers (McClelland, 1975; McClelland and Burnham, 1976) it has been demonstrated beyond doubt that few motivational dispositions in people like the achievement, power, and affiliation motives determine how people are going to work, what kind of work do they tend to choose and how do they react to work that does not suit their dispositions. Research has also indicated that the later motivational patterns and orientations to work are determined to some extent by socialization at home and school. McClelland, Atkinson and their coworkers postulated that early training for independence helps develop achievement motivation. Thus boys with high n achievement were found to be more independent in their problem-solving efforts in school (Winterbottom, 1958), and in another study, to ask for less aid from their parents and to display greater self-reliance in general (Rosen and D' Andrade, 1959). Further evidence that achievement oriented children show less overt dependence behaviour was presented by Crandall, Preston, and Rabson, (1960) and Crandall and Sinkeldam (1964). Krebs (1958) found that children's achievement tendency was positively related to their maintenance of independence in conformity evoking situations. Studies conducted in India on students also demonstrate beyond doubt that motivational dispositions in general and achievement motivation in particular influence academic achievement and other work-related behaviours (Mehta and Mohta, 1975; Jawa, 1972; Husaini, 1974; Singru, 1972; Sinha, 1970 etc. For details of several studies see Mehta and Mohta, 1975).

Achievement motivation has also been found to be associated with or determined by background variables like parental education and income etc. (De and Priya, 1972; Desai, 1972) which again indicate to socialization effects. Achievement motivation has been found to influence not only the work in students but also in adults. Researches reviewed on Farmers show that it plays a significant role in determining their progressiveness or economic status (Sinha and Chaubey, 1972, Singh and Pal, 1974; Singh and Singh, 1971; Singh, 1969 etc.) Researches on entrepreneurs in India also indicate the relationships between need achievement and entrepreneurial behaviour (McClelland and Winter, 1969; Nandi, 1973; Rao et al., 1975 etc.). Research on this motive has also indicated that it is possible to develop achievement motivation in people through appropriate training programmes (McClelland and Winter, 1971; Rao et al., 1975 for entrepreneurs; Mehta, 1969; Desai, 1972 for high school students; Heredero, 1976 for farmers; Pareek et al., 1973 for college students. From this brief review the following observations may be made:

- Certain motives or need orientations influence the effectiveness of an individual in work situations. (eg. n ach influencing effectiveness in studies, farming and entrepreneurial entry)
- These motives are developed in people through early socialization in the family and child-rearing practices.
- These motives may also be associated with the family background, educational level of parents, social structure, community where the person lives etc. and the individual develops these motives depending on these variables (researches indicating various background factors like sex, culture, SES etc. influence n ach. see Mehta and Mehta, 1975)

- These need dispositions can be developed in people through appropriate training programmes and intervention strategies. However, the survey presented in earlier sections also indicate the following trend and gaps in research in these dimensions.
- Only a highly select few needs and motives have been researched. (Probably no other need or motive is as much researched in India as is n achievement).
- The available motivational dimensions researched are not sufficient^{to} explain the variations in work effectiveness in all spheres of work with uniform predictability. For example, McClelland's and later researches indicate that high n ach people work for themselves and not for others.
- Those who have to work for others and help others (eg. extension workers, missionaries, doctors, development officers, managers etc.) may need high scores on other motives which need to be investigated. For example Pareek (1968) proposed extension motive as one such important motive in these groups. McClelland's (1975) recent research also suggests this.
- Many such motive profiles associated with work in different occupational settings need to be investigated.
- Socialization processes involved in developing these profiles in people need to be investigated.
- Strategies for training people, on these motives have to be developed and experimented with. For example, efforts are under way at the Indian Institute of Management, Ahmedabad, to develop extension and power orientations in people that require these orientations. The author has tried out one such programme with family planning workers, the results of which are being documented.

B. Background Factors, Institutional and Professional Impacts in School

Besides motivational factors family and other background factors stand out as a significant set influencing the work patterns and working behaviour of people including their effectiveness. Researches on vocational and occupational choices and interests presented in the earlier sections are an evidence to this. Researches on teaching as a career indicate that desire for financial stability, love for teaching, need to be involved in some activity and economic reasons as leading towards the choice of this career (Verma, 1971; Verma, 1974 and Shamsuddin, 1971). However, no such studies are available on developmental workers health workers and industrial workers giving reasons for the choice of a career. Some insights however are thrown by studies dealing with vocational aspirations, interests and work-value patterns of students. These studies on students indicate that, while childhood socialization in the family develops certain orientations in them, school plays a great role in shaping these orientations and forming definite attitudes and aspirations for work in students. The study/Bose ^{of} et al (1970) indicating college-wise differences in aspirations and work-values of medical students are indicators of this.

Impact of the profession itself on future choices of work and the impact of college culture and teachers have also been demonstrated by studies. For example, Sandhu and Sinha's (1970) study indicates the tendency of agricultural students to prefer research while Rao's (1976) study on medical students indicates the tendency of medical students to prefer academics least and independent work most. Sharma's (1971) study on business management students indicates that a striving to get ahead and economic gains as important factors. Das and Sarkar's (1970) study points out the differences between science and agriculture students.

Evidence about how the choice of and socialization in a professional school/college shapes one's job preferences has been presented by Mathur and Rao (1975). Impact of teachers on student study habits has also been demonstrated (Kaul and Sohal, 1973). Achievement during school (Deb, 1967), availability of facilities (Kansal, 1971) personality and background variables (Jamuar, 1974; and Pande, 1975) appear to influence early choices and orientations in students towards future careers. The review of various researches on work-values by Rao (1976) presents the impact of background variables like age, sex, socioeconomic status, urban-rural background etc. on student work-preferences. From these studies and in continuation of the early observations on early socialization to work, the following observations may be made:

- While motives and orientations are formed and developed through early socialization and later training, the school plays a great role in making the individual form definite images about future jobs, and orientations to different jobs and career. The teacher, the peers, books, knowledge achieved during school and college and the reference groups all contribute to such formation of attitudes and interests.

Early dispositions combined with such formation of attitudes, performance in school, personality, availability of opportunities and the influence of the background variables lead the individual choose certain streams of specialization in the school and the college.

Such choice of a profession and streams of study have partly determined the activities and individual is likely to be involved in future. However, as he gets exposed

to the stream of study he has chosen or the profession in which he is in, he forms definite attitudes to work depending in the socialization experiences in the college.

- All this period his personality and social background variables are continuously exerting their influence on him at every step of his choice and they continuously interact with him and influence his choices at every step of his adult age. (Evidence to this effect may be drawn from studies on industrial workers, teachers, farmers etc. indicating how personality and social background factors have influenced their choice of work, reactions to work, their satisfaction/dissatisfaction, innovativeness etc.)

Besides pointing out these trends the researches surveyed indicate the following gaps and questions that need further research:

- In these samples where opportunities for schooling and higher education are missing not much is known about the process in which they get socialised. For example the less educated rural background industrial worker, class IV employees etc.
- Are there any definitely identifiable directions in which the school and college experiences inject differential attitudes to work? For example what are the socializing forces in an engineering or medical college and in which direction each of these forces act? Who are the critical socializing agents in influencing student vocational aspirations? What kinds of curricular experiences shape students in positive and negative directions? Answers to these questions may help identify the sources that need to be influenced for attitude change and value

education in students. For example, it will be a great service if something can be done about discovering the influences in forming negative attitudes to work in rural areas in medical students.

- In spite of the voluminous literature on vocational interests very few longitudinal studies have been conducted. To what extent are the college effects lasting? How do students react as adults when their vocational aspirations get shattered and they have to undertake work they looked for the least? How strong are their attitudes? and how the college experiences influence their later work-reactions? etc. need to be investigated.
- While the background and personality factors have been found to be associated with vocational choices, study habits etc. nothing definite can be concluded from the researches available so far about the directions in which these influence in each profession. For example, the low socioeconomic status background may tend to make a social work student or a teacher trainee highly achievement oriented whereas a management student may develop a sense of inferiority and a middle class background medical student may strive hard to make a mark as a doctor. Such background and personality profiles for different roles and role preparations may be useful.
- Very little work is reported on the preparation of VLWs, BDOs, Extension Educators, health personnel and other categories of people about their student socialization. Probably some of these groups are there by accident than by choice. Retrospective studies examining their career patterns may throw some light.

C. What People Look for in Work and How They React?

A good amount of literature has been reported in the past on the motives behind work in different settings. Several theories are available that deal with this question. Motivation theories have contributed a great deal to this question. Maslow (1954) theorized a hierarchy of needs starting from Physiological needs to self-actualization needs working in a pattern that when one need is fulfilled the individual looks for the next higher need to be fulfilled. In his two factor theory Herzberg (1966) proposed that two sets of factors Hygienes (including salary, work-conditions, company policy, supervision and work group) and motivators (advancement, development, responsibility, recognition etc.) contribute to job dissatisfaction and job-satisfaction respectively and influence the work behaviour. A few studies on workers reviewed by Dolke (1974), and Roy and Raja (1974) point out that the factors dealt with by Herzberg are seen as important in Indian industrial settings. A few studies in India provide full evidence to his theory also (for example, Dayal and Saiyadain, 1970 present evidence). The study of Kalro and Misra (1973) renders also partial support.

The factors stated by people in different categories of work has value of its own throwing light on what motivates people to work. The few studies on teachers indicate that a desire for intellectual growth, desire to serve, lack of opportunities elsewhere, desire for financial stability are reasons for teachers to work (Brar and Adhar, 1972). For industrial workers, opportunity for promotion (Singhal and Upadhyay, 1972), other Hygiene factors (Rao and Ganguli, 1971), job-security (Paliwal and Paliwal, 1971), wages and work-conditions (singh, 1971; Muthuchandran, 1972) etc. are the factors. Dolke's (1974) survey of studies points out that money, wages, security, advancement, work-conditions are

some of the factors that are perceived as important by workers. Researches on entrepreneurs indicates that economic motivation need for independence, achievement orientation and having a sense of accomplishment etc. drive people to be entrepreneurs (Pareek and Kumar, 1968; Rao, 1975). Studies on working women also point out the need to give financial support and the need to use one's education (Jauhari, 1970; Paranjape, 1974; Ranade and Ramachandran, 1970; and Ravi, 1975). Farmer's appear to be working mainly for economic gains. Even students mention economic aspect as an important consideration for choosing their future careers. Not much literature is available on the other groups like the development workers.

Studies on supervisors and managers present what they look for in their jobs rather than to answer their motives. For example, supervisors have been found to look for a competent and sympathetic boss, job-security and team work (Singhal and Upadhyay, 1972), recognition, achievement, salary, promotion and responsibility (Dolke, 1970, 1970a), ^{and} adequate earnings and job-security (Kulkarni, 1973). Managers were found to look for autonomy and self-actualization (Deb, 1972) and motivators (Pestonjee and Basu, 1972). Research on VLWs and AEOs also suggests similar factors (Dass, 1971). If people look for these things what do they find in their jobs? and how do they experience them? Teachers seem to face problems due to government's rigid rules, heterogeneity in class, lack of promotional opportunities (Kale, 1970) and a conformity and syllabus orientation that makes them discipline oriented and to work for completing syllabus rather than to ensure learning (Singaravelu and Feroz). There are not many studies dealing directly with how other categories of people find work.

Indirect evidence from other studies suggest that most of the workers are stuck with the hygiene factors and they do not even find them in their jobs.

Besides their own expectations, many other factors appear to be determining their job-satisfaction as well as efficiency. For example, age, length of service and income (Singh and Agarwal, 1971), public or private sector management, and occupational mobility (Sharma, 1970), personality variables (Dwivedi, 1972), skilled versus unskilled nature of job (Jawa, 1971), content of job and company satisfaction (Sharma, 1971) etc. were found to be some variables influencing job satisfaction and productivity in jobs of industrial personnel. The studies also suggest that permanent workers, high salaried, low caste, and rural background workers (Tripathi, 1974) tend to be more satisfied. These factors include both personal and social background variables as well as company related variables. Probably each set of factors play an important role in their own way. Teachers seem to have somewhat different set of factors that explain their job effectiveness. Creativity as can be seen through fluency, flexibility etc. (Raina, 1970), adjustment (Samanthroy), personality and attitudes to democratic classroom practices (Quarashi, 1973), intelligence (Sharma, 1974), aptitude (Sharma, 1972) Values (Kaul, 1973) and job-adjustment (Verma, 1972) seem to be some of the factors associated with teaching efficiency. As a group they seem to enjoy their professions (Marr and Mathur, 1973), and ready to accept responsibility/work hard and have positive attitudes to work (Gupta and Singh, 1972).

Managerial success has also been found to be determined by personality (Deb, 1969) social life orientations (Phingra, 1972) and value patterns (Dhingra and Paliwal, 1973).

The one study on scientists indicates that they are disappointed due to lack of promotional opportunities, social isolation, public indifference and lack of funds (Chandra, 1970). Civil servants and administrators are disappointed due to lack of autonomy and authority (Panandikar, 1975), unfair promotions, posting and transfers, low salary and political interference (Mathur, 1972). BDOs were unhappy about lack of authority, too much work load and demands and lack of sense of achievement in job (Muthayya, 1970). VLWs were not satisfied with their dual roles, unfairness of policy and administration etc (Kotle, 1972) and they are often involved in non-technical jobs (Dasgupta, 1973). Effective Gramsevaks have been found to show high social participation (Dudhani, 1970), ^{and} use many communication strategies (Patel, 1972). Effective AEOs were found to ^{be} resourceful and professionally competent (Singh and Sinha, 1971).

Research also points out that background variables like age, caste, rural background, training duration and job-variables like the number of villages served, experience, tenure of service, average daily working hours etc. influence their effectiveness (Saigamkar and Patel, 1970; Shetty and Murthy, 1970). Similar findings were obtained with extension workers (Reddy and Patel, 1972). The following trends may be noted and hypothesized from the various researches surveyed:

- When people join work-situations they are either there by choice and as a result of long term involvement in thoughts centering round that profession or work. For example, doctors and entrepreneurs are two categories who have been found to make such decisions about their future work when they are very young.

- A few people are **there** by accident. An example may be teachers who enter teaching profession because they had no other alternatives available.
- People develop certain expectation in the initial period of their work in an organization or in a profession or in an occupation.
- If they are there by choice their expectations may have been deep rooted and gaps in meeting their expectations might make them react very intensely depending on how important is that aspect in the person's psychological field. If they are there by accident the expectations are probably not that stronger and frustration of the expectations may not make the person respond in highly unproductive ways.
- In work-situations that require backing by prolonged professional training (such as doctors, engineers, lawyers, nurses etc.) expectations may have been formed during student period and orientations to work also develop during these periods. These orientations get modified through the process of organizational socialization which takes place with the interaction of the individual and his work situation.
- In work situations that require no backing of prolonged professional training the organizational socialization may be less painful process as the individual starts developing expectations during this period (untrained teachers, VLWs and AEOs are an example).
- Irrespective of the process in which people get to perform certain roles, they look for certain basic needs to be fulfilled like money, security, work conditions etc. -- some of Herzberg's **hygienes**. This seems to be true with all work settings. Wherever such needs are

not fulfilled indicators are that the work suffers.

- People in higher occupations tend to look for more than the hygiene factors -- such as the opportunities for growth, advancement, good supervisors, team-work, autonomy etc. This is exemplified by supervisors, managers and civil servants. Probably this is associated with the fact that these categories have come there by choice than by accident. It is also present in others like teachers and even skilled workers but not to a very marked degree.
- Depending on what the environment, work-setting or the organization offers people seem to develop satisfaction or dissatisfaction, frustration and attitudes to job which influence their productivity.
- While satisfaction or dissatisfaction and job attitudes do influence the efficiency of the person in work, other variables like his own knowledge, skills, personality, and situational factors related to work have also been found to contribute to the effectiveness. Researches on teachers, farmers, workers, supervisors, managers and even students have indicated this.
- It is possible to train people to change their expectations, help them adjust to their jobs and perform better. However, researches on such training interventions are not many. There are a few on teachers and students and some are in process on health workers.

The survey also indicates the following gaps:

- What are the factors one looks for in a work situation irrespective of the occupation he is in, besides money, security and work-conditions? There has been enough

research on the factors but the methodologies are so divergent, very little could be concluded.

- Is long duration of professional preparation associated with more frustration in the absence of need-pressure congruence (to use Murray's analogy)
- Can the individual needs and work-situational pressure be studied and the congruence between them be used to predict job-adjustment and productivity.
- In an earlier paper on the use of non-cognitive instruments the author suggested that measures of personality needs may be used for selection if profiles of motivational climate of the organizations are maintained. Measuring the needs and tallying them with environmental pressure and using the congruence as indicator of the possible job-adjustment by the person could be tried out (Rao, 1975).
- Experiments on job-redesigns, job enrichment etc. to maximize work-motivation have not yet been researched.
- Some research is needed on strategies of making people feel autonomous and powerful. As recent research indicates, such a strategy may help people develop and be productive. Practically no research has been reported on job-rotation, appraisal, counselling and such strategies of human resources development.

D. Human Resources Identification and Development

Research in psychology of work should, besides providing answers to the questions on motives to work, patterns of work, development of orientations to work, and the impacts of work on people etc., also indicate strategies of selecting and developing right kind of people for different work situations and developing human resources for increased efficiency and satisfaction. Some literature available on entrepreneurs, teachers, students and farmers indicates that ^{they} can be trained to do well in their jobs. These stray studies have been presented in their respective sections. However not much work has been reported in the area of selection of personnel and training. The few studies available on selection include those by Dolke and Sharma (1975) on an aptitude battery for architecture students, Saiyadain and Monappa (1976) on psychological tests for executive selection, Rao (1974) on the use of non-cognitive instruments in selection and role-set based assessment center approach to selection (Rao, 1975), Das (1975) on recruitment policies for commercial banks, by Ratnam (1971) on human resources management and the seminar papers on personnel selection by Indian Statistical Institute (1974). These researches project a trend indicating that there is a good shift in focus of scientists working in the field of personnel selection from developing ability, performance and aptitude tests alone to understanding the personality, values and other psychosocial orientations of the individual and trying to judge whether the individual would adjust to the work-situation and whether he could be developed to handle future jobs.

E. A Model for Understanding Work-motivation

A question may be asked after a survey of these researches, whether any conceptual model of work-motivation that enhances our understanding of people at work in different is possible. In fact, the patterns reviewed so far do indicate to such conceptual linkages between different variables, probably leading to a model.

From his researches on hospital personnel and a survey of other related researches Agarwal (1973) has presented a stratification theory of work-motivation. According to this model the societal system in which one lives, role, status ascribed to the roles, self and self-concepts developed through socialization processes, and organizational structures and process all interact to determine work-motivation. Agarwal's (1973) assumptions about the relationships between pairs of variables in his model are supported by researches surveyed above. However, it is difficult to conclude whether the researches surveyed fit into the totality of the system for at least one reason that no single study takes into account such a totality of variables as outlined by Agarwal. While his own researches on hospitals may render support to such model, no definite conclusions can be drawn from the researches here.

Recently after reviewing several conceptual models on work motivation, Pareek (1974)/^{presented} a three level work-motivation model: According to this model, work-motivation can be conceived at the individual level in terms of his needs, his decisions to work in an organization, his personality etc. At the interactional level between him and his role in the organization, work-motivation develops in terms of changed strength in his need pattern and his commitment to work in the organization. At the third level it may be viewed as the final out come of his working in an organization and the satisfaction he derives from his work and role. The first level work-motivation in Pareek's model may be a resultant of the early socialization - a dimension very inadequately

dealt with by Pareek (1973) in his model. In the second level of work motivation which comes out as an interaction of the individual with the organization a great amount of support is rendered by the researches surveyed here confirming the various interactions between expectancies, goals and individual variables as outlined by Pareek (1973, p.27). The researches surveyed also render support to the third level of work motivation which is the ultimate satisfaction an individual derives from his work. Researches reviewed earlier indicate several such determiners of work-satisfaction and committment. However, this model still rests largely on the motivational dimensions and may not be sufficient to give a complete analogy of a psychology of work. What is the role of organizational structures? Policies? and situational factors in determining work-orientations of people. Pareek's model may also have limitations in explaining entrepreneurial activities, work in agriculture nor does it answer questions like the impact of professional training on work-motivation. In the context, of the review so far one may also question if the existing studies are sufficient to validate or develop models of work-behaviour? Perhaps the answer is negative. Longitudinal studies involving people in different settings and following them from time to time and assessing their life changes and reactions to such changes can probably throw more light on psychology of work. The existing models are adequate enough to work out intervention strategies for improving the quality of work life. Let us hope that innovative work that is being initiated by institutions like the National Labour Institute would throw light on more dimensions of work behaviour and helping people improve the quality of work life.

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