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A COMPARATIVE STUDY OF ANXIETY AND MENTAL STRESS OF PLAYERS

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ABSTRACT

The purpose of the present study was to investigate the difference in anxiety and mental stress of players participating in single events and players participating in group events. The sample comprised of forty respondents who participated in the 7th SAAF Games held in Madras in 1995. To measure anxiety and mental stress, the State Trait Anxiety Test (STAT) (Spilberger, 1970) and the adapted version of Symptom of Stress Questionnaire (Gurin, 1960) were used respectively. Data were analyzed by applying t-tests. Results revealed that compared to the players participating in group events, those participating in single events suffered significantly higher anxiety and mental stress. These findings have been interpreted in the light of past studies.

INTRODUCTION

Players who participate in single events and those who participate in group events do not experience anxiety and mental stress in the same way. Since diffusion of responsibility prevails on group, the athletes do not alone feel responsible for their behavior. In the case of players participating in individual events, whole responsibility rests with the individuals which causes excessive pressure (Tutko, 1971). Excessive pressure in turn leads to high anxiety and high mental stress (Coopers et al., 1978). It is observed that different sports and different positions within the same sports demand optimal level of arousal for high level of performance. Athletes usually experience stress from pressures to achieve certain specific goal or to behave in particular ways. In some instances, pressure seriously taxes athletes' coping resources and if stress becomes excessive, it may lead to maladjustment. Pressure may originate from external or internal sources. An athlete may feel severe pressure to make good performance because the supporters demand it or he may submit to such pressure because he wants to participate in international sports. The long hours of practice, tension of competition, the sustained concentration of effort over long time result in considerable stress. When an athlete is handicapped by inefficient practice or other difficulties, the continuing effort for achievement can be highly stressful.

In the area of sports, many investigators (Henin,1980; Cratty and Henin, 1980) have studied the relationship of single event and group event competitive anxiety and stress.

The studies provide conflicting results. Several researches were conducted to investigate anxiety under different group settings. Singh (1991) found that individual players suffer greater anxiety as compared to group players. Tutko (1971) stated that anxiety is greater in individual sportsmen than in team sportsmen. But Spielberger and associates (1970) found no such relationship. Radha (1991) found significant differences in anxiety level between players participating in group events and players participating in individual events. Raviv and Rotstenin (1982) reported significant differences between the teams of group athletes and individual athletes. Singh (1986) also found supportive results. Several researches show that high anxiety level exists among players participating in football, basketball, hockey and volley ball (Oxendine, 1986; Frost, 1971; Alderman, 1974; Carron et. al., 1977).

Pressure of competition usually leads athletes to experience excessive anxiety and mental stress, which disrupts performance by over arousing them. Even well practiced athletes are not always concerned about this matter for which performance decrement occurs in both cases.

Objective

The present study was, therefore, designed to investigate whether any difference exists between players participating in single events and players participating in group events in terms of their anxiety and mental stress.

METHOD

Sample

The sample of the present study comprised of 40 respondents (twenty football players and 20 athletes) who participated in the 7th SAAF Games held in Madras in 1995. Considering the availability of sample, the respondents were selected by incidental sampling technique. The respondents were all male players belonging to middle socio-economic status. Their age ranged from 19 to 35 years. All the players had 2 to 8 years experience of playing in the national and international games. The mean and standard deviation (SD) of age and experience of the selected players, by events, are shown in Table below.

Table 1: Mean and SD of age and experience of Sample Players

Type of events	N	Age (yr.)		Experience (yr.)	
		Mean	SD	Mean	SD
Single event	20	24.85	1.71	5.3	1.48
Group event	20	24	1.14	4.2	1.4

Measuring Instruments

To collect relevant data for the study, two questionnaires were used. These were: (i) The State Trait Anxiety Test (STAT) by Spielberger (1970) and (ii) adapted version of Symptom of Stress Questionnaire developed by Gurin (1960). There are 20 anxiety items in STAT. Each item of the test a 4-point scale with the response categories 'almost always', 'sometimes', 'often', and 'never'. The correlation of STAT with its Bangla Version was found to be .68, which was significant at .01 level.

Adapted Version of Symptoms of Stress Questionnaire consists of 24 items. Each item has a 4-point scale with the response categories 'almost always', 'sometimes', 'often', and 'never.' The correlation of Adapted Version of Symptom of Stress Questionnaire with its Bangla Version was found to be .66, which was significant at .01 level.

Procedure

The questionnaires were administered to 20 football players and 20 athletes who participated in the 7th SAAF Games held in Madras. At first, rapport was established with the respondents and they were properly informed about the objective of the study. The interview was conducted in the field situation. The respondents were contacted individually and a date was fixed for interview.

Since all the respondents were literate, they filled-in the questionnaire themselves. They were given assurance of maintaining secrecy of their responses. Respondents expressed their opinion by putting a tick mark on one of the four possible answers. Upon the completion of their questionnaire, they were thanked for cooperation.

RESULTS

To analyze the collected data, t-tests were employed (Tables 2 and 3).

Table 2: Mean difference in the anxiety scores of two categories of players.

Type of events	N	Mean	SD	DF	t
Single events	20	46.4	3.43		
Group events	20	29.95	2.27	38	3.91*

* $p<.05$

It appears from table-2 that significant difference ($p<0.05$) exists in the anxiety scores of players participating in single events and group events. Reference to group means

indicates that respondents who participated in single events scored higher in anxiety ($\bar{x}$ = 46.4) as compared to those who participated in group events ($\bar{x}$ = 29.95). In other words, players participating in single events suffered more from anxiety than those participating in group events.

Table 3: Mean difference in the mental stress scores of two categories of players.

Type of events	N	Mean	SD	DF	t
Single events	20	64.1	4.82		
Group events	20	33.5	3.26	38	5.76*

* p<.05

Table-3 also shows significant difference (p<0.05) in the mental stress scores of players participating in single events and players participating in group events. Reference to group means also indicates that respondents participating in single events scored higher in mental stress ($\bar{x}$ = 64.1) than those participating in group events ($\bar{x}$ = 33.5). Thus, it is evident that players participating in single events suffered more from mental stress than those participating in group events.

DISCUSSION

The major finding of this study is that significant difference exists in anxiety and mental stress scores of players participating in single events and players participating in group events. It is revealed from table 2 that players participating in group events experienced lower anxiety. This result was confirmed by past findings (Tutko, 1971; Raviv and Rotstenin,1982). One possible explanation is that group functioning involves certain factors such as (a) the team, (b) communication between coach and players and among players, (c) shared goal settings with agreement, (d) subdivision of activity and (e) coordination of efforts (Carron et. al., 1979; Murry, 1981). These factors give team players the feeling of sharing. As a result, players participating in groups share the feeling of success and failure together with the team members. In a situation like this, all the group players together equally experience stemming out from the pressure of competition or failure. Hence the effect is felt less intensely. On the other hand, pressure of competition or fear of failure leads the individual athlete to bear the pressure alone which causes high anxiety.

It is observed that athletes participating individually, scored higher in mental stress. This result has supported the finding of one previous study conducted by Tutko (1977). Hardman (1973) failed to observe any difference between the two groups of athletes. Group athletes share common interests. Because of similarity, group athletes understand each other and are likely to expose themselves to one another (Klevora, 1977). So their

interaction runs in a warm, relaxed and friendly manner. This establishes empathy amongst the athletes and offers a continuous availability to deal with every problem in an open context that is rich in clarification. This ensures the perfecting of the balance of the athletes' personality for which they can deal with anxiety and mental stress properly. But individual players fail to expose themselves to anyone who is similar to them and can understand their problems in their own way. Consequently, they suffer greater stress and anxiety (Raviv and Rotstein, 1982).

Sometimes group acts as a heaven for protection from a threatening environment and this becomes a means in satisfying the need for security (Smitt, 1983). When group athletes go under anxiety and mental stress, they realize that each person in the group is there to give support. Then they readily develop cohesiveness. Because of their cohesiveness, they exert cooperative and coordinated effort to deal with anxiety and mental stress for which the effect experienced is less intense. On the other hand, individual athletes have to bear all the pressure of competition alone without any other cooperative effort which tax greater anxiety and mental stress on them.

Finally, another reason for group athletes to have low anxiety and mental stress is that membership allows athletes in a group to share their own feelings (Smitt, 1983). As a result, they do not alone feel responsible for their behavior since diffusion of responsibility prevails in the group. This diffusion responsibility reduces anxiety and mental stress because the responsibility rests with the group collectively and not with the individual. On the other hand, individual athletes have to bear the responsibility and success and failure as well as the pressure of the performance alone. This makes the athlete more conscious about his actions and makes him distracted which causes high anxiety and mental stress.

Thus, on the basis of the above discussion, we can say that sport is a competitive issue whose pressure involves anxiety and mental stress. But excessive anxiety and mental stress is disruptive to attention, concentration, etc. and the execution of motor skills in an automatic flowing manner inhibits peak performance. In a situation like this, sport psychologists are needed to train athletes (both individual and group) to regulate their levels of arousal. This in turn will help them to minimize their anxiety and mental stress and will lead them to maximize their performance capabilities to guarantee success.

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COOPERATIVE AND COMPETITIVE BEHAVIOUR OF MALE STUDENTS REARED AT HOME AND INSTITUTION

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ABSTRACT

The present study was designed to investigate whether cooperative and competitive behavior of students differed by rearing place (home/institution). The sample comprised of 64 home-reared and 72 institutionalized male students of class VIII-X. They were administered a Bangla version of the Cooperative-Competitive Questionnaire. Data were analyzed by employing t-test. Results revealed significant differences in the cooperative and competitive behavior of students by rearing place, where institutionalized boys were more cooperative than home-reared boys but home-reared boys were more competitive than institutionalized boys.

INTRODUCTION

The process in which members of a group work together for mutually acceptable goals is known as cooperation. Cooperation may involve merely our participation in a set of mutually understood role behaviours. But competition is concerned with personal goals. Here, an individual tries to acquire a greater, than equal, share of the rewards available to members of the group. In one study, Dunn and Goldman (1966) showed that group members found the experience more satisfying when rewards were shared equally. De Charms (1957) found that competition leads to a higher level of performance than does cooperation. Shaw (1958) demonstrated that competitive situations arose stronger motivation to achieve but this stronger motivation might interfere with performance of certain tasks and might result in poorer scores. Begum and Ahmed (1986) found that competition prone subjects take greater risks than the cooperation prone and the neutral subjects in both individual and group situations.

Home plays an important role in the life of every person. Research findings have shown that variety of parental factors influence a child's academic achievement (Johnson and Medinnus, 1969). Begum (1985) found that achievement motivation was higher among home-reared children than that among institutionalized children. Rescorla et al. (1991) studied 83 homeless children and found that those children were delayed in vocabulary and visual motor development and had higher rates of behavioural symptoms. Khanam (1992) found that institutionalized children were more benevolent than the home-reared children.

On the basis of the above discussion, the present study was designed to investigate whether cooperative and competitive behavior of high school boys differed by their rearing place (home/institution).

METHOD

Sample

The sample comprised 64 home-reared and 72 institutionalized male students. They were the students of class VIII, IX and X from two boys institutions (hostel living boys of Dhanmondi Govt. Boys High School and Residential Model High School) and two boys schools (Lalmatia Boys High School and Mohammadpur Boys High School). All these schools were situated in Mohammadpur Thana under Dhaka City. Respondents' age ranged form 13 to 16 years. They belonged to middle and high socio-economic classes. From every class, first 12 students were selected as sample. Due to incomplete answers, 8 questionnaires of home-reared cases were rejected. Thus, the final sample size came to 136.

Measuring Instrument

Bangla version (Ahmed, 1984) of the Cooperative-Competitive Questionnaire developed by Pareck and Dixit (1974) was used to measure cooperative-competitive behaviour. It is a semi-projective test consisting of five items, each having three alternative responses indicating cooperation, competition and neutral tendencies. The first response showed cooperation, the second one competition and the third one a neutral tendency. Each response was scored either for cooperation I, or competition I or neutral 0. The maximum score, on either cooperation or competition could be 5 and the minimum could be 0.

The Bangla version of the questionnaire was found to be valid and reliable. Begum and Ahmed (1986) obtained the reliability of the questionnaire by administrating both English and Bangla versions of the questionnaire upon a group of 20 respondents at an interval of two weeks. Product moment correlation coefficient between the sets of scores was computed to be +.89.

Procedure

Selected schools and institutions were first contacted by the author herself and, in accordance with mutual convenience, a schedule for administering the questionnaire was prepared. In their tiffin time, selected students of all classes were placed in one class room and were given a brief introduction by the author about the purpose of the study. Then the questionnaire was administered to them. After completing their tasks, the respondents were thanked for their kind participation and cooperation.

RESULTS

In order to find out whether cooperative and competitive behaviour differed as a function of living condition (home/institution), t-test was used (Tables 1 and 2).

Table 1: Mean difference in cooperative scores of home-reared and institutionalized male students and SDs and t-value

Groups	Mean	SD	t
Home reared	2.03	1.92	
Institutionalized	2.92	1.36	2.17*

*p<.05

Table-1 shows that the mean cooperative scores were significantly different for home-reared and institutionalized male students and, institutionalized boys were more cooperative than home-reared boys.

Table 2: Mean difference in competitive scores of home reared and institutionalized male students and SDs and t-value

Groups	Mean	SD	t
Home reared	1.96	1.53	
Institutionalized	.89	1.59	2.74*

p<.05

Table-2 shows that the mean competitive scores were significantly different for home-reared and institutionalized male students and, home-reared boys were more competitive than institutionalized boys.

DISCUSSION

The present study attempted to investigate whether cooperative and competitive behavior of high school students differed by rearing place (home/institution). Results showed that institutionalized boys were more cooperative than home-reared boys but home-reared boys were more competitive than institutionalized boys.

The findings can be explained after Dunn and Goldman (1966) who showed that group members found the experience more satisfying when rewards were shared equally. As the institutionalized sample of the present study lived in a group atmosphere, they might feel more satisfied when they got reward equally. Probably this is why the institutionalized boys were more cooperative than home-reared boys.

It has been observed that home-reared boys were more competitive than institutionalized boys. This finding reflects the present social situation of our society. Our society is becoming more competitive and parents are giving encouragement to their children to take part in competitive behaviour. As a result, home-reared boys became more competitive than institutionalized boys. Rosen and D'Andrade (1959) found that mothers' awareness about the child's success was related to the child's high need achievement. So, it may be stated that due to mothers' encouragement, the home, reared boys were more competitive than of institutionalized boys.

It should be noted, however, the study had its obvious limitations. The sample was not representative of all the social classes since they were drawn only from Dhaka City and only from two schools and two institutions. More works are, therefore, required in this direction for deriving any dependable conclusion.

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CORRELATES OF PSYCHOLOGICAL MODERNITY

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ABSTRACT

The present study examined the relationship between modernity and some socio-economic variables. A total of 18 socio-economic variables were measured and their relationship with modernity were examined through regression analysis. Stepwise regression showed that six out of 18 variables were significantly contributing to modernity. Among the six variables, education had the greatest contribution to modernity (beta =.17), followed by experience in a city school (beta=.60), father's education (beta=.54), listening to radio/TV (beta=.51), duration of electricity in the house (beta=.50) and economic solvency (beta=.42). The importance of the findings has been discussed.

INTRODUCTION

The concept of modernity is a fairly broad one encompassing individual's values and behaviour toward the world. Inkeles and Smith (1976) defined modernity as a syndrome of the following traits: openness to new experience, readiness for social change, awareness of diversity attitudes and opinions around and inquisitiveness about information, orientation to present and future rather than the past, calculability and sense of efficiency rather than belief in fate. In some earlier studies (Sorcar, 1993-94, 96) positive relationship was observed between modernity and some socio-economic variables. The theory of modernity, as conceived by us, is based on the assumption that certain experiences have modernizing effect on the individual. It was, therefore, hypothesized that the more an individual will be exposed to those experiences, the more she/he will be modernized in terms of values, attitudes and behaviour. Hence, in order to test this hypothesis, certain socio-economic variables were identified and correlated with modernity scores of the sample individuals. Some of these variables (e.g. urbanization of residence, education, experience in city school, city dwelling etc.) were studied by Inkeles and Smith (1976), and most others were shown to be associated with fertility and family planning but their influence on modernity was not examined earlier.

Objectives

In view of the previous findings that psychological modernity is correlated with fertility and family planning behaviour, it is imperative to investigate the socio-economic variables that contribute to modernize an individual so that these variables could be

manipulated to control or regulate fertility behaviour toward designed goals. The specific objectives of the study were to:

1. measure and correlate some common socio-economic variables with psychological modernity, and to
2. estimate the relative contribution of the socio-economic variables to psychological modernity.

METHOD

Sample

The sample of the study comprised 400 couples representing urban (10%), semi-urban (40%) and rural (50%) areas of the Brahmanbaria District of Bangladesh. Though the places/spots were purposively selected, the respondents from within each spot were selected by simple random sampling technique. Paikpara Ward of Brahmanbaria Pourashava was selected to represent urban area, Ward No. 3 of Nabinagar Sadar Union was selected to represent semi-urban area and the Narayanpur village was selected to represent rural area. Separate sampling frame was prepared for each stratum and appropriate number of respondents were randomly selected using the Random Number Table. Thus, there were 40 urban, 160 semi urban and 200 rural couples in the sample.

Age of the male respondents ranged from 20-49, with a mean of 34.9 years and standard deviation of 6.3 years. The mean age of the wives of the respondents was 26.7 years with a standard deviation of 5.9 years. The respondents came from various occupational groups: e.g. farming (23%), business (43.5%), service (11%), village craftsmen (3.25%), doctors and teachers (4%) and unemployed labourers etc. (15%).

Measuring Instruments

The data for the study were collected through use of two instruments: (a) the questionnaire for socio-demographic variables including age, education, family planning information, etc., and (b) the Bangla version of the overall modernity scale (OM 12) developed by Inkeles and Smith (1976). The OM 12 scale contains 14 items with factor loadings ranging from .29 to .58 (Inkeles and Smith, 1976). The adapted Bangla version contains 15 items and has proved to be highly reliable (Sorcar, 1993). Item-total correlation for the items ranged from .08 to .46, all statistically significant at .05 level and above. The reliability coefficient for the full scale, estimated through K-R formula 20, was .95 which was close to .99 reported by the original authors. In the

standardization sample, the scores ranged from 7 to 32 with a mean of 20.6 and SD of 4.5. For computational purposes, the scoring system in the present study was modified by using 1 instead of 0 for non-modern answers and 2 or more for modern answers and thus the point of origin of the scale was changed. The scores, now, range from 17 to 43 with a mean of 32 and standard deviation of 5.6.

The instruments were administered on the husbands of the couples through home visits by trained interviewers. The data were analysed through computer using the SPSS software programme. Stepwise regression analysis was performed to examine the relative contribution of the socio-economic variables with modernity scores.

The Variables and their measurement

The independent variables which were measured to find out their correlation with modernity, were: degree of urbanization of respondent's residence, respondent's age, education, wife's education, family literacy, respondent's fathers education, experience in modern school, years in city school, electricity, modes of communication, economic solvency, land holding, number of religious institutions and high schools, distance from city, mass media exposure (possession & listening) and city dwelling after 15 years. All these independent variables were measured through interval or ratio scales and their relationship with psychological modernity (dependent variable) was estimated through product moment correlation. However, few more words need to be mentioned about the measurement of the variables. In this study, the degree of urbanization of residence was measured in a 3-point scale. A residence in a fully urbanized area like a city or a district head quarters was given a score of 3, followed by semi-urban areas like thana head quarters with lesser concentration of population than cities and lesser number of civic facilities was given a score of 2 and village area was given a score of 1. Similarly, levels of education were assigned numerical values ranging from 0 to 7. Illiterate people were given a score of 0, those with class I-IV grade education were scored 1, followed by those with V-IXth grade education a score of 2, those who passed SSC were given a score of 3, HSC passed were scored 4, degree passed were scored 5, post graduates were scored 6 and post graduates with additional professional degrees were scored 7. Possession of Radio/TV was scored from 0 to 2, with people having no Radio/TV were given a score of 0, those having either Radio/TV were given a score of 1 and those having both were given a score of 2. Radio/TV listening was measured in terms of number of days a respondent listened to Radio/TV broadcast per week. Most other variables used in the study were measured in interval or ratio scales.

RESULTS

The zero-order correlation employed to examine the relationship of 18 socio-economic variables with psychological modernity scores appear in Table 1. The figures in the correlation matrix Table indicate that except 'efficiency of communication' and 'number of high schools in the locality' of the individual, all other variables were significantly correlated with modernity. The degree of this significant relationship of the socio-economic variables with modernity ranged from .14 to .72 (See Table 1).

The highest degree of zero order correlation was found between husband's education and modernity (r=.72) followed by that between modernity and wife's education (r=.65), modernity and experience in modern school (r=.64), modernity and years in city school (r=.61), modernity and family literacy (r=.59), modernity and father's education (r=.54), modernity and duration of electricity in the house (r=.51), modernity and possession of Radio/TV (r=.54), modernity and listening of Radio/TV (r=.51), modernity and city dwelling after 15 years (r=.47), modernity and economic solvency (r=.42) and modernity and land holding (r=.17). In contrast, distance of the respondent's house from the city (r=.33) and number of religious institutions in the locality (r=.19) were found to be negatively correlated with modernity.

Psychological modernity

Table I: Correlation matrix

Variables	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19*
V1 Urbanization of residence	0.16	0.50	0.50	0.43	0.39	0.35	0.45	0.05	0.19	0.57	0.03	0.57	0.19	0.42	0.41	0.39	0.74	0.41
V2 Husband's age	1	0.18	0.09	0.29	0.14	0.12	0.11	0.04	0.01	0.19	0.01	0.17	0.02	0.10	0.09	0.08	0.39	0.14
V3 Husband's edn		1	0.80	0.73	0.63	0.82	0.73	0.19	0.41	0.50	0.0	0.45	0.28	0.13	0.85	0.54	0.49	0.72
V4 Wife's edn			1	0.72	0.57	0.63	0.64	0.27	0.46	0.46	0.02	0.43	0.34	0.08	0.59	0.55	0.48	0.65
V5 Family literacy				1	0.55	0.74	0.51	0.24	0.44	0.46	0.05	0.31	0.32	0.00	0.48	0.47	0.50	0.59
V6 Father's edn					1	0.51	0.49	0.14	0.32	0.45	0.01	0.36	0.21	0.12	0.49	0.44	0.38	0.54
V7 School modernity						1	0.68	0.19	0.38	0.45	0.01	0.29	0.23	0.05	0.43	0.39	0.38	0.64
V8 Yrs in city school							1	0.12	0.34	0.55	0.03	0.41	0.2	0.15	0.47	0.43	0.49	0.61
V9 Land holding								1	0.43	0.02	0.02	0.10	0.05	0.12	0.22	0.24	0.00	0.17
V10 Solvency									1	0.33	0.02	0.10	0.19	0.06	0.42	0.42	0.27	0.42
V11 Electricity										1	0.03	0.58	0.06	0.35	0.27	0.47	0.52	0.51
V12 Communication											1	0.00	0.08	0.05	0.03	0.04	0.03	0.06
V13 Dist. from city												1	0.13	0.78	0.37	0.30	0.54	-0.33
V14 Religious institutions													1	0.65	0.15	0.20	0.33	-0.19
V15 # high schools														1	0.14	0.06	0.10	0.07
V16 Possession of Radio/TV															1	0.85	0.43	0.54
V17 Radio listening																1	0.40	0.51
V18 City dwelling																	1	0.47

* V19: Modernity

In order to find out the relative contribution of the variables to psychological modernity, all of the 18 variables in the list were entered in a stepwise regression analysis. The results of stepwise regression have been summarized in Table-2.

Table 2: Stepwise regression analysis (Summary Table)

Step	Variable name	Multiple R	R^2	F	Beta in
1	Respondent's education	.718	.52	424.42*	.72
2	Electricity	.738	.55	247.48*	.51
3	Economic solvency	.747	.56	166.28*	.42
4	Radio/TV listening	.752	.56	128.14*	.51
5	Years in city school	.755	.57	104.67*	.61
6	Respondent's father's education	.758	.57	88.54*	.54

P<0.001

It appears from the above table that out of a total of 18 independent variables, only 6 turned out to be significantly contributing to psychological modernity of the individual. Those included: respondent's education, electricity, economic status, listening to Radio/TV, years in city school, and respondent's father's education. All of these 6 variables determine about 57.0% of the dependent variable (modernity) scores.

Among the six important independent variables, respondent's education had the greatest contribution to modernity (beta= 0.72), followed by individual's experience in city school (beta= 0.61), respondent's father's education (beta= 0.54), listening to Radio and TV (beta= 0.51), electricity in the house of the respondent (beta= 0.51) and economic solvency (beta= 0.42).

DISCUSSION

The objectives of the study were to examine the relative effect of some selected socio-economic variables on psychological modernity of an individual. Out of 18 independent variables, only six were found to contribute significantly. Among those variables, respondent's education had the greatest contribution to modernity which alone explained 52 percent of the variability in psychological modernity. With the inclusion of additional variable, electricity (in the regression equation), the explaining power of the independent variables increased to 55 percent and, with the inclusion of still others (economic solvency, Radio/TV listening, years in city school and respondent's father's education),

the variables' power of explaining the variability in the dependent variable rose up to 57 percent. These findings were well in agreement with those of Inkeles and Smith (1976).

Inkeles and Smith (op. cit.) observed a significant correlation (ranging from .24 to .74) between respondent's education and modernity in six countries including Bangladesh. Possession of electricity by rural inhabitants in Bangladesh is a relatively recent phenomenon. In the urban areas, electricity is available in every house. It is generally assumed that electricity modernizes the individual through exposing her/him to Radio/TV and making her/him aware of the inventions of science. The present finding supported this assumption. In like manner, it can be argued that economic solvency provides people more opportunities for exposure to modern influences and makes a man/woman less dependent upon fatalism to explain world events. Though possession of Radio/TV per se was not found to have significant contribution on psychological modernity, listening to Radio contributed to modernity. Inkeles and Smith (op.cit.), however, observed that the effect of mass media contact was mediated through education . But in the present study, even after controlling for other variables, the effect of Radio listening was significant (beta=.51, α =0.001).

The present study also revealed that years in city school, rather than in religious institutions or traditional village schools, significantly contributed to modernity. Similar findings were also reported by Inkeles and Smith (op.cit.) who observed that urban schools in Chile were more effective modernizers, yielding a gain of 2.4 points for each additional year of city schooling against only 1.5 points gain for each additional year of rural schooling.

Finally, respondent's father's education was found to have significant contribution to modernize the individual. Inkeles and Smith (op.cit.) also showed that educated fathers provided to their children training on human dignity, calculability and sense of efficacy during early childhood. Thus perceived, father's education exerts a great influence in inculcating modern values in children.

On the basis of the above discussion, it is clear that psychological modernity is a function of individual's level of education, possession of electricity in the house, economic solvency, listening to radio/TV, years of schooling in city schools and respondent's father's education. Hence, in order to achieve a definite declining trend in the fertility of the couples of our country, all efforts should be directed toward modernizing the couple's attitudes. Emphasis should be laid on increasing education, expanding facilities for electricity and exposure to mass media (Radio/TV) in order to modernize individual's attitudes and values. Family planning programme inputs, without modernization, are likely to turn out to be futile efforts.

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DELIBERATION ON CHILDHOOD DISABILITY: ITS PREVALENCE

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ABSTRACT

Contemplating the substantial affliction endured by the family as well as the community due to the existence of a disabled child, the present paper attempted to report various prevalence studies on childhood disability. It presented the issue from the standing of both developed and the developing countries, with specific consideration of the situation prevailing in Bangladesh. The present review pointed to the urgency of prompt consideration regarding the problem of childhood disability and suggested the importance of epidemiological studies to provide the necessary information and knowledge essential for undertaking any positive action ameliorating the engraving situation of childhood disability.

INTRODUCTION

Persons of all ages have been affected by disability who require services and attention throughout the world. Deliberation on childhood disabilities received exclusive attention because childhood suffice the foundation of future adult life. Childhood has been recognized as a distinct and crucial period of human life. Potential effects of early experience on later development of human beings have been substantially documented in various researches and theories of human behaviour. Needs and problems of today's children eventually project the craving and distress of coming grown-ups. Intervention and services centred around early childhood period were, thus, more liable to procure effective, long lasting, positive impact. Insight into situation affiliated with childhood disabilities would also speak for the issue concerning disability in adulthood. Moreover, prospects of intervention are more favourable for younger children. Early intervention programme with high risk infants achieved great success in promoting and or arresting the adverse effect.

UNICEF (1980) estimated that about one out of every ten of the world population are born with or acquire some sort of physical, mental, or sensory disabilities. Unless some special support and concern are provided, disability would encroach their capacities for normal development. A current population projection by Rehabilitation International (1980) shows that in 1975, there were more than 6 million disabled children in North America, more than 11 million in Europe, 13 million in Latin America and 88 million in Asia. The global picture conceived by the study projected that by the year 2000, there would be about 190 million disabled children of which 150 million would live in

developing countries. It was deducted that about 25% of world's population were suffering from the disastrous impact it had on the individual, family and community (Noble, 1981). Data from various countries all over the world depicted a large number of disabling conditions commonly found among the children of which locomotor problems, mental retardation, blindness and deafness were obtrusive.

Prevalence studies in the developed countries

United Nations Disability Statistics Data Base (DISTAT, 1988) provided a systematic documentation of data on disability in population census and various household surveys from several countries. As cited in DISTAT, the United States' population census of 1980 reported 8.5% disabled within the age group of 16-64 years. In the United Kingdom, disability survey conducted during the year 1985-86 reported 3.2% disabled persons in the age group below 15 years and 14.2% in the age group 16 years and above.

Numerous studies had been carried out in this connection in the United States and Latin America with varying results. Boyle et al. (1993) examined the prevalence of developmental disabilities and its impact among children below 17 years from the data of 1988 National Health Interview Survey in the United States. Following a structured in-person interview with a parent or other adult household member, attempt was made to identify and examine a wide range of developmental disabilities like deafness or hearing trouble, blindness , epilepsy or seizures, stammering and stuttering, other speech defects, cerebral palsy, delay in growth or development, learning disabilities, and emotional or behavioural problems. The result stated 17% of children in the USA to have ever had a developmental disability. The study depicted substantial impact of these conditions on the health and educational functioning of the affected children. Prevalence of specific disabilities were also agonizing according to the World Health Organization report as well as individual study results. Report of Rehabilitation International (1980) refereed to a Pan American Health Organization study in Latin America which cited 11.06% of prevalence estimate for various forms of disability. Out of which 3% experiencing locomotor problems, 3% mental retardation, 2% blindness, and other 2% deafness and speech problem. It also reported a survey by the United States Office of Education on 75 million school-age children that classified 10% handicapped under speech impairment (3.5%), mental retardation (2.3%), hearing impairment and deafness (1%), visual impairment (1%), locomotor and other problems (2.2%).

The overall prevalence rate of mental retardation has been estimated to be as high as 3 percent of the population. Shah (1991) reported that 5-15% of children aged 3 to 15 years in both developing and developed countries suffered from mental handicaps. Accordingly, there might be as many as 10-30 million severely and about 60-80 million

mildly or moderately mentally retarded children in the world. The incidence of mental retardation in the United States was estimated to be about 6.8 million persons (Robinson and Robinson, 1976). The prevalence of Down syndrome rate at live birth, found in their study, ranged from 5.8 to 20.8 per 10,000. California Birth Defect Monitoring Program (CBDMP) identified 1058 infants with Down's syndrome giving a crude prevalence of 1.03 per 1000 (Hahn and Shaw, 1993).

Large number of studies had also been carried out in Europe, Australia, and Japan. Empirical study of an unselected school population of 416 children aged 6-12 years by Sonander (1990) yielded prevalence of mental retardation of 1.3% in Sweden. Dolk and his associates (1990) covered a total population of 1,414,895 live and stillbirths by 19 registries in 11 countries in Europe during the study period of 1980-86. The administrative prevalence of mental handicap at the age of 10 years was ascertained by Joyce and his associates (1988), for a group of children born in 1973 and 1974 in New Zealand. Birth cohort prevalence of 4.33 per 1,000 live births were found. A community based study of prevalence of intellectual handicap in Western Australia found the rate to be 8.9 per 1000 live male births and 6.3 per 1000 female births with an overall rate of 7.6 (Wellesley et al., 1992). In Gunma prefecture of Japan, out of 236,000 school-going children between 6 to 15 years of age, 129 cases of severely mentally and physically disabled children were reported in the register of regional board of education (Machida et al., 1993). In a study of suburban area of Tokyo, high incidence rate was found for severe motor and mental retardation (1.0/1,000). Incidence rates for cerebral palsy and Down syndrome were 1.9 and 1.3 per 1,000 respectively (Suzuki and Kodama, 1991).

Prevalence studies in the developing countries

A large number of the disabled population live in the developing countries. In 1975, more than three-quarters of the world's disabled people lived in the developing countries and by 2000, this rate would rise to four-fifths (Noble, 1981). About one-third of the disabled population were children. Table-1 provides the United Nations Disability Statistics Compendium report (1990) on population census data about percentage of disabled persons by age group from selected Asian countries. It shows that the percentage of disabled children (under 15 years) varied from 14% to 34% in case of the Asian countries which was notably higher than those in the developed countries.

Table 1: Percentage of disable persons by age group in various Asian countries

Country	Census Year	Age Group (percentage)			
		0-14	15-24	25-59	60+
Bahrain	1981	14.2	15.5	36.7	33.7
Egypt	1976	17.2	17.5	47.1	18.1
Kuwait	1980	34.2	25.3	26.4	14.1
Pakistan	1981	19.8	12.8	32.7	34.7
Sri Lanka	1981	23.4	19.1	37.1	16.6

Source : United Nations Disability Statistics Compendium

Tao (1988), reviewing the recent prevalence survey in urban and rural areas of China, found prevalence rate similar to those in the Western countries but much higher rate was reported in minority regions. A national sample survey of China in 1987 (reported by Chen and Simeonsson, 1993) provided an estimate that one out of every five families had a member who was disabled. For children under 14 years of age, the overall prevalence rate of disability was 2.66%. The prevalence rate of mental retardation was 1.8% which accounted for 66% of all disabled children.

A report on deaf population in the third world considered 6 million children to be suffering from hearing impairment (Hammerman, 1981). Blindness survey of Nepal reported 0.84% to be blind people but fortunately childhood blindness reported in the study was low; only eleven cases of blindness were detected in children under the age of 15, estimated population was 4033 (Billiant et al., 1984).

Preliminary studies in developing countries suggested that the prevalence rate of serious mental retardation in the developing countries was also higher than that of the developed countries. An international pilot study on childhood disability was carried on in 10 study sites in 9 developing countries. House to house survey of 1000 children of 3 to 9 years age were screened at each study site by using simple questionnaire to identify children having disability, particularly severe mental retardation. The study gave an approximate prevalence estimation of severe mental retardation to be 5 to 16 per thousand (Belmont, 1984). A population survey of mental retardation was conducted in 44 electoral units of Pakistan by Hasan and Hasan (1981). The study included 7,012 persons from 1,483 randomly selected households and, out of 279 cases diagnosed as mentally retarded by a team of professionals, 70 cases were severely retarded. While rate of 10.3 per thousand was estimated for severe mental retardation, that of 30.7 per thousand was estimated for mild retardation. Narayanan (1981) gave an account of prevalence of mental retardation in southern India. Results of the epidemiological survey conducted in three villages in 1970 gave an average prevalence rate of 3.4 per 1000 for severe mental retardation. The prevalence rates of severe mental retardation in two villages surveyed in 1979-80 were found to be 6.4 per 1000, which were somewhat higher than the earlier study. In another

door to door household survey in southern India, Satapaty et al. (1985) reported a rate of 4.4 per 1000 in total population and 10.4 among children under 14 years of age, with male to female ratio of 5:3.

Prevalence of disability in Bangladesh

Besides some confined survey reports, prevalence estimate of disability was not adequately available in Bangladesh. BDHS (1994), however, reported that the proportions of various types of disability in Bangladesh were, in order, as follows: Visual impairments, 26.40%; Hearing impairments, 18.50%; Speaking impairments, 14.04%; Paralyzed parts of body, 13.33% ; Leg impairments, 11.04%; Mentally handicapped 4.68%; Goitre, 3.94%; Arm impairments, 3.40%; Memory impairments, 2.19%; Leprosy (White skin), 1.14% and Loss of feeling, 1.04%.

The first attempt to provide any empirical data on the situation of handicapped children in Bangladesh was undertaken by Mia and his associates (1981). A national survey covering 24,858 rural and 1,535 urban families was carried out to identify handicapped children and portray the magnitude of the problem. The study estimated that 2,52,850 families with a total of 14.24 million members were affected by the presence of handicapped children. The rate of handicapped children per thousand children was found to be 8.41 in rural areas and 7.08 in urban areas. A study of prevalence of nutritional blindness in rural and urban areas of Bangladesh carried out by Cohen and his associates (1985) found that out of 18,660 rural and 3,675 urban children examined, 738 rural and 211 urban children had abnormal eye function. The International Pilot Study on Childhood Disability carried out on 1,000 children between 3 and 9 years of age from rural areas of Bangladesh found that 56.58%) of the disabled children were mentally retarded (Zaman, 1982).

As an extension of the pilot study, an international collaborative research was undertaken covering 10,000 children of 2 to 9 years of age from urban and rural areas of Bangladesh. The overall prevalence of serious disability was 15.67 per 1000 (Zaman et al., 1992). Table-2 shows the prevalence rate of various serious disabilities among the children of Bangladesh as estimated by the above study. It is evident from the figures in the table that mental retardation and hearing disability were the two most prevalent serious disabilities in Bangladesh which were higher among the urban than among the rural population.

Table 2: Prevalence of various serious disabilities among the children of Bangladesh per thousand (95% C.I.)

Area	Serious mental retardation	Serious motor disability	Serious visual disability	Serious hearing disability	Serious seizure disability
All children	5.93 (3.42-8.43)	3.79 (2.54-5.04)	2.46 (0.26-4.67)	5.87 (2.14-9.60)	0.32 (0-0.69)
Urban	6.03 (3.77-8.29)	3.57 (1.83-5.32)	3.74 (0-8.16)	9.67 (2.12-17.22)	0.45 (0-1.07)
Rural	5.84 (1.47-10.21)	4.01 (2.21-5.80)	1.27 (0.25-2.28)	2.32 (0.96-3.69)	0.21 (0-0.62)

Source: Zaman et al. (1992). Childhood Disabilities in Bangladesh.

Condition of disabled children in Bangladesh

Like most developing countries, the disabled children in Bangladesh have been typically subjected to extreme negligence. Their needs have been ignored by the policy planners of the country battling to render the rudimentary standards of proper growth and development of which majority of the children are deprived of. Data on general health and educational situation of the children of Bangladesh furnished in Table- 3 reflect a pathetic and substandard scenario.

Table 3: General health and educational feature of the children of Bangladesh

Mortality rate		Malnutrition (percentage)		Primary education (rate)	
Infant (per 1000 live births)	Child (per 1000 in 1-5 yrs age)	Mild/ moderate	Severe	Enrolment	Completion
125	22	63	21	61	55

Source: UNICEF (1987). An analysis of the situation of children in Bangladesh.

According to the figures in the above table, infant mortality rate and percentage of mild/moderate malnutrition were both high but primary education enrolment and completion rates were not satisfactory. Though ensuring proper health and education for the children get priority in our national policy, the issue of disability is often ignored. The welfare of these disabled children have been left to a large extent to the hands of the immediate families yielding to charity and sympathy. Parents of mentally handicapped children have unrealistic attitude towards recognition and acceptance of their children. They either try to keep secret the presence of a handicapped child in the family or put undue pressure on the child to behave normally (Zaman and Rahman, 1981; Hammerman, 1981). Parents feel emotional burden and blame themselves for the

predestined condition. Social attitude toward developmental incompetence also has a significant impact on the future of the disabled children.

CONCLUSION

From the above discussion on the situation of disabled children of the world, it is clear that the magnitude of the problem has become so alarming that no nation can avoid its responsibility any longer. Conditions are more deplorable in the developing countries where services extended to the need of the disabled children are sparse. It was reasonably speculated that economic drawback affect the quality of life in the developing countries. Sub-standard health status and social well-being are deftly pictured in their below average life expectancy at birth and high infant and maternal mortality rates. Malnutrition, infectious diseases, illiteracy, poor living standard, improper hygiene and above all disproportionate distribution of facilities and services have been more prevalent in the developing countries than in the technologically advanced countries. Therefore, children in the developing countries have been extremely vulnerable to many biological and environmental factors which cause mental retardation and other developmental disability. Variations in prevalence estimates of different studies might be due to the variations in the ways disability have been defined, the categories considered, the population included and the methodology followed. But despite their limitations, all the studies demonstrated the growing necessity for urgent attention to the issue of mental retardation and childhood disability.

Understanding of the afflicting physical and social situation that are causing disability or predisposing high risk within an individual has been a pressing demand to generate and materialise any affective intervention strategy to promote the well-being of the disabled children. Epidemiological studies provide the information and knowledge necessary as a groundwork for such earnest effort. Such studies can identify high-risk population more specifically and can provide insight into the history of specific disabilities (Lin and Standley, 1962; Kramer, 1967). Urgency of epidemiological study in Bangladesh is to determine a comparative appraisal of factors essentially related to, or influencing, the occurrence and persistence of any disease by analyzing its distribution over time, place and persons. Subsequent derivation of biological and socio-demographic inferences from these observations would provide the basis for developing and evaluating preventive procedures and positive health policies for the disabled children in Bangladesh.

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FEELING OF INSECURITY AMONG HEARING IMPAIRED AND NORMAL SCHOOL STUDENTS

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ABSTRACT

A total of 88 students, 44 hearing impaired and 44 normal hearing students, were randomly selected from an educational institution of South Delhi. Half of the hearing impaired and normal students were males and half were females. They were administered Srivastava's short form of Maslow's Security-Insecurity Inventory. ANOVA revealed significant effect of gender on insecurity. It was concluded that students with hearing impairment were not more insecured than normal ones but the girls were more insecured than the boys.

INTRODUCTION

According to Maslow (1952), the feeling of security is synonymous to mental health. To him, insecurity refers to a feeling of rejection, of not being loved, isolated, a constant feeling of anxiety, tension and danger (Maslow, 1954). Many researches have been carried out in the Indian context to find out the correlation between insecurity and other personality dimensions. Jamuar and Singh (1973) reported a correlation of .89 between insecurity and neuroticism. Satyawathi and Indira (1977) obtained correlation of .89 and .77 between security and adjustment for normal and neurotics receptively. Hasnain (1989) reported that scheduled tribe and scheduled caste subjects were significantly more insecured than caste Hindu subjects. Hasnain and Kharkwal (1993) found negative correlation between feeling of security and defeatism.

Kakkar (1965) was of the opinion that for the all-rounded development of personality, the psychological needs, i.e., need for security, curiosity, achievement, recognition, etc. of children must be satisfied up to an optimum level. In case of dissatisfaction of these needs, symptoms of mental illness are manifested. Children who were hard of hearing and deaf, surely had difficulties in communication and interaction with other children (Davis, 1978). Hearing impairment, except in rare cases, affects the ease with which the communication occurs, and communication forms the basis of social interaction. The hearing impaired person's self-concept and confidence influence how rejection by others is perceived and handled. Meadow (1980) had summarised the studies of personality variables of deaf children and reported that personality inventories consistently showed deaf children have had more adjustment problems than children with normal hearing. When deaf children without apparent serious problems had been studied, they were

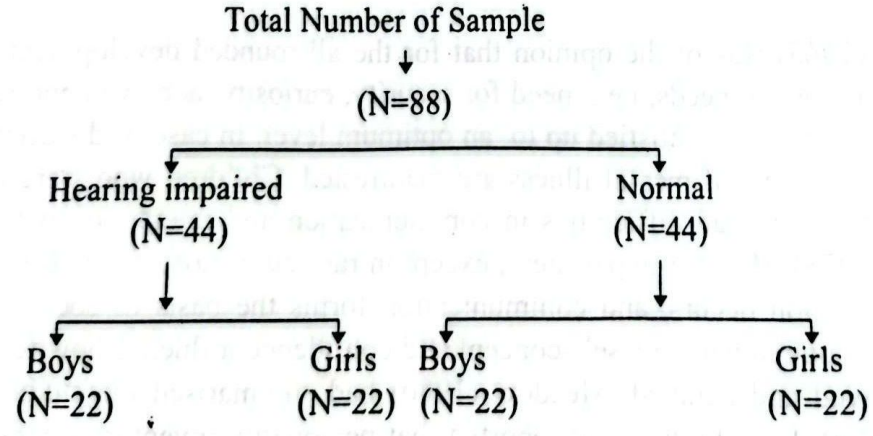
found to exhibit characteristic rigidity, egocentricity, absence of inner control, impulsivity and suggestibility. However, there was much diversity among deaf people which could be accounted for by education, communication and experience.

The above researches showed certain personality deficiencies due to lack or difficulty in communication and interaction. It was, therefore, worthwhile to explore the differences in insecurity feelings of hearing impaired and normal boys and girls. Such a study becomes important particularly in the light of summary of findings by Jangira in the Fourth Survey of Research in Education covering the period from 1983 to 1988. While summarising the studies, he stated that intellectual side of hearing impaired children had been studied extensively in the present century. It was found that when non-verbal and performance type tests were used, the deaf were almost equal to children with normal hearing. While reviewing the studies on deaf subjects from 1964 to 1969, Jangira concluded that thinking process of deaf children were similar to those of normal children. However, the hearing impaired might differ from normal children on personality factors like the feeling of insecurity. Therefore, the present study was planned to bridge the gap in the findings.

METHOD

Sample

A total of 88 students, 44 each hearing impaired and normal hearing students of class VI to VIII were randomly selected from an educational institution of South Delhi. In each group, there were 22 boys and 22 girls making a 2x2 factorial design. The design and number of subjects in each group may be shown digramatically in the following way:



The hearing impairment of boys and girls was of a moderate degree.

Measuring Instruments

Srivastava's (1976) short from of Maslow's Security-Insecurity Inventory was used to measure the insecurity of the subjects. In this short form, there are 24 items with 'yes', 'no', and '?' response categories. Higher total score on the inventory indicating higher insecurity.

RESULTS

To investigate whether feelings of insecurity differed by levels of hearing (impaired, normal) and gender (boys, girls) of children, and whether there was any interaction between the two independent variables in respect of feelings of insecurity, data were analyzed by employing two-way ANOVA (Table-1).

Table 1: Two-way ANOVA for feelings of insecurity by levels of hearing and gender of the respondents

Source of variation	Sum of Squares	df	Mean Squares	F
Levels of Hearing (H)	27.28	1	27.28	3.74[a]
Sex (S)	34.37	1	34.37	4.71*
Interaction: HxS	0.92	1	0.92	0.13[a]
Within Groups Error	613.13	84	.7.30	
Total	675.70	87		

* $p<0.05$; [a] Not significant.

Note: Mean insecurity score was 8.93 for the boys and 10.17 for the girls.

Figures in the table reveal that only the main effect of gender was significant. Neither the main effect of levels of hearing nor the interaction effect of the two independent variables were statistically significant. It means, feelings of insecurity was not different for hearing impaired and normal children, and that levels of hearing (impaired, normal) and gender did not have any combined/joint effect on feelings of insecurity.

However, the significant main effect of gender means that feelings of insecurity was not the same for boys and girls. And, referring to the footnote of Table-1, we find that mean insecurity score was higher for the girls ($\bar{x}$ =10.17) than the boys ($\bar{x}$ =8.93). That is, irrespective of levels of hearing, felt more insecured than the boys.

DISCUSSION

The present study was conducted to investigate whether feelings of insecurity differed by levels of hearing (impaired, normal) and gender (boys, girls) of children, and whether there was any interaction between the two independent variables in respect of feelings of insecurity. The results revealed that feelings of insecurity was not different for hearing impaired and normal children, but feelings of insecurity significantly differed by gender, with girls having more feelings of insecurity than the boys.

Possibly, psycho-social problems cause more feelings of insecurity than physical problems. Especially in the Indo-Pak sub-continent, the girls/females are in more disadvantageous position than the boys/males. They are the victims of male dominant society and are looked down in many occasions. Because the females are not as independent as the boys/males, they naturally feel insecured being subordinated by the males. The findings point to the urgent need to changing our traditional attitude towards the females.

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Note: Results and discussion sections have been re-written by the Editor.

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THE INFLUENCE OF CREATIVITY, TYPE OF SCHOOL AND GENDER ON DISCIPLINED IMAGINATION

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ABSTRACT

The influence of creativity, gender and type of school on disciplined imagination was investigated by taking 614 boys and girls aged 12-13 years studying in grade seven. The children were taken from schools situated in Dhaka city. For measuring creativity, Torrance Test of Creative Thinking was used. The translated Bangla version of Khatena-Torrance Creative Perception Inventory was administered for measuring disciplined imagination. Results showed superiority of boys over the girl students on disciplined imagination. Although the main effect of type of school was not significant, the interaction effects of type of school and gender, and creativity and gender, were significant.

INTRODUCTION

Creativity is a universal human function and leads to all forms of self expression. The analysis of creativity has been made in multiple directions. The popular meaning has given birth to the scientific definition of creativity. However, even today after the introduction of Guilford model of intellect, it seems difficult to develop a highly scientific and concrete idea of creativity. Even, Guilford has been criticized by other investigators. Further, it may be mentioned that some of the definitions may be acceptable to the researchers but they are also not complete as they fail to cover all the important elements required for a workable definition. Amidst these controversies, Hurlock (1978) has selected the definition given by Drevdahl (1964) who considered creativity as the capacity of individuals to produce compositions, products of ideas of any sort which are essentially novel and of which the individual was not aware before. Further, he stated that creativity may be considered as an imaginative activity where one finds synthesis of thinking. Through this activity, the information derived from past experience are synthesized and treated in the light of new patterns and combinations which result in generation of new correlates. Creativity may be taken in the form of controlled imagination that results in the achievement of some kind.

Barron (1963) proposed that a creative person willingly admits into her/his perceptions the complex and disordered, and is challenged to make new order out of the apparent chaos through the use of her/his own abilities and experiences. The pleasure derived from the solution motivates him/her to search for solutions defying rational construction and, therefore, to serve the need to achieve order and discipline.

Torrance and Khatena (1969), in a study on imaging in music, reported that the autobiographical information given by a group of music majors, derived from a creativity research questionnaire, was significantly related to their ability to produce original verbal images as measured by sounds and images. A study on creative perceptions found that when adults perceive themselves as creative, they tend to be more verbally original and imaginative (Khatena, 1977).

Smith and Tegano (1992) investigated the relationship between self-image and creativity in late adolescence and observed that more creatively scoring subjects' exhibit better psycho-social functioning than less creatively scoring subjects. Concomitant with their more heightened self assurance was subjects' expressed greater imaginative power. The findings, however, were contrary to the profile that depicts creative individuals as socially and emotionally deficient. Marjoribanks (1992) suggested that three is a relationship between students' leaning environment and creativity. The findings of another study (Sajid, 1984)suggested that the female respondents had higher scores on verbal creativity as compared to male subjects. However, the male respondents were found to be better on originality aspect of nonverbal creativity as well as on its composite scores.

Cross-cultural research with the Torrance Tests of Creative Thinking (Torrance, 1974) suggested that socioeconomic and political change through its influence on sex-role identification can have a strong impact on children's measured creativity. Raina (1980) reported a reversal in sex differences in creativity over a 10-year period in India. In 1969, boys in India had shown a consistent superiority on both Verbal and Figural tests, retesting a decade later revealed that both verbal and figural creativity had shifted in favour of the girls. In a review of studies reported between 1958 and 1974, Maccoby and Jacklin (1974) found that on verbal tests of creative ability, there were no sex differences in the early school years but from about age seven in most studies, girls showed an advantage. However, in non-verbal creativity, no clear trend across studies has been discerned.

The studies mentioned above indicate that creative persons perceive themselves in a different way. Environment seems to have an important role in the development of creativity. Studies have also shown that there is sex difference in creativity. In Bangladesh, there has not been any research conducted in this area earlier. The problem of the present study was based on the assumption that the causes of an individual's creative behaviour are multiple, interdependent and interactive. It could be best understood in the context of interaction among different psycho-social variables.

METHOD

Sample

The sample of the study comprised of 614 students taken from different schools of Dhaka City. A list of government and non-government schools and the S.S.C. examination results of those schools in the last two years were procured from the Director General's office of the Directorate of Secondary Education. From that list and from the information about the SSC results, four non-government and two government schools were selected because SSC examination results of those schools were more or less similar. Out of 614 students, 328 were boys and 286 were girls. They were all students of class VII. The number of government school students was 300 and the number of non-government school students was 314.

Measuring Instruments

Torrance Test of Creative Thinkig (T.T.C.T.): This test was developed by E. Paul Torrance (1974). Although a variety of figural tasks have been developed, the standardized batteries consist of three tasks, each designed to tap somewhat different aspects of creative functioning. These differences are reflected to some extent in the activity instructions.

Figural form 'A' has five measures which include fluency, originality, abstractness of titles, elaboration and resistance to premature closure. Since this is a figural test, the problem of language did not arise. Only the instructions had to be translated into Bangla.

The reliability cooefficients for the TTCT test, as reported by the original author, were very high (r=.90 and above). Attempts to ascertain the validity of the test yielded satisfactory evidence of validity (Torrance, 1972; Mourad, 1976; Rungsinan, 1977; Alieldin, 1978, 82).

Khatena-Torrance Creative Perception Inventory: The translated Bangla version of Khatena-Torrance Creative Perception Inventory was administered for measuring disciplined imagination. Torrance and Khatena (1969) reported stability coefficients of 0.73 for the test. The validity evidence reported by them indicates that the scores on their instrument are significantly related to the ability to produce original image, to write original stories, to produce provocative questions, etc.

The original scale was translated into Bangla and it was shown to two judges who had competence in both Bangla and English. Some minor corrections had to be done. The

reliability was studied on a group of 100 children in the age range of 12-13 years. The test-retest reliability over a period of one month was 0.87.

Procedure

For collecting data, the Headmasters/Headmistresses of the selected schools were approached. They were also given an official letter from the researcher in order to explain the purpose of the research and the importance of its findings. The heads of the institutions were assured of the confidentiality of the data collected by the researcher. The respective class-teachers of the classes where the tests were conducted were instructed by the heads of institutions to ensure cooperation of their students.

After distributing the booklets, answer-sheets and questionnaires among the students they were shown a model answer on the blackboard by the investigator. They were required to fill-up the personal information sheet before they proceeded to deal with the figures and questions in the booklets and questionnaires.

About 20-30 students participated in each session of administration of the test. It was ensured that all the students return their booklets, answer-sheets and questionnaire after giving each and every response.

RESULTS

To analyze the collected data, three-way ANOVA was applied (Table-1).

Table 1: Summary of ANOVA for the effects of type of school, creativity and gender on disciplined imagination.

Sources of Variation	SS	df	MS	F
A (Type of School)	0.72	1	0.72	0.24
B (Creativity)	64.70	2	32.35	10.56*
C Gender	76.97	1	76.97	25.12*
Ax B	5.65	2	2.82	0.92
A x C	35.81	1	35.81	11.69*
Bx C	43.74	2	21.87	7.14*
A x B x C	11.38	2	5.69	1.86
Within cells	1844.17	602	3.06	

* $p<0.01$

Table-1 indicates that the main effects of (i) creativity and (ii) gender, and the interaction effects between (a) type of school and gender and (b) between creativity and gender were statistically significant ($p<0.01$). Since the variable creativity had more than two levels, multiple comparison of disciplined imagination mean scores was done following significant 'F'. Table-2 shows that the difference in mean scores was statistically significant for each of the possible pairs of groups by levels of creativity.

Table 2: Comparison of the means of disciplined imagination scores belonging to high, average and low creative groups

Levels of creativity	t-value
High-Average	4.2**
High-Low	6.00**
Low-Average	2.23*

* $p<0.05$, ** $p<0.01$

[1] **Note**: The mean disciplined imagination scores by levels of creativity were 4.78, 4.08 and 3.70 for high, average and low creative groups respectively.

To interpret the significant interaction effects of type of school and gender, and creativity and gender, the respective group means were plotted graphically (Figures 1 and 2). Figure-1 reveals that the mean disciplined imagination score was highest for boys in the Govt. school, and the difference in mean scores was higher for girl's than the boys in the two types of schools.

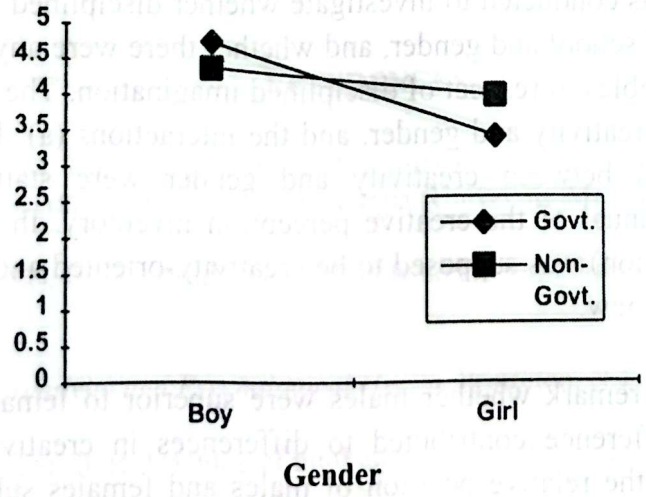

Figure 1: The interaction of type of school and gender on disciplined imagination

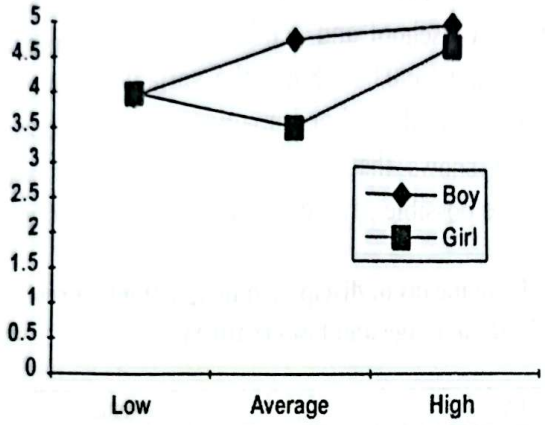

Figure 2: The interaction of gender and creativity on disciplined imagination

Figure-2 indicates that the mean disciplined imagination score was highest for boys in the high creativity group, but the difference in mean scores was highest between the boys and girls in the average creativity group.

DISCUSSION

The present study was conducted to investigate whether disciplined imagination differed by creativity, type of school and gender, and whether there were any interactions among the independent variables in respect of disciplined imagination. The results revealed that the main effects of creativity and gender, and the interactions (a) between school type and gender and (b) between creativity and gender were statistically significant. According to the manual of the creative perception inventory, this particular variable (disciplined imagination) was supposed to be creativity-oriented and the findings of this study supported this view.

It seems difficult to remark whether males were superior to females or vice versa. It appears that sex difference contributed to differences in creativity to some extent. However, as far as the relative position of males and females subjects on the test of creativity is concerned, the problem of generalization arises. Some studies have indicated males to be superior whereas others showed females to be superior. This in itself reflects the role of some other factors affecting the performance of males and

females on the test of creativity. The socio-cultural stimulation and advancement, SES, incentives for growth and development in home, school and college environment, availability of resources for creative output, personality characteristics and other such factors may be considered in this context. Thus, sex in itself should not be treated, in isolation, as a factor in creative pursuit. Studies should be conducted on various samples controlling all possible cognitive, conative and affective factors and isolating sex difference as a factor creating difference on creative measures.

de Bono's (1983) cognitive Research Trust and Lipman's philosophy for children (Lipman, et al. 1980) deliberately foster students' metacognitive understanding of the thinking skills. Students learn what each skill means and why, when and how it should be used. An increased understanding of creativity helps raise creativity consciousness, demystify creativity and convince students that given their present abilities, they are perfectly capable with interest and effort of hatching creative ideas and producing creative things. For example, students can be helped to understand attitudes and personality traits that contribute to one's creative imagination and creative productivity. Delcourt (1993) conducted a research and showed how gradually students become creative when there are interest and the atmosphere.

However, more studies should be conducted in this field. In this study, it has been found that high creative students have high disciplined imagination. Since disciplined imagination relates to attempting difficult tasks and preferring complex tasks, it is expected that for a developing country like Bangladesh, creative students with their imaginative power can contribute most to our society. When this rare quality is detected among the children it should be nurtured properly.

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JOB SATISFACTION, OCCUPATIONAL STRESS AND MENTAL HEALTH BY WORK SCHEDULE AND TYPE OF ENTERPRISE

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ABSTRACT

The present study was conducted on 200 shop-floor workers to investigate whether job satisfaction, occupational stress and mental health differed according to work schedule and type of enterprise, and whether there were any interactions between work schedule and type of enterprise in respect of job satisfaction, occupational stress and mental health. Results revealed that (a) each of job satisfaction, occupational stress and mental health of the respondents differed significantly, and independently, according to work schedule and type of enterprise but none of the interaction effects were significant; (b) the non-shift workers were more job satisfied than the shift workers, and the private sector workers were more satisfied than those of the public sector; (c) shift workers suffered more from occupational stress than the non-shift workers, and occupational stress was higher for the public sector workers than those of the private sector; (d) mental health was better for the non-shift workers than the shift workers, and the private sector workers enjoyed better mental health than those of the public sector, and (e) while job satisfaction and mental health were positively correlated to each other, occupational stress was negatively correlated to both job satisfaction and mental health.

INTRODUCTION

Job satisfaction may be defined as 'a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences' (Locke, 1976). After reviewing numerous studies on job satisfaction, Vroom (1964) identified three key-factors that affect job satisfaction, viz, individual characteristics, factors intrinsic to the job and extrinsic factors. In an extensive study, Khaleque and Rahman (1987) found that intrinsic factors as nature of the job, working environment, job security, supervision, job status, promotion, autonomy, communication, performance-based reward and recognition, work hour, and shift work influence job satisfaction greatly. They also found that family and social life of the workers significantly affect job satisfaction.

As a nebulous concept, stress can be thought of as 'any physical or psychological change that disrupts the organism's balance or homeosthesis' (Akil and Morano, 1995). Some intrinsic factors of occupational stress include poor working condition, shift work, long working hours, travel, risk and danger, person-job mismatch, new technology, and work

over/under load (Cooper and Smith, 1985; Edwards and Cooper, 1990). Cooper et al. (1978) also found role conflict and ambiguity as major sources of potential stress at work. Besides, Cooper (1996) identified organizational structure and climate, culture and management style as critical factors of occupational stress.

Mental health, according to Banks et al. (1980), refers to behaviors, attitudes and feelings that represent an individual's level of personal effectiveness, success and satisfaction. There is an extensive literature on the relationship among job satisfaction, occupational stress and mental health. Nevertheless, Rahman and Sorcar (1990), found that occupational stress was higher for the employees dissatisfied with their jobs than the satisfied ones. Sorcar and Rahman (1993), reported that employees with low occupational stress enjoyed better mental health than those with high stress.

The characteristic features of public and private sector enterprises distinguish them in different ways. First, public enterprise is more service-oriented whereas private enterprise is more profit-oriented. Second, employees in public enterprise enjoy more job security; on the contrary, those in private enterprise, are better paid-off. Studies in this area have also brought out some other distinctions. Solomon (1986), observed that (i) emphasis on use of performance-based rewards was significantly more prevalent in the private enterprise than the public enterprise, (ii) policies that promote efficiency were significantly more prevalent in the private sector, (iii) satisfaction with job was significantly higher among private sector employees than those in the pubic sector, and (iv) organizational climate was better in the private enterprise than in the public enterprise. The last finding was also confirmed by Rahman et al. (1991). Further, they found that personal need non-fulfillment was lesser among the private sector employees.

Researches on shift system are a major concern now-a-days because shift work is not seen as beneficial to shift workers and the various problems that this may cause are topics of great importance. A substantial research literature in this area has identified a wide range of problems that individuals may experience as a result of working in shifts. These range from acute disturbance of circadian rhythms and sleep, through an impoverished family and social life, to a chronic impairment of mental and physical health (US Congress, OTA, 1991; Waterhouse et al., 1992). The problems experienced by many shift workers are well documented in literature and fall broadly into three categories: difficulties with sleep (Akerstedt, 1990; Mahan et al., 1990; Tepas and Mahan, 1989), impairment of physical and psychological health, including neuroticism (Bohle and Tilley, 1989; Knuttson, 1989; Rutenfranz et al., 1985), and social and domestic disruption (Colligan and Rosa, 1990; Walker, 1985). Besides, studies have also shown that compared to non-shift workers, shift workers are more dissatisfied with their jobs (Jamal, 1981), they suffer more from mental and physical ill-health (Jamal, 1981;

Kovacs et al., 1995) and have higher occupational stress (Scott et al., 1995; Tzenova et al., 1995).

Available literature indicates that in the past, there have been attempts to investigate independently the effects of work schedule and type of enterprise on job satisfaction, occupational stress and mental health of employees. Joint effect of work schedule and type of enterprise seems to has been overlooked. But it is very much likely that both type of enterprise and work schedule may jointly influence the worker's job satisfaction, occupational stress and mental health. So, the present study was conducted to investigate whether there was any interaction effect of the independent variables on the dependent variables. The present study, thus, set forth the following objectives:

a) whether job satisfaction differed according to type of enterprise (public and private) and work schedule (shift and non-shift);
(b) whether there was any interaction between type of enterprise and work schedule in respect of job satisfaction;
(c) whether occupational stress differed according to type of enterprise and work schedule;
(d) whether there was any interaction between type of enterprise and work schedule in respect of occupational stress;
(e) whether mental health differed according to type of enterprise and work schedule; and
(f) whether there was any interaction between type of enterprise and work schedule in respect of mental health.

METHOD

Sample

In order to collect data, while the enterprises were selected purposively, the respondents within each organization were selected by stratified random sampling technique. A total of 200 shop-floor workers were selected, taking 100 from each of the public and the private sector enterprises. Within each type of organization, again, 50 respondents were selected from among the shift workers and 50 from the non-shift workers.

The means of age, experience, years of schooling and salary of the respondents were 33.1 years, 10.2 years, 7.8 years and Tk.1466.3 respectively. Of the respondents, 183 were married and 17 unmarried.

Measuring Instruments

The instruments used in the present study included

(i) Job Satisfaction Scale (Warr et al., 1979);
(ii) Occupational Stress Index (Srivastava and and Singh, 1981); and
(iii) General Health Questionnaire (GHQ-12)(Goldberg, 1972)

Job Satisfaction Scale: The scale developed by Warr et al. (1979) consists of 15 items concerning different aspects of job. Correlation between intrinsic and extrinsic satisfaction subscales for the full sample was 0.65. Correlation of total job satisfaction scale with personal life and style scales were 0.36 and 0.28 respectively. All of these correlations were significant. Respondents are required to express their satisfaction or dissatisfaction concerning each item by marking on a 7 point scale ranging from 'highly satisfied' to 'highly dissatisfied'.

Occupational Stress Index: The occupational stress index developed by Srivastava and Singh (1981) consists of 46 items with 5 alternative response ('strongly disagree' to 'strongly agree') categories. Out of 46 items, 28 are true keyed and 18 false keyed. The items relate to almost all relevant components of job life which cause stress in some way or the other such as role overload, role ambiguity, role conflict, unreasonable group and political pressure, responsibility for persons, under-participation, powerlessness, poor personal relations, intrinsic impoverishment, low status, strenuous working condition and unprofitability. The reliability index ascertained by split-half (odd-even) method and Cronbach's alpha coefficient for the scale were found to be 0.93 and 0.90 respectively.

Scores on occupational stress index were found to correlate highly with a measure of ill mental health (Srivastava and Singh, 1981). For scoring the true-keyed items, weightage of 1-5 are assigned respectively for 'strongly disagree', 'disagree', 'undecided', 'agree' and 'strongly agree'. The scoring for the false-keyed items is reverse. The possible range of scores on this index is from 46-230, with higher scores as indicative of high stress. For the present study, a Bangla version of the index was used which was found to have high inter-judge agreement (Rahman and Sorcar, 1990).

Mental Health Questionnaire: The questionnaire developed by Goldberg (1972) is a self-administered screening test for detecting minor psychiatric disorders in general population. The questionnaire consists of 12 items with 4 points Likert type scaling. The responses are given weights of 0,1,2 and 3 for 'not al all', 'somewhat', 'to a considerable extent' and 'to a great extent' respectively, with higher scores as indicative of better

mental health. Banks et al. (1980) used it as an indicator of mental health in occupational studies and found that it provides an useful estimate of mental health in employment related and occupational problems. The development studies (Goldberg, 1972) showed high internal consistency (0.65), test-retest reliability (0.73) and validity in terms of a good linear relationship with clinical check-up records as the criteria (r=0.70).

Procedure

The investigation commenced with prior permission of the concerned authorities. Data from public and private sector workers were collected by administering a set of questionnaires consisting of all the three measuring instruments that was given to each of the respondents. The questionnaire also included some personal demographic information which were to be filled in by the respondents prior to the completion of the three questionnaires. The respondents filled-in the questionnaires in presence of one of the investigators. Data from 200 respondents were thus collected.

RESULTS

To investigate whether job satisfaction, occupational stress and mental health each differed according to work schedule and type of enterprise and whether there were any interactions between work schedule and type of enterprise in respect of job satisfaction, occupational stress and mental health of the respondents, two-way ANOVAs were used (Tables 1-3) and to examine the intercorrealations among the dependent variables, Pearson's Product Moment Correlation Coefficients were employed (Table-4).

Table 1: Summary of 2-way ANOVA for job satisfaction by work schedule and type of enterprise.

Source of Variation	Sum of Squares	df	Mean Square	F Value
Type of Enterprise (A)	2730.605	1	2730.605	65.034*
Work Schedule (B)	1026.045	1	1026.045	24.437*
A x B Interaction	49.005	1	49.005	1.167
Residual	8229.5	196	41.987	-
Total	1203.155	199	-	-

* $p < 0.001$

Note: By type of enterprise, the mean job satisfaction score was 59.62 for the public sector and 67.01 for the private sector workers. By work schedule, the mean job satisfaction score was 61.05 for the shift workers and 65.58 for the non-shift workers.

The above table shows that job satisfaction of the respondents differed significantly ($p<0.001$) by type of enterprise and by work schedule but there was no interaction effect

of the two variables on job satisfaction. That means, job satisfaction was determined independently by type of enterprise as well as by work schedule. Further, referring to the footnote of Table-1, it may be observed that job satisfaction was higher for the respondents from the private sector than those from the public sector and, it was higher for the non-shift workers than the shift workers.

Table 2: Summary of 2-way ANOVA for occupational stress by schedule and type of enterprise

Source of Variation	Sum of Squares	df	Mean Square	F Value
Type of Enterprise (A)	24886.805	1	24886.805	209.233*
Work Schedule (B)	5460.125	1	5460.125	45.905*
A x B Interaction	160.205	1	160.205	1.347
Residual	23312.82	196	118.943	-
Total	53819.955	199	-	-

* $p < 0.001$

Note: By type of enterprise, the mean occupational stress score was 146.64 for the public sector and 124.33 for the private sector workers. By work schedule, the mean occupational stress score was 140.71 for the shift workers and 130.26 for the non-shift workers.

Table-2 reveals that the occupational stress scores of the respondents also differed significantly ($p<0.001$) by type of enterprise and by work schedule but there was no interaction effect of the two variables on occupational stress, indicating that occupational stress was independently influenced by type of enterprise as well as by work schedule. In addition, referring to the footnote of Table-2, it may be observed that occupation stress was higher for the respondents under public sector than those under private sector and, it was higher for the shift workers than the non-shift workers.

Table 3: Summary of 2-way ANOVA for mental health by work schedule and type of enterprise

Source of Variation	Sum of Squares	df	Mean Square	F Value
Type of Enterprise (A)	840.5	1	840.5	80.29*
Work Schedule (B)	348.48	1	348.48	33.289*
A x B Interaction	32.00	1	32.00	3.057
Residual	2051.8	196	10.468	-
Total	3272.00	199	-	-

* $p < 0.001$

Note: By type of enterprise, the mean mental health score was 20.26 for the public sector and 24.36 for the private sector workers. By work schedule, the mean mental health score was 20.99 for the shift workers and 26.63 for the non-shift workers.

The above table indicates that mental health of the respondents differed significantly ($p<0.001$) by type of enterprise and by work schedule but there was no interaction effect of the two variables on mental health, implying that mental health was independently influenced by type of enterprise as well as by work schedule. Further, referring to footnote of Table-3, it may be observed that mental health was higher for the respondents under private sector than those under public sector and, it was higher for the non-shift workers than the shift workers.

Table 4: Intercorrelations among job satisfaction, occupational stress and mental health.

Variables	N	Occupational Stress	Mental Health
Job Satisfaction	200	-0.64*	0.51*
Occupational Stress	200	-	-0.65*

* P<0.001.

Figures in Table-4 show that all the intercorrelations among job satisfaction, occupational stress and mental health were significant ($p<0.001$). However, while the correlation between job satisfaction and mental health was positive ($r=0.51$), those between job satisfaction and occupational stress ($r=-0.64$) and mental health and occupational stress ($r=-0.65$) were negative.

DISCUSSION

The present study was conducted to see the effect of type of enterprise and work schedule on each of job satisfaction, occupational stress and mental health and to investigate whether there was any interaction between the two variables in respect of job satisfaction, occupational stress and mental health. The findings revealed that: (a) the non-shift workers were more satisfied than the shift workers, and the private sector workers were more satisfied than those of the public sector, (b) shift workers suffered more from occupational stress than the non-shift workers, and occupational stress was higher for the public sector workers than those of the private sector; (c) mental health was better for the non-shift workers than the shift workers, and the private sector workers enjoyed better mental health than those of the public sector, and (d) while job satisfaction and mental health were positively correlated to each other, occupational stress was negatively correlated to both job satisfaction and mental health.

The findings about the effect of work schedule on job satisfaction, occupational stress and mental health were quite consistent with the past studies (Jamal, 1981; Kovacs et al., 1995; Tzenova and Topalova, 1995) which showed that shift-work causes sleep

disturbance, more depression, anxiety and eventually results in dissatisfaction with the job, increases occupational stress and mental ill-health of the employees.

The findings about effect of type of enterprise on job satisfaction, occupational stress and mental health were also in the expected direction. Those were consistent with some other previous studies (Solomon, 1986; Rahman et al., 1991) which indicated that compared to the public sector, private sector employees were better paid having a performance-based reward system, who worked under better work environment and better managerial style resulting in higher job satisfaction, lesser occupational stress and better mental health for those who work.

Finally, the findings about the intercorrelations among the dependent variables were also consistent with the findings of other studies (Rahman and Sorcar, 1990; Sorcar and Rahman, 1993). However, we should be cautious in our generalization before further studies are conducted in the same direction having relatively large and statistically determined sample size covering varieties of enterprises of different nature. It may also be suggested that the measuring instruments constructed abroad be re-standardized according to our context before they are used in any study.

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ORGANIZATIONAL CLIMATE: A MULTIDIMENSIONAL STUDY

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ABSTRACT

The present study is an expost-facto study aimed to assess the state of affairs as regard the organizational climate of a private company. For the present study, a questionnaire was developed to measure the organizational climate from a holistic point of view. The sample of the study comprised of 100 management level employees from different grades. All the sample were males and their age varied from 25 to 52 years. Data were analyzed by employing ANOVA and Duncan's Multiple Range Test. Further, the data were analyzed following principal component factor analysis, with varimax rotation. On the basis of cut-off point of eigen value, 6 factors were extracted out of 16 variables. Finally, the Scree test was drawn and four factors were retained on the basis of this test. The first factor extracted 33.20% of the total variance, second factor 24.58%, third and fourth factors extracted 15.48% and 9.92% of the total variance respectively.

INTRODUCTION

The industrial and organizational psychologists traditionally viewed behaviour as jointly determined by characteristics of the individual and the organization. Research in industrial psychology has been heavily skewed towards the individual. As Hackman (1976) pointed out, substantial knowledge is available about the attributes of individuals which are important for understanding organizational behaviour but, on the other hand, less is known about the organizational side of the equation. The above trend has, to some extent, been reversed from the mid-sixties with the use of the concept of climate. As argued by Payne and Pugh (1976), the traditional concerns of studying organizational behaviour from the point of view of the individuals are getting transformed into more general interests in the study of the organization's environmental setting that influences both individual and group behaviour. Discovering how the organization is a psychologically meaningful environment for its members, has led to the concept of organizational climate. Under the heading of organizational climate are subsumed indicators of the subjective reactions of the organizational participants to their work life. The "mood" of the organization members has become a major concern since this positive or negative reaction, however subjective, has substantial repercussion for organizational performance.

The construct of organizational climate is important in this regard as it provides a conceptual link between analysis at the organizational level and the individual level (Litwin and Stringer, 1968; Payne and Manfield, 1973) and has been shown to influence the attitudes and behaviours of individuals in organizations (Litwin and Stringer, 1968; Pritchard and Karasick, 1973; Waters et al., 1974). The early studies on climate considered it to be a correlate of work motivation and productivity (Litwin and Stringer, 1968) or salesperson success (Schneider and Bartfelt, 1968, 1970). McGregor (1960), in his book, devotes an entire chapter to what he called "the managerial climate". He conceptualized climate as the "day-by-day behaviour of the immediate superior and of the other significant people in the managerial organization". In other words, McGregor's view of climate was that managers create the climate in which subordinates work by what they do, how they do it, how competent they are, and their ability to make things happen through upward influence in the organization. The first paper that relatively comprehensively conceptualized and operationalized climate as it is studied today was presented by Litwin and Stringer (1968) who presented a new familiar set of six climate dimensions-including structure, reward, warmth and support-as reported by organization member perceptions. Bumgartel (1971) viewed organizational climate as a product of leadership practices, communication practices and enduring and systematic characteristics of the working relationship among persons and divisions of any particular organization.

Climate is widely defined as the shared perceptions of "the way things are going around here". More precisely, climate is a shared perception of organizational policies, practices and procedures both formal and informal. Climate is a molar concept that is indicative of the organization's goal and appropriate means to goal attainment. Multiple climates are thought to exist in organizations, and these climates have recently been specified by identifying clusters of persons who share a common perceptions (Joyce and Slocum, 1984; Rentsch, 1988).

The present effort is an expost-facto study aimed to assess the state of affairs as regards the organizational climate of a large pharmaceutical company in New Delhi. Keeping this purpose in mind, the related literature of the past 25 years were reviewed. However, the search proved inconclusive because of the diversity in definition and multidimensional nature of the concept of organizational climate. Different researchers have used different dimensions of climate and have studied climate in relation to concepts like job satisfaction and job anxiety (Sharma and Sharma, 1989), organizational climate and job satisfaction (Chadha, 1988), organizational structure, climate and personality (Kumar and Rao, 1986), organizational climate and need satisfaction (Kandan, 1985), leadership styles, interpersonal need structure and organizational climate (Sinha and Kumar, 1985), etc. None of these were completely relevant to the

organization. As a result, it was decided that a questionnaire would be developed to cater to the uniqueness of this organization. Therefore, the aim was also to see the differences in climate perception over the various grades of managers.

Any organization for its survival has to be dynamic and continually interacting with its internal and external environment. This study has been designed to map out the organizational climate which can be understood through the perceptions and attitudes of the personnel on factors like interpersonal relations, leadership phenomenon, organization structure, etc.

METHOD

Sample

The sample was drawn from among the management employees and a total of 100 management employees were taken from a large public sector organization. Due to the uneven distribution of management employees by designation, a stratified random sampling was employed to obtain the respondents from various positions for a crossectoral comparison on organizational climate. All the respondents were male and their age varied from 25 to 52 years. The distribution of respondents by designation were as follows:

Designation	Number
Chief General Manager	12
General Manager	11
Deputy General Manager	16
Assistant General Manager	10
Chief Personnel Manager	17
Personnel Manager	14
Deputy personnel Manager	8
Assistant Personnel Manager	12
Total	100

Instrument Construction

As per the purpose of the study a questionnaire was developed comprising of 68 items having 16 dimensions, namely: Rewards/Incentive system, Participation in decision making, Support system, Organizational structure, Performance standards, Conflict

mechanisms and resolution, Communication and feedback, Motivation, Identity/stability, Warmth and trust, Interpersonal relations, Responsibility, Control, Leadership phenomenon, Financial image and Power politics. In the first dimension, there were 8 statements and the other dimensions had only 4 statements each.

This was a four-point rating scale. But due to the agency's requirement, a fifth category was added, this being- 'cannot comment'. However, it was given the least weightage of 0. The questionnaire was item validated with the help of judges and the reliability (split-half) analyzed, was found to be 0.94. Rephrasing and re-wording was then done on the basis of expert opinion both from the industry as well as academicians.

Procedure

Before selecting the sample, management employees' consent was taken from appropriate authorities and each respondent was contacted personally by visiting the organization. Respondents were explained the climate scale; the instructions were explained clearly in case of doubt. They were given the scales separately so that they were not able to exchange their views. It was ensured that they rated the attitude scale on the spot so that the immediate reactions were known.

Operationalization of the dimensions measured

1. Rewards/Incentive system: The feeling of being rewarded for a job well done; emphasis that novel work/ideas should be rewarded; the perceived fairness of rewards which are based on merit.

2. Participation in decision making: Degree to which employees take part in decisions that affect their work situation.

3. Support system: The perceived helpfulness of the managers and other employees in the group; emphasis on mutual support and encouragement from above and below.

4. Organizational structure: Degree to which the lines of authority are clearly defined, degree to which roles are clear-cut, degree to which bureaucratic levels are present.

5. Performance standards: The perceived importance of achieving targets; the emphasis of regular reviews; the emphasis on doing a good job.

6. Conflict mechanism and resolution: The consideration of all grievances, the emphasis is placed on getting a problem out in the open to resolve it.

7. Communication and feedback: Deals with the extent to which information is available; to the degree to which there is a free flow of information; emphasis on the presence of forums for the exchange of ideas.

8. Motivation: The amount of challenges in the job, the extent to which the job provides one with a sense of accomplishment; the degree to which financial compensations are adequate.

9. Identity/stability: The feeling that you belong to a company; the degree to which you feel you are a valuable member of the organization, the degree to which members prefer to remain in the organization or leave it.

10. Warmth and trust: The prevalence of a friendly trusting atmosphere; the importance given to friendly relations; the sensitive handling from superiors.

11. Interpersonal relations: The prevalence of friendly and informal social groups; degree to which informal get-togethers are encouraged.

12. Responsibility: The feeling of being your own boss, the degree to which one is fully in charge of his job; emphasis on working without interference.

13. Control: The degree to which one has freedom to work in one's style; not having one's work closely monitored.

14. Leadership phenomenon: The feeling of having a one-man in the organization; the degree to which the group functions as a team; the degree to which suggestions are taken.

15. Financial image: Indicates the degree of risk-taking an organization indulges in; to the degree to which a sense of security prevails.

16. Power politics: The degree to which one feels manipulated in the organization; the degree of professional rivalry present; the degree to which the divide and rule policy is seen functioning.

Analysis of Data

The analyses were done by means of ANOVA, Duncan's Multiple Range Test and finally factor analysis was done following principal component factor analysis (Hotelling, 1933), with varimax rotation (Kaiser, 1958). On the basis of the cut-off point of eigen value "one", the factors were reduced and for retaining the factors "Scree Test" (Cattlle, 1966) was employed. Statistical package for the social sciences (SPSS) was used for this purpose. Since the sample size was 100, variables with factor loading of 0.50 or above were examined to help in interpreting the factors (Harman, 1976). Thus, out of 16 variables, 6 factors were extracted on the basis of cut-off point of eigen value and finally four factors were retained on the basis of Scree test for interpretation.

RESULTS

Results of statistical analyses have been presented in Tables 1, 2, 3, and 4.

Table-1 shows that there were significant differences among the managers only on the dimension of warmth and trust.

Table-2 indicates that managers of each of the eight groups (positions) differed significantly from the others on the dimension of warmth and trust.

Table-3 indicates that factor analysis resulted in the identification of six factors only.

Figure-1 shows the result of Scree Test which indicates the retention of 4 factors.

Table-4(a) shows that variables namely rewards/incentive, organizational structure, performance standards, conflict mechanism and resolution, communication and feedback, motivation, identity/stability and power politics turned out to be significant for Factor-1 which extracted 33.20% of the total variance. Table-4 (c) displays that variables namely support system, warmth and trust, responsibility, control and leadership turned out to be significant for Factor-II which extracted 24.5% of the total variance. Table 4(c) depicts that variables namely warmth and trust and interpersonal relations turned out to be significant for Factor-III which extracted 15.48% of the total variance. Similarly, Table-4(d) indicates that the variable 'financial image' turned out to be significant for Factor-IV, which extracted 9.92% of the total variance

Table 1: Summary of one-way ANOVA for 16 variables by eight positions of management employees

	Source of Variation	SS	Df	MS	F
Reward/Incentive	Between Treatment within treatment	2178.34 42209.10	7 92	311.19 458.79	0.67
Decision Making	Between treatment Within treatment	2869.11 29822.64	7 92	409.9 324.16	1.26
Support System	Between treatment Within treatment	1870.99 25905.45	7 92	267.28 281.58	.95
Organizational Structure	Between treatment Within treatment	548.23 17966.50	7 92	78.32 195.28	.40
Performance Standards	Between treatment Within treatment	241.74 11504.26	7 92	34.53 125.05	.27
Conflict Mechanism & resolution	Between treatment Within treatment	1009.21 25361.78	7 92	144.17 275.67	.52
Communication & feedback	Between treatment Within treatment	575.47 14870.28	7 92	144.17 161.60	.51
Motivation	Between treatment Within treatment	2249.61 22059.14	7 92	321.37 239.77	1.34
Identity/Stability	Between treatment Within treatment	3601.48 25621.27	7 92	514.50 278.49	1.85
Warmth & Trust	Between treatment Within treatment	3602.66 19262.09	7 92	515.66 209.37	2.46*
Interpersonal Relations	Between treatment Within treatment	241.97 21657.14	7 92	3427.00 235.40	.15
Responsibility	Between treatment Within treatment	405.10 13788.09	7 92	57.87 149.87	.39
Control	Between treatment Within treatment	2018.36 23807.14	7 92	288.34 258.77	1.11
Leadership Phenomenon	Between treatment Within treatment	1248.56 14432.88	7 92	178.37 156.88	1.14
Financial Image	Between treatment Within treatment	2260.50 45471.70	7 92	322.90 494.30	.65
Power Politics	Between treatment Within treatment	2009.19 2521.56	7 92	287.63 274.08	1.05

*p<.05

Table 2: Duncan's multiple range test on warmth and trust dimension

	Means	GR3 46	GR7 48	GR1 49	GR4&5 56	GR2 59	GR6 64	GR8 67	CR
GR3	46	-	-	-	-	13*	18*	21*	10.15
GR7	48	-	-	-	-	11*	16*	19*	8.7
GR1	49	-	-	-	-	10*	15*	18*	7.25
GR4&5	56	-	-	-	-	-	8*	11*	5.8
GR2	59	-	-	-	-	-	5*	8*	4.3
GR6	64	-	-	-	-	-	-	3*	2.7

* p<.05

Table 3: Factor matrix

Variables	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI	Commonality
Rewards/Incentive system	.740	.160	.077	.101	-.330	.104	.709
Decision making	-.180	.591	.281	-.334	.207	-.525	.891
Support system	.110	.617	-.325	-.147	.321	.413	.794
Organizational structure	.660	-.299	.294	.029	-.017	.217	.660
Performance standards	.624	.252	.085	.081	.045	-.223	.518
Conflict mechanism & resolution	.682	.330	-.101	.120	.079	-.471	.827
Communication & feedback	.730	-.092	.196	-.107	-.054	.018	.594
Motivation							
Identity/Stability	.634	.331	-.427	.118	.183	-.125	.757
Warmth and trust	.776	-.190	.258	.091	.028	.128	.730
Interpersonal relations	-.051	.415	.657	.152	-.075	.126	.651
Responsibility	.113	-.362	.864	-.011	.016	-.024	.891
Control							
Leadership	-.180	.681	-.119	.109	-.344	.220	.689
phenomenon	.120	.590	-.180	-.241	-.428	-063	.640
Financial image	-.085	.803	.038	.082	.043	.318	.771
Power politics	.123	.032	.201	.941	-.019	.015	.943
	.681	-.071	-.045	.037	.631	-.092	.879
Eigen value	3.967	2.937	1.850	1.185	1.008	1.001	
Pct. of variance	33.20	24.58	15.48	9.92	8.44	8.38	

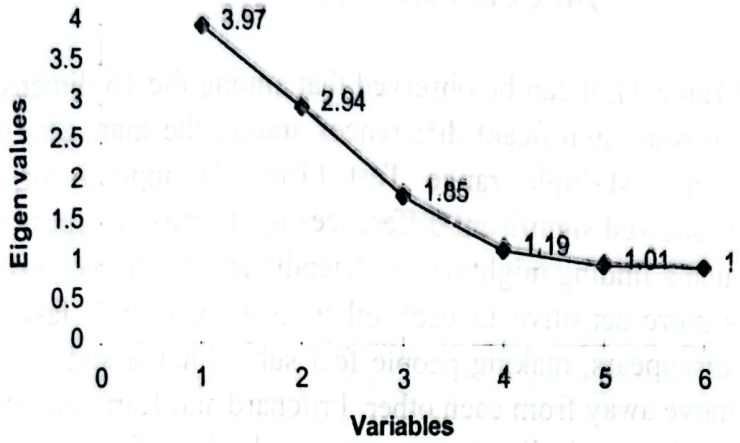

Figure 1: Scree test

Table 4: Significant loading on variables of Factor-I through Factor-IV

Name of the variables	Loading
(a) Factor-I	
1.Rewards/Incentive scheme	.74
2. Organizational structure	.66
3. Performance standards	.62
4. Conflict mechanism & resolution	.68
5. Communication & feedback	.73
6. Motivation	.63
7. Identity/Stability	.77
8. Power politics	.68
(b) Factor-II	
1. Support system	.61
2. Warmth and trust	.58
3. Responsibility	.68
4. Control	.59
5. Leadership	.80
(c) Factor-III	
1. Warmth and trust	.65
2. Interpersonal relations	.86
(c) Factor-IV	
1. Financial Image	.94

DISCUSSION

From the results obtained (Table 1), it can be observed that among the 16 dimensions of organizational climate, there were significant differences among the managers only on 'warmth and trust'. Duncan's Multiple range Test (Table-2) applied for further confirmation of the findings showed significant differences by dimensions (positions) of managers. The reason for such a finding might be that friendly and warm feelings among superiors make employees more sensitive to each other. Normally, in a fast moving organization, this warmth disappears, making people feel subordinated and as a result, people in the organization move away from each other. Pritchard and Karasick (1973), in a study on the effect of organizational climate on managerial job performance and job satisfaction, found that the dimension of warmth and trust was highly significant. This was interpreted by them as the fact that it is very important for the individual to have warm and trusting relations, otherwise it may result in low satisfaction on the job which has further repercussions on performance. Table-3 showed result of factor matrix which extracted 6 factors only. The result also shows the commonality, the eigen value and the pct. of variance. Figure-1 shows the result of scree test and finally 4 factors were retained. Table 4 shows most important variables for factor-I, II, III and IV.

The findings of the present study do not conform to any traditional model of organizational climate and it has been pointed out earlier that every organization has its unique climate. Hence, researches are designed to cater to this uniqueness. The present study is also no exception. The particular clusters of dimensions under each factor are not claimed to be generalizable across the universe of organizations. These may be just indicators of the nature of the organization and its uniqueness.

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PERCEPTION OF ORGANIZATIONAL CLIMATE BY DIFFERENT LEVELS OF EMPLOYEES

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ABSTRACT

The aim of the study was to investigate the organizational climate as perceived by the employees at various levels of hierarchy in a bulb factory. A sample of 192 employees comprising of 27 managers, 60 supervisors and 105 workers having a minimum of 2 years of experience in that organization was selected. The proportionate mean scores on organizational climate questionnaire revealed that authoritativeness was perceived most by the managers and the workers whereas supervisors felt bureaucracy to be most persistent. F- test followed by post hoc t-test was applied. Participation, Bureaucracy, Rules observation, Job specificity, Union-Management relationship and Authoritarianism dimensions were found to have significant differences. Managers V/S Supervisors were found to have significant differences on Participation, Bureaucracy, Authoritarianism and Job specificity dimensions. Supervisors V/S Workers had significant differences only on Participation and Rules observation dimensions. Lastly, Managers V/S Workers had significant differences on all the six dimensions.

INTRODUCTION

Organizational climate is a set of characteristics that describes an organization and that distinguishes an organization from other organizations, is relatively enduring over time, and that influences the behaviour of people in the organization (Forehand and Gilmer, 1964).

Just as different climates can exist for each organization, job or work group, different climates can also exist for various organizational goals or organizational imperatives, e.g. climate for productivity and climate for service (Schneider and Gunnarson, 1990). Organizational climate acts as a moderator of the relationship between leadership styles and influence strategies (Ansari, 1989) and as a facilitator of psychological growth of the employees (Kumari and Mathur, 1986; Klein, 1991).

Chacko & Anantharaman (1993) found significant correlation between organizational climate and organizational effectiveness. Kumar and Malimath (1993) analyzed the relationship between organizational climate and dynamics of power in a public sector organization and concluded that managers at a higher level perceived more

responsibility, reward and structure. Also, managers with higher educational qualification perceived more conflict in their work set-up.

The review of related literature shows that the employees at different levels of hierarchy perceived organizational climate differently. The present study was done to know about the persisting organizational climate of a bulb factory and help the management to tighten up the loopholes that existed, which would certainly help the organization to enhance the well-being of its employees and in turn the production. The trade union also, to some extent, affect the organizational climate of an organization. Therefore, it seemed necessary to conduct a study about the different factors which have an influence on the organization and, perhaps, the type of organizational climate that exists as a result.

METHOD

Sample

Out of 1200 employees having a minimum of 2 years of experience in the organization, a sample of 192 males serving in various departments was selected from Hind Lamps Ltd., Shikohabad. The sample comprised of 27 managers, 60 supervisors and 105 workers selected by random sampling method.

Measuring Instrument

Hindi version of Organizational Climate Questionnaire (OCQ) (Srivastava, 1988) was used. This includes a total of 10 dimensions. The questionnaire consists of 55 items having five alternatives to each question, i.e. always true, frequently true, true, seldom true and never true.

Procedure

The data were collected from the employees individually. All the required instructions were given and the respondents were told that the sole purpose of this survey was academic and their responses would be kept confidential.

Data Analysis

One-way analysis of variance was performed for the total sample (N=192) for each of the dimensions, i.e. participation, bureaucracy, autonomy, rules observation, job specificity, job routineness, union-management relationship, authoritarianism,

authoritativeness and social loafing. Post hoc t-test was applied for the significant F-values to search for the difference comparing the levels of employees. Apart from this, proportionate mean was also calculated to know about the ranking of all the dimensions by levels of employees.

RESULTS

Table-1 shows that F-values were significant for the dimensions of participation, bureaucracy, rules-observation, job-specificity, union-management relationship, and authoritarianism ($p< 0.01$). This indicates that there exists a significant difference among the employees of different levels on these six dimensions of organizational climate.

Table 1: Mean Scores, Proportionate mean scores (Rank order) and F-values on each dimension by levels of employees

Dimensions	Managers		Supervisors		Workers		
	Mean	Pro.M.	Mean	Pro. M.	Mean	Pro. M.	F.
Participation	13.44	1.92 (3)	9.03	1.29(10)	7.03	1.00 (10)	18.60*
Bureaucracy	9.37	1.87 (4)	12.62	2.52 (1)	11.79	2.36 (4)	8.57*
Autonomy	8.19	1.64 (8)	6.82	1.36 (9)	7.28	1.46 (9)	1.14
Rule observation	3.19	1.56 (9)	3.85	1.93 (7)	5.06	2.53 (2)	12.51*
Job specificity	11.19	1.86 (5)	13.65	2.28 (3)	14.75	2.46 (3)	7.82*
Job Routineness	7.26	1.82 (6)	8.5	2.13 (5)	7.97	1.99 (7)	1.85
Union-Management Relationship	21.63	1.97 (2)	24.45	2.22 (4)	25.73	2.34 (5)	4.81*
Authoritarianism	6.59	1.32 (10)	10.18	2.04 (6)	10.92	2.18(6)	14.74*
Authoritativeness	11.59	2.32 (1)	12.42	2.48 (2)	12.87	2.57 (1)	1.22
Social loafing	8.37	1.67 (7)	9.22	1.84 (8)	9.77	1.95 (8)	1.55

* $p<0.01$; Pro. M.= Proportionate Mean. Figures in parentheses indicate ranks of the dimensions.

The rank ordering according to the proportionate mean scores for the managers were authoritativeness, union-management relationship, participation, bureaucracy, job specificity, job routineness, social loafing, autonomy, rules-observation and authoritarianism (in descending order). For the supervisors (the ranks in descending order) were bureaucracy, authoritativeness, job specificity, union-management relationship, job routineness, authoritarianism, rules observation, social loafing, autonomy and participation. Furthermore, the workers' ranking order for the various dimensions (in descending order) were authoritativeness, rules-observation, job specificity, bureaucracy, union-management relationship, authoritarianism, job-routineness, social loafing, autonomy and participation.

As a requisite for further analysis, post hoc t-tests for the significant F-values were applied to compare the difference by levels of employees. Table-2 shows that each of the three levels of employees differed significantly from the others on the dimension of 'participation'. On the dimension of 'bureaucracy', there were significant differences between managers and supervisors, and managers and workers. On the dimension of 'rules observation', there where significant differences between supervisors and workers, and managers and workers. On the dimension of 'job specificity', there were significant differences between managers and supervisors, and managers and workers. On the dimension of 'union-management relations', only the managers and workers differed significantly. On the dimension of 'authoritarianism', there were significant differences between managers and supervisors, and managers and workers. In other words, for the climate dimensions under consideration, there were no significant differences between supervisors and workers on bureaucracy, managers and supervisors on rules observation, supervisors and workers on job specificity, managers and supervisors and supervisors and workers on union-management relations, and supervisors and workers on authoritarianism.

Table-2: t-values for multiple comparisons

Dimensions	Managers V/S Supervisors	Supervisors V/S Workers	Managers V/S Workers
Participation	3.64**	2.35*	5.83**
Bureaucracy	3.92**	1.41	3.18**
Rules observation	1.32	3.46**	4.16**
Job specificity	2.39*	1.51	3.75**
Union- Management relations	1.86	1.20	2.95**
Authoritarianism	3.95**	1.16	5.22**

* $p < 0.05$ ** $p < 0.01$ level.

DISCUSSION

If the t-values reported in Table-2 are interpreted in the light of corresponding mean scores presented in Table-1, then the followings become evident:

'Participation' was perceived most by the mangers ($\bar{x} = 13.44$), followed by supervisors ($\bar{x} = 9.03$) and workers ($\bar{x} = 7.03$). The managers, being on top of the administration, are usually the key persons in decision-making process. So, it is likely that their sense of participation would be maximum. The supervisors and workers, on the other hand, feel less of participation because in many vital decisions (e.g. decision about new recruitment), they are not concerned.

'Bureaucracy' was perceived most by the supervisors ($\bar{x}$=12.62), followed by workers ($\bar{x}$=11.79) and managers ($\bar{x}$=9.37). In other words, supervisors and workers differed sharply from the managers. Since existence of bureaucratic practices ignores personal needs and hampers personal growth of the employees, persons in the higher echelon should try to be less bureaucratic, more participative and more approachable in order to make the climate a more congenial work place. ' Rules observation' was perceived most by the workers ($\bar{x}$=5.06), followed by supervisors ($\bar{x}$=3.85) and managers ($\bar{x}$=3.19). That is, the workers differed significantly from the managers and supervisors. In any organization, the managers and supervisors are responsible for assigning the medium for carrying out a particular job. It seems that the workers in the organization under consideration are asked to follow the rules strictly as it is a necessary pre-condition for maintaining the production level.

'Job specificity', again, was perceived most by the workers ($\bar{x}$=14.75), followed by supervisors ($\bar{x}$=13.65) and managers ($\bar{x}$=11.19). That is, workers and supervisors differed significantly from the managers. This finds support in a previous study (Singh, 1988) which observed that jobs at lower level are more specified. In fact, in the organization under consideration, the workers/mechanics/technicians have their own specific work to do for which written records are maintained.

'Union-management relations' was perceived best by the workers ($\bar{x}$=25.73), followed by supervisors ($\bar{x}$=24.45), and managers ($\bar{x}$=21.63). In other words, the workers significantly differed from the managers. It indicates that as members of the union, the workers had successful interactions with the management but the latter probably could not appreciate it. This is quite likely as in many organizations, the management and union are two opposing forces. However, for a congenial organizational climate, the relationship between union and management should be one of mutual trust and cooperation.

'Authoritarianism' was perceived most by the workers ($\bar{x}$=10.92), followed by supervisors ($\bar{x}$=10.18) and managers, ($\bar{x}$=6.59). That is, workers and supervisors differed significantly from the managers. It means, demand for personal loyalty by the managers and letting down the subordinates are practiced in the organization under consideration. Since authoritarianism is a negative attribute of organizational climate, it should be abolished as far as possible.

Other studies (e.g. McMohan and Ivancevich, 1976; Butterfield and Posner, 1979) also observed that hierarchical groups differ on some organizational climate issues like

participation, bureaucracy and authoritarianism but they do not differ on all issues, which support the present findings.

To conclude, it may be stated that perception of bureaucracy and authoritarianism by a segment of the employees produces a detrimental effect on the work environment of any organization. Organizations can improve their work environment and increase productivity through introducing participatory management style which can minimize the differences in perception of different levels of employees.

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RELIABILITY OF THE BANGLA ADAPTATION OF THE MOONEY PROBLEM CHECK LIST, FORM-A

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ABSTRACT

The purpose of the present study was to adapt the Mooney Problem Check List, Form-A, for its use with Bangla speaking people, specially in Bangladesh. To achieve this end, the original version of the check list was translated into Bangla and some items which seemed to be inappropriate in the culture of Bangladesh were revised. The areas of the problems and order of the problems of each area of the Bangla version were the same as in the original form. Reliability of the Bangla version of the check list was tested by applying parallel form and test-retest methods. The reliability coefficients in both techniques were found to be.92. The obtained high parallel form and test-retest reliability coefficients proved that the Bangla version of the Mooney Problem Check List, Form-A, was definitely a dependable tool for identifying the personal problems of late adolescents and adults.

INTRODUCTION

The purpose of the Mooney Problem Check List is to help individuals express their personal problems. The usefulness of the check-list approach lies in its economy in bringing the problems of the individual into the open and in appraising the major concerns of the group. The problem check lists are used as aid in counselling, in surveys and research (Gordon and Mooney, 1950; Mooney and Gordon, 1950). A review of psychological literature reveals a lack of reliable tools in Bangladesh for identifying personal problems. Although a number of check lists are available from Western countries, yet they are unlikely to be appropriate in Bangla culture, which is obviously different from the culture in which the check lists were developed. Therefore, there is a dire need to develop appropriate check list for identifying personal problems of Bangla speaking people, specially in Bangladesh.

Although the Mooney Problem Check Lists were developed in the USA, many researchers have used the problem check lists in identifying personal problems and for collecting data from individuals of both developed and developing countries (Pflieger, 1947; Hibler and Larsen, 1944; Hasan, 1985; Khan et al, 1995-96). But the check lists in their original form cannot be used in Bangladesh mainly because the check lists are in English and some of the items are culturally inappropriate. Hence the authors feel that there is a need for translating and adapting this widely-used check list to make it suitable

for identifying personal problems of the people of Bangladesh. More specifically, the aim was to translate, adapt and find out the reliability of the Mooney Problem Check List, Form-A.

Description of The Mooney Problem Checklist, Form-A

The Mooney Problem Check List was developed during the early 1940s in the USA by Leonard V. Gordon and Ross L. Mooney. There are six forms of the check list, e.g. the Adult Form (A), the College Form (C), the High School Form (H), the Junior High School Form (J) the Nursing School Form and the Rural Youth Form.

The adult form of the Mooney Problem Check List was developed for use with the late adolescents and adults who are mainly of non-student status. The purpose of the check list is to help individuals express their personal problems. But the responses do not yield scores on traits or permit any direct statements about he adjustment status of the respondents. Rather, the problem check list is a form of simple communication between researcher/counsellor and the respondents to accelerate the process of identifying their real problems.

Adult form of the Mooney Problem Check List consists of 288 problems concerning personal lives of the adolescents and adults. These problems are divided into nine problem areas. The areas of the problems and total number of problems in each area are as follows; Health (36); Economic Security (36); Self-improvement (36); Personality (72); Home and Family (36); Courtship (18); Sex (18); Religion (18)and Occupation (18).

The problem check list is self-administering and all the needed instructions are given on the cover page of the booklet. The procedure of answering is simple. Respondents read through the check list and underline the problems which are concern to them, circle the ones which are of most concern, and finally write a summary in their own words.

Scoring of the check list is very simple. Responses are computed in two ways. First, the total number of encircled and marked (underlined and encircled) problems in each area are counted independently and second, the total number of encircled and marked problems of the total check list are also counted.

METHOD

Procedure and Sample

For adaptation of the Bangla version of the Mooney Problem Check List, Form-A, the items were translated into Bangla and were judged independently by five judges. Three of the judges were Professors of the Department of Psychology, and the other two were Professors of the Department of English, University of Rajshahi. Each item of the Bangla version was selected on the basis of agreement of all five judges. Some of the 'Self-improvement', 'Personality' and 'Religious' items of the original check list which were culturally inappropriate in Bangladesh, were changed and modified according to the suggestions and agreement of all the judges. In all, five items were modified in the following manner: item No. 10, "To dance" was replaced by "To dance and sing" to make it more applicable to Bangla culture. Item No. 30, "Wishing I were the other sex" was framed as "Had I been male/female". In item No. 46, "Church" was replaced by "Current religious belief". Again in item No. 92, "Church" was replaced by "*upashanalaya*" (the Bangla word for place of worship). "Going to church" in item No. 139 was replaced by "*dharmia anusthan*" (a Bangla item of religious ceremony).

There was no need to modify the remaining items. Then, the reliability of the Bangla version of the check list was determined by employing both the parallel form and test-retest reliability techniques. Correlation coefficient of both types of reliability were computed through product moment method.

The parallel form reliability (i.e., correlation between the English and the Bangla version) was determined by using 20 subjects aged 25 to 37 years. All the subjects were males from various professions, but care was taken to select those who were proficient in both English and Bangla languages. English and Bangla versions of the check list were then administered on the subjects in two sessions and counter-balancing method was used for presenting the two forms of the check list. In the first session, one half of the subjects were presented with the English form and the other half were presented with the Bangla form. In the second session, after ten days of the first session, the two forms of the check list were presented in a reverse condition following the standard procedure.

The test-retest reliability of the Bangla version of the check list was computed by administering the check list on 50 subjects (30 males and 20 females) aged between 20 and 30 years. The same form of Bangla version was administered again on the same group of subjects, after a time interval of three weeks.

RESULTS

In order to examine the reliability of the Bangla version of Mooney Problem Check List, Form-A, parallel form and test-retest reliability were tested. In both cases, reliability coefficient for total problems of the check list and area-wise analysis were done. Table 1 shows the parallel form and Table 2 shows the test-retest reliability. Figures in the tables indicate that all the correlation coefficients (r) were significant at 0.001 level and, the 'r' values for the nine areas of the checklist ranged from 0.76 to 0.93 in case of parallel form and from 0.54 to 0.93 in case of Test-retest reliability.

Table 1: Parallel form reliability coefficient and their level of significance (N=20, df=18)

Areas of Problems	Circled problems		Total problems	
	'r' values	't' ratios	'r' values	't' ratios
Total*	**0.914**	**9.574****	**0.918**	**9.880****
Health	0.805	5.775**	0.795**	5.577**
Economic Security	0.938	11.536**	0.914	9.589**
Self-improvement	0.829	6.307**	0.820	6.097**
Personality	0.763	5.019**	0.791	5.487**
Home and Family	0.834	6.416**	0.785	5.393**
Courtship	0.930	10.794**	0.934	11.107**
Sex	0.791	5.597**	0.929	10.689**
Religion	0.780	5.300**	0.834	6.420**
Occupation	0.801	5.690**	0.814	5.964**

* Combining all problem areas in the check list.,** p<0.001

Table 2: Test-retest reliability coefficient and their Level of significance (N=50, df=48)

Areas of problems	Circled problems		Total problems	
	'r' values	't' ratios	'r' values	't' ratios
Total*	**0.929**	**17.417****	**0.921**	**16.480****
Health	0.830	10.329**	0.690	6.598**
Economic Security	0.864	11.898**	0.762	8.167**
Self-improvement	0.907	14.965**	0.902	14.517**
Personality	0.829	10.281**	0.932	17.946**
Home and Family	0.760	8.106**	0.875	12.553**
Courtship	0.730	7.416**	0.881	12.933**
Sex	0.876	12.581**	0.810	9.599**
Religion	0.594	5.123**	0.818	9.850**
Occupation	0.543	4.479**	0.657	6.041**

* Combining all problem areas in the check list, ** p<0.001

DISCUSSION AND CONCLUSION

The main purpose of the present study was to adapt and find out the reliability of the Bangla version of the Mooney Problem Check List, Form-A, to make it suitable for administration on Bangla speaking people, specially in Bangladesh. For this purpose, the check list was translated into Bangla and then examined by five judges. Each item of the Bangla version was selected on the basis of agreement of all five judges.

After making the necessary changes, the final form was prepared, then parallel form and test-retest reliabilities of the Bangla version were tested. The parallel form reliability coefficient for the total problem was 0.91 and area-wise reliability coefficients ranged from 0.76 to 0.93. Each of the coefficients was highly significant. On the other hand, the test-retest reliability coefficient for the total problem was 0.92 and area-wise reliability coefficient varied form 0.54 to 0.93. All of the test-retest reliability coefficients were also highly significant.

Thus, the high reliability of the Bangla version of the check list shows that the adapted Bangla version of the Mooney Problem Check List, Form-A, is definitely a dependable tool for identifying the problems of the late adolescents and adults of Bangla speaking people, specially in Bangladesh.

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SEX DIFFERENCES IN AGGRESSIVE BEHAVIOUR IN CHILDREN: PARENTS AND TEACHERS' REPORTS

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ABSTRACT

Sex differences in aggressive behaviour in children of Dhaka City were studied using the Bangla version of the Child Behaviour Checklist (CBCL) and the Teachers' Report Form (TRF). Mothers reported aggressive behaviour in 304 boys and 262 girls on the CBCL and teachers reported aggressive behaviour in 320 boys and 260 girls on the TRF. The results showed that 2.2% of boys and 1.5% of girls according to mothers, and 2.6% of boys and 1.6% of girls according to teachers have aggressive behaviour in the clinical range. An analysis of the 20 common items for boys and girls on the ' Aggressive Scale' of the CBCL revealed significant sex differences on 13 items (65%), and on all the items, boys were judged to have significantly higher aggressive behaviour than girls. Out of 34 common items for boys and girls on the 'Aggressive Scale' of the TRF, boys obtained significantly higher scores on 26 items (76.47%), and only on 5 items (14.7%), girls were rated significantly higher in aggression than boys. The results of the present study were interpreted in the socio-cultural context of Bangladesh and in the light of existing literature and theories.

INTRODUCTION

Aggression is one of the most prevalent form of behaviour problems in children. Aggressive behaviour involves actions that may result in physical or psychological injury to another person. Generally physical behaviour such as hitting, kicking, biting, etc. and verbal acts such as making threats, calling names, etc. are known as aggressive acts. According to some theories, aggression is not a reaction to things that happen around a person but an innate, uncontrollable impulse. Other experts believe that an aggressive child is so because of his experience of life and upbringing. Stormshak et al. (1996) hold that siblings play a key role in the family cycles of coercive exchanges that foster aggression. Another group of experts believe that aggressive behaviour is a combination of one's unique personality and experience of the world.

Difference of aggression in boys and girls appears in the second year of life (Train, 1993). Sears (1965) stated that aggression is one of the main defining variables in delineation of masculine and feminine behaviour. Sex differences in aggression have been studied by many investigators and most of them reported higher rates of aggressive behaviour for males. Hoffman (1977) and MacCoby and Jacklin (1974) mentioned that

the predominance of aggressive behaviour in males is probably the most unequivocal sex difference in the literature.

However, girls are not always found to be less aggressive than boys. Some studies (e.g., Afrose and Shamsi, 1988; Pearce, 1978) reported no significant differences between males and females in aggression, and others (Biswas, 1989; Moore and Mukal, 1982) found that sex was significant only for physical aggression. Eagly and Steffen (1986) concluded that although men were somewhat more aggressive than women on average, sex differences were inconsistent across studies.

Since aggressive, hostile, acting out child is unpopular and the very aggressive youngster is likely to have problems in adulthood, studies should be done to identify and to determine the prevalence rate of aggressive behaviour in boys and girls and to find out on which items of aggressive scale boys and girls differ from each other. No study has yet been done in Bangladesh to study the prevalence of aggressive behaviour in children and to find out how boys and girls differ from one another on the items of aggression. The present study was, therefore, undertaken to investigate the above mentioned variables. Home and/or school is the place where the different types of behaviour problems of children are initially diagnosed. Therefore, in the present study, both mothers and teachers were taken as the informants of aggressive behaviour in children.

METHOD

Sample

The aim of the present research was to study the aggressive behaviour in ten years old children. As most of the children of that age belong to class V, all the ten years old children of that class attending either the primary or the secondary schools for more than six months were included in the sample. Twenty seven schools were selected from different parts of Dhaka City and all the ten years old children of a particular school who were present on the day of the administration of the checklists, were reported by the teachers. Age of the children were determined according to school records/teachers' report and mothers' statement.

The total number of children reported by the teachers on the Aggressive scale of the TRF were 580 (320 boys and 260 girls). Some of the parental checklists (CBCL) were not either filled up or returned by the mothers of the children to the researcher. Therefore, the total number of children reported by the mothers on the 'Aggressive Scale' of the CBCL) were 566 (304 boys and 262 girls). The sample comprised of children from

different socio-economic strata. In this study occupation, income and education of the parents were considered as the measure of social class. A total of 86 (14.83%) children were from upper families, 330 (56.90%) from middle class families and 164 (28.28%) were from lower class families.

Measuring Instruments

The Bengali version of the Child Behaviour Checklist (CBCL: Achenbach and Edelbrock, 1983) was administered to the mothers of the children and the Teachers' Report Form of the child behaviour checklist (TRF: Achenbach and Edelbrock, 1986) was administered to the teachers of the children to assess their perception of aggressive behaviour in children. Both the checklists are widely used and yield several factors and scores including an internalizing-externalizing and total problem score. In the present study, raw scores on the Aggressive Scale of both the checklists were used as indicators of aggressive behaviour in children. There are 23 times for boys and 25 items for girls and 20 items are common for both sexes on the Aggressive Scale of the CBCL. The total number of items of the Aggressive Scale of the TRF for boys and girls are 38 and 35 respectively and 34 items are common for both sexes. Each of the items of the aggressive scale of both the checklists is rated on a 3 point scale ("not true=0, "sometimes or somewhat true"=1, "very or often true"=2). The total aggressive score of each child is the sum of the 1s and 2s circled by the mothers on the CBCL and by the teachers on the TRF. Higher scores indicate more aggressive behaviour in children.

Both forms of the checklist have been found to be highly effective, reliable and valid for assessing children of different age and sex. Moreover, both CBCL and TRF can be used for both general and more specific purposes as there is provision for both broad-band and narrow-band syndromes. The present researcher translated both the checklists into Bangla with the written permission of the checklist developers, and their reliability and validity were studied on Bangladeshi sample. The test-retest reliability of the Aggressive Scale of the Bangla CBCL over a period of one month was 0.93 for boys and 0.94 for girls, while 0.90 for boys and 0.88 for girls on the TRF. The criterion-oriented validity of the Aggressive Scale of the Bangla CBCL and the TRF was also assessed.

Procedure

The Heads of the selected 27 schools of Dhaka city were contacted by the researcher. The Head of each school introduced the class teacher/teachers of the selected children to the researcher who briefed them about the purpose of the study. Class teachers were instructed to fill up each items of the Aggressive Scale on the TRF in the way that describes the pupil now or within the past two months. Mothers of the children who had

minimum education level of class IX filled up the questionnaire themselves. They were instructed to circle 0, 1 or 2 on each item of the Aggressive Scale on the CBCL which describes the child now or within the past 6 months . The researcher wrote the responses of the illiterate mothers or mothers with an education below class IX. All the mothers and the teachers were assured that all information supplied by them would be kept confidential. Items of the Aggressive Scales of the CBCL and the TRF were scored according to the procedure specified in their respective manuals.

RESULTS

Prevalence of aggressive behaviour in boys and girls was determined on the basis of the clinic cut-off scores as provided in the manuals for the CBCL and the TRF. Thus, the cut-off scores for Aggressive Scale of the CBCL and the TRF were set at about 98th percentile. Means and SDs for Aggressive Scale of the CBCL and the TRF as well as percentages exceeding cut-off scores among boys and girls are presented in Tables 1 and 2 respectively.

Table 1: Means and SDs for Aggressive Scale of the CBCL and percentages exceeding cut-off scores among boys and girls

Sex	N	Mean	SD	%> Cutt-off
Boy	304	7.5	4.9	2.2
Girl	262	6.1	4.6	1.5

Table-1 shows that according to mothers report, 2.2% of boys and 1.5% of girls were in the clinical range on Aggressive Scale.

Table 2: Means and SDs for aggressive scale of the TRF and percentages exceeding cut- off scores among boys and girls

Sex	N	Mean	SD	%> Cutt-off
Boy	320	9.5	8.7	2.6
Girl	260	5.9	5.7	1.6

The above table shows that teachers reported 2.6% of boys and 1.6% of girls to be in the clinical range on Aggressive Scale.

As the number of items on the Aggressive Scale of the CBCL and the TRF were not the same for boys and girls, comparison between them on 20 and 34 common items of the

Aggressive Scale of the CBCL and the TRF respectively was done by applying chi-square test.

Table 3 shows the distribution of each of the common items of the Aggressive Scale of the CBCL in 304 boys and in 262 girls, together with the probability of difference furnished by a chi-square test.

Table 3: Percentage distribution of items of Aggressive Scale of the CBCL by sex.

Problem Items*	Not True		Somewhat True		Very True		P
	Boys	Girls	Boys	Girls	Boys	Girls	
Argues	46.1	65.3	36.2	28.2	17.8	6.5	.001
Brags	91.8	92.0	7.6	7.3	.7	.8	NS
Cruel to others	75.0	90.1	23.0	9.9	2.0	.0	.001
Demands attention	36.8	34.4	40.1	40.5	23.2	25.2	NS
Disobeys at home	53.9	65.6	34.5	29.8	11.5	4.6	.005
Disobedient at school	98.2	100.0	1.8	.0	-	-	.05
Poor peer relations	73.7	76.0	20.1	21.4	6.3	2.7	NS
Jealous	57.9	61.5	38.8	30.5	3.3	8.0	.05
Fights	49.7	92.7	38.2	6.9	12.2	.4	.001
Not liked	87.8	95.8	11.2	3.8	1.0	.4	.001
Screams	69.7	82.1	28.0	16.4	2.3	1.5	.005
Shows off	95.1	93.1	4.9	6.1	.0	.8	NS
Stubborn	48.4	59.9	29.3	31.3	22.4	8.8	.001
Moody	52.6	79.0	33.1	17.9	14.2	3.1	.001
Sulks	78.3	69.8	18.4	26.0	3.3	4.2	NS
Excess talk	88.8	88.5	8.6	9.9	2.6	1.5	NS
Teases a lot	82.2	93.1	16.4	6.1	1.3	.8	.001
Temper tantrums	61.8	69.8	31.3	27.1	6.9	3.1	.05
Threatens people	96.7	95.8	3.3	4.2	-	-	NS
Unusually loud	93.4	98.1	6.6	1.9	-	-	.01

* Please see the CBCL for actual wording of items.

Table- 4 shows the distribution of each of the common items of the aggressive scale of the TRF in 320 boys and in 260 girls, together with the probability of difference furnished by a chi-squared test.

Table 4: Percentage distribution of items of Aggressive Scale of the TRF by sex

Problem items*	Not True		Somewhat True		Very True		p
	Boys	Girls	Boys	Girls	Boys	Girls	
Argues	80.0	90.0	18.1	9.2	1.9	.8	.005
Defiant	94.0	98.8	6.0	1.2	-	-	.005
Brags	93.4	91.5	4.1	4.6	2.5	3.8	NS
Cruel to others	82.8	91.9	16.3	8.1	.9	.0	.005
Demands attention	55.6	43.8	36.6	48.1	7.8	8.1	.01
Destroys own things	82.8	94.2	17.2	5.8	-	-	.001
Destroys other things	90.6	98.5	9.4	1.5	-	-	.001
Disobedient at school	85.6	94.6	13.1	5.0	1.3	.4	.005
Disturbs others	65.0	79.6	30.9	17.7	4.1	2.7	.001
Poor peer relations	68.1	78.1	30.0	18.8	1.9	3.1	.01
Lacks guilt	80.6	89.6	14.7	7.7	4.7	2.7	.01
Jealous	63.8	63.8	35.3	30.8	.9	5.4	.005
Feels persecuted	81.3	88.8	15.6	10.0	3.1	1.2	.05
Fights	57.8	90.0	30.3	9.6	11.9	.4	.001
Bad friends	86.6	95.0	10.0	5.5	3.4	3.5	.05
Impulsive	53.4	62.3	38.4	34.2	8.1	3.5	.05
Lies, cheats	67.5	83.1	27.5	15.0	5.0	1.9	.001
Talks out of turn	75.6	80.4	16.3	16.5	8.1	3.1	.05
Attacks people	94.8	99.6	5.2	.4	-	-	.001
Disrupts class	68.4	83.5	28.1	15.0	3.4	1.5	.001
Screams	81.3	89.2	18.4	10.4	.3	.4	.05
Shows off	96.3	92.3	1.6	5.0	2.2	2.7	.05
Explosive	77.5	87.6	17.2	10.4	5.3	1.9	.005
Easily frustrated	86.3	76.5	12.5	23.5	1.3	.0	.005
Stubborn	45.0	63.1	45.6	32.7	9.4	4.2	.001
Moody	70.5	87.3	28.5	12.7	.9	.0	.001
Sulks a lot	81.9	62.9	16.3	33.6	1.9	3.5	.001
Suspicious	78.8	81.9	20.6	17.7	.6	.4	NS
Swearing	88.4	96.5	11.6	3.5	-	-	.001
Excess talk	78.8	84.2	15.9	13.8	5.3	1.9	.NS
Teases a lot	87.2	95.0	12.2	5.0	.6	.0	.005
Temper tantrums	56.6	80.0	39.4	17.3	4.1	2.7	.001
Threatens people	91.3	96.2	8.4	3.8	.3	.0	.05
Unusually loud	97.2	99.6	2.8	.4	-	-	.05

* Please see the TFR for actual wording of items.

The results presented in Tables 3 and 4 revealed that out of 18 similar items of the Aggressive Scale of the CBCL and the TRF, mothers and teachers were in agreement that 10 items (55.56%) were present significantly more in both. Four items (22.22%) were reported by the teacher to be present significantly more in girls. Items showing sex differences are presented in Table 5.

Table 5: Items showing sex differences on Aggressive Scale

Items present in boys (reported by both mothers and teachers)	Items present in girls (reported only by teachers)
Argues	Demands attention
Cruel to others	*Jealous
Disobedient at school	Shows off
Fighting	Sulks a lot
Scrums a lot	-
Stubborn	-
Moody	-
Teases	-
Temper tantrums	-
Unusually loud	-

*This item was reported by the teachers to be equally present in boys and girls but differed significantly in terms of intensity. It is 'somewhat' or 'sometimes true' more for the boys but 'very true' or 'often true' more for the girls.

DISCUSSION

The objective of this study was to investigate aggressive behaviour in boys and girls as reported by mothers and teachers. The results presented in Tables 1 and 2 showed the mean aggressiveness of boys scored by mothers and teachers were 7.5 and 9.5 respectively. These mean scores were higher than the mean scores obtained by the American boys aged 6-11 years (Achenbach and Edelbrock, 1983, 1986). One of the possible reasons for higher scores obtained by the Bangladeshi boys on Aggressive Scales might be the fact that many children from lower SES were included in the sample of boys. In view of the research findings (e.g., Davie et. al., 1972) that aggression, hostility, destructiveness and disobedience are present more in lower SES, higher scores by the present sample of boys on the Aggressive Scale may be justified. However, difference among the teachers and mothers from the two cultures may also work as a factor for such a difference. Another possibility is that Bangladeshi boys, in general, have more problems in this aspect of behaviour. On the average, mothers gave a score of 6.1 for girls while teachers gave a score of 5.9. Verhulst et al. (1988) also obtained similar results for Dutch girls.

Mothers reported 2.2% of boys and 1.5% of girls, and teachers reported 2.6% of boys and 1.6% of girls to have aggressive behaviour problem in the clinical range. Thus the percentages of boys and girls exceeding cut-off scores on Aggressive Scale of both the checklists were not very high. The results of the present study regarding the rate of prevalence of aggressive behaviour in boys and girls were quite consistent with the result

of some other studies published in various countries. In Ontario (Canada), approximately 5 percent of boys and 2 percent of girls were rated by teachers to have conduct disorder (Offered et al., 1989). As conduct disorder includes aggression, delinquent and other forms of externalizing behaviour, therefore, the prevalence rate of conduct disorder was higher than simple aggression.

Results presented in Table-3 indicated that out of 20 common aggressive items for both boys and girls, significant differences among them were found on 13 items (i.e. 65%) and boys scored significantly higher than girls on all the items.

Results in Table-4 showed that out of 34 common items of Aggressive Scale, boys and girls differed from each other on 31 items (91.18%) and only on 3 items no sex difference was found. Out of 31 items on which sex difference was found, boys obtained significantly higher scores on 26 items (76.47%) and girls scored significantly higher than boys only on 5 items (14.70%),

The finding that boys were significantly more aggressive than girls, were consistent with the past studies on aggression (e.g., Hoffman, 1977; MacCoby and Jacklin, 1974; Lal et al., 1976). Begum et al. (1981) also found that Bangladeshi males were more aggressive than females. The results of the present study indicated that teachers not only reported boys to be significantly more aggressive than girls but also they reported aggression as the most frequent behaviour problem in school.

The difference between boys and girls on aggression might have resulted from the differences in the ways boys and girls were reared and also through sex role socialization. Bangladeshi girls, like those from many other countries are not allowed to display aggression because it does not fit the feminine image. Boys, on the other hand, are allowed and sometimes encouraged to be dominant, independent, physically active and aggressive so that they can fit into their stereotype masculine role. Some researchers (e.g., Rutter, 1977; Werry, 1986) concluded that boys were temperamentally more difficult and irritable than females. In some studies, it was observed that boys were more affected by family discord and disruption (Rutter, 1970), marital conflict (Emery, 1982) and maternal separation (MacCoby and Jacklin, 1974). It could be assumed that boys in Bangladesh might also be affected by these factors and thus, in the present study, boys scored significantly higher than girls on both the Aggressive Scales.

Like other studies (e.g., Lapouse and Monk, 1964; Werry and Quay, 1971), the findings of the present research also showed high prevalence rate of some items of aggression in boys as evaluated by both the informants. Those items included 'argues' (54%), 'demands attention' (63.3%), 'fights' (50.4%), and 'stubborn' (51.6%). Girls also

obtained high scores on the item 'demands attention' (65.7%). Some items were found to be present in less than 10% of boys and girls. Those items included 'brags', 'disobedient at school', 'shows off', 'threatens people', 'unusually loud'. In conclusion, it may be said that aggressive behaviour of children should be identified not only because it is noxious and troublesome to others but also because of anticipated future discomfort to the child or others. After the preliminary judgment of parents and teachers that a particular child is aggressive, the opinion of experts should be sought for helping and taking proper care of the aggressive child.

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A STUDY OF MANAGERIAL SKILL AT THREE LEVELS OF MANAGEMENT

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ABSTRACT

Managerial skill was studied in a group of 110 managers from public and private sector organisations. These managers were from three levels of management-top, middle and bottom. Managerial skill was studied with the help of a forced-choice scale of managerial skill developed by the author (1986) which measures five types of managerial skill, namely- decision making, leadership, human relations, communication and conceptual skills. Results obtained by employing chi-square test revealed that there was significant association between degree of decision-making skill and management levels for managers in the low age group only.

INTRODUCTION

The success of an organisation depends to a large extent upon its ability to recruit mature and developed managerial talents. To achieve this target, it is important to study the managerial behaviour and to assess the managerial potentiality of the employees. Job of a manager is not stereotyped, it varies from time to time, from person to person and from situation to situation. Different investigators have observed that certain traits of managerial talent are possessed in different degrees at different levels of management (Ghiselli, 1959; Porter & Kaufman, 1959; Smoley and Slivinski, 1971). It is observed that some individuals succeed remarkably as managers while others with high intellectual ability and professional training fail miserably even under similar circumstances. Now, one would like to know what is meant by success. But it is difficult to define "success". The concept of "success" has often been confused with "effectiveness". Though these two concepts are conceptually different, yet from the practical point of view, there exists a certain amount of overlap between them. At the same time, it is a fact that an executive may be effective on the job-without being successful or organisational dynamics of a place may push even an inefficient person up in the hierarchy.

Studies done by different investigators (Ghiselli, 1959; Hersey and Blanchard, 1977; Morse & Wagner, 1978) have shown that overall managerial effectiveness can be expressed in terms of personal qualities possessed by managers: high intelligence level, good verbal skills, effective judgment in handling managerial situations, organising skill, dispositions towards interpersonal relations, risk taking capacity, etc. Ghosh (1986) has developed a Forced-choice scale for measuring managerial skill which takes into account five types of managerial skill, namely Decision Making, Leadership, Human Relations,

Communication and Conceptual Skills. These skills have been found to be required for effectively performing the functions of a manager. But whether these skills are equally important for different levels of management are not known. The objective of the present investigation was to study whether these five types of managerial skill mentioned above were different at different levels of management in public and private sector organisations.

METHOD

Sample

The sample of the study comprised of 110 managers from three different levels of management-top, middle and bottom. There were 17 managers at the top level, 60 at the middle level and 33 at the bottom level of management. The sample varied in their age from early twenties to late fifties with a mean of 35.72 years. There were 63 managers from public sector and 47 managers from private sector industrial organisations, selected by stratified random sampling technique from eastern and northern parts of India.

Measuring Instruments

The forced-choice scale of managerial skill developed by the author (1986) was used in this study. The scale measures five types of managerial skill, namely-decision making, leadership, human relations, communication and conceptual skills. The scale developed in forced-choice format presents items in triadic form. There are 70 items in the scale covering the five skills. The respondent has to give two responses for each item- one of which is "most applicable" to him and the other which is "least applicable". The scoring keys of the scales have been developed on the basis of iterative item analysis. The K.R. reliablities of the five scales ranges from .55 to .71. The validities of the scales with other standardised measures have been found to be quite satisfactory.

Descriptive information such as respondents' age, job level, type of organisation, etc. were collected with the help of a biographical information blank specially designed for this purpose.

RESULTS

In order to investigate whether the degree of managerial skill (high, average, low) and management levels (top, middle, bottom) were associated, chi-square tests were applied for each of the five managerial skills (decision-making, leadership, conceptual skill,

human relations and communication) keeping the age of the managers constant (Tables 1 to 3).

Table 1: Frequency distribution of five managerial skills by degree of managerial skill and levels of management (High age group) (N=30).

Managerial skills	Management levels	Degree of managerial skill			df	χ^2 = Value
		High	Average	Low		
a) Decision-making	Top	2	6	1		
	Middle	3	11	5	4	2.18[a]
	Bottom	0	2	0		
b) Leadership	Top	1	6	2		
	Middle	4	9	6	4	2.47[a]
	Bottom	1	1	0		
c) Conceptual skill	Top	4	2	3		
	Middle	2	11	6	4	7.22[a]
	Bottom	0	2	0		
d) Human relations	Top	2	3	4		
	Middle	6	9	4	4	2.59[a]
	Bottom	1	1	0		
e) Communication	Top	3	5	1		
	Middle	7	8	4	4	2.76[a]
	Bottom	0	2	0		

[a] Not significant.

Table 2: Frequency distribution of five managerial skills by degree of managerial skill and levels of management (Middle age group) (N=46).

Managerial skills	Management levels	Degree of managerial skill			df	χ^2 = Value
		High	Average	Low		
a) Decision-making	Top	3	1	1		
	Middle	8	112	7	4	3.08[a]
	Bottom	3	4	6		
b) Leadership	Top	1	2	3		
	Middle	5	17	5	4	6.97[a]
	Bottom	4	3	6		
c) Conceptual skill	Top	1	5	0		
	Middle	9	11	7	4	4.28[a]
	Bottom	5	5	3		
d) Human relations	Top	1	2	3		
	Middle	5	15	7	4	1.83[a]
	Bottom	2	8	3		
e) Communication	Top	2	3	1		
	Middle	5	14	8	4	1.24[a]
	Bottom	4	6	3		

[a] Not significant

Figures in Tables 1 and 2 indicate that none of the chi-square values were statistically significant. That is, there were no association between degree of managerial skill and levels management in respect of the managerial skill variables (for either high or middle age group).

Table 3: Frequency distribution of five managerial skills by degree of managerial skill and levels of management (Low age group) (N=34).

Managerial skills	Management levels	Degree of managerial skill			df	χ^2 = *Value*
		High	Average	Low		
a) Decision-making	Top	1	1	0		
	Middle	0	11	3	4	12.94[a]
	Bottom	9	4	5		
b) Leadership	Top	1	1	0		
	Middle	4	5	5	4	1.16[a]
	Bottom	6	7	5		
c) Conceptual skill	Top	0	2	0		
	Middle	2	9	3	4	2.43[a]
	Bottom	5	11	2		
d) Human relations	Top	0	2	0		
	Middle	7	5	2	4	4.12[a]
	Bottom	5	9	4		
e) Communication	Top	1	1	0		
	Middle	2	8	4	4	3.23[a]
	Bottom	5	6	7		

* $p<0.02$; [a] Not significant.

Figures in Table-3 indicate that there was significant association between degree of managerial skill and management levels only with respect to the decision-making skill of the younger managers, other relatioships were not significant. The cell figures also show that relatively higher number of young managers at the bottom level of management were having high degree of decision-making skill.

DISCUSSION

The present study was conducted to investigate whether there was any association between the degree of managerial skill (high, average, low) and management levels (top, middle, bottom) in respect of the five managerial skill variables while controlling for age factor of the managers. The results revealed that there was significant association between degree of decision-making skill and management levels for managers in the low age group, and that relatively higher number of young managers at the bottom level were

having high degree of decision-making skill. One possible explanation of the findings may be that compared to the higher age groups, younger managers are exposed to more information and modern technologies as they are products of the later generation. They are more enthusiastic and have vision of building their own society. That is why, though placed at the bottom level of management, they have shown high degree of decision-making skill.

But a sharp line of distinction cannot be drawn among the different levels of management in terms of managerial skill as the group of managers studied here were from varied business and industrial organisations in which different individuals performed different types of duties.

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