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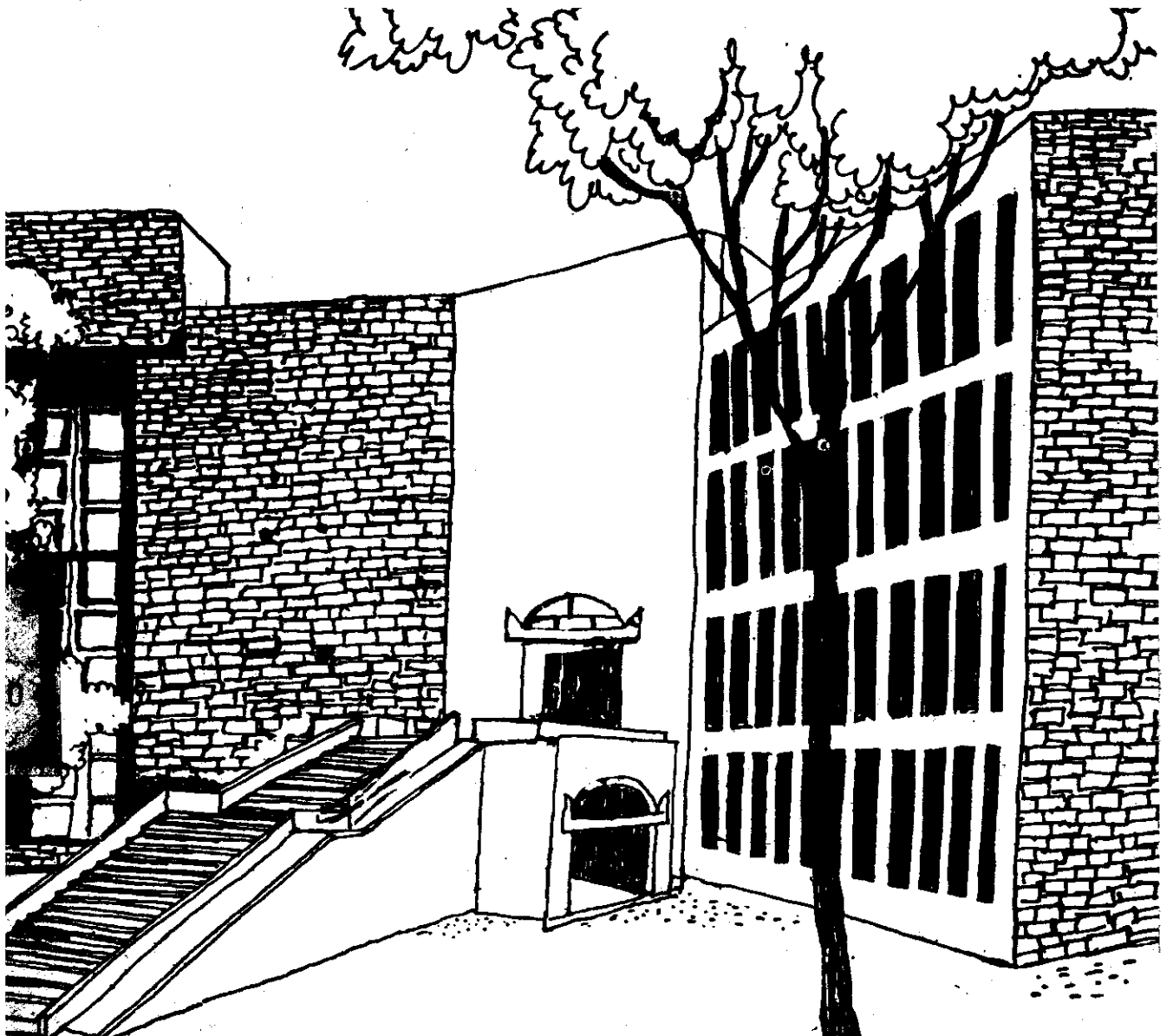
A STUDY OF ROLE STRESS IN RELATION TO
TYPE-A AND ANGER

By

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PREFACE

The main objective of the present study is to identify the dominant role str of business executives categorised as top and middle, and senior IAS officer

It is widely recognised that stress is a problem affecting the well-being of the individual executive as also the organisational performance and ability to handle tasks competently. There is also some research to indicate that Type-A personality orientation has links with stress proneness. Type-A orientation can be briefly described as speed-orientation or how fast one tends to work on and react even to seemingly inoccuous demands. This was an important contribution of cardiologists to the study of stress phenomenon Besides, Type-A orientation, a related personality dimension is anger orientation of the individual. Anger, the most common but least understood of emotions, can be classified as state and trait anger. The state or situational anger depicts how one feels at a particular point of time and trait depicts one's general anger orientation.

In the present research an attempt is made to determine the levels of organisational role stresses for the three sets of samples and also to determine their Type-A orientation and anger levels.

The author will specially like to thank Prof. Spielberger of Florida University who allowed the use of his STAS measure for determining the anger levels.

Shri G.P. Singh worked on this project for a few months and was extremely helpful in analyses of the data and putting them in a readable form. My Secretary, Shri M. Haridasan, had the burden of typing the manuscript and he deserves a word of appreciation.

Place: Ahmedabad

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ABSTRACT

Present study is an attempt to explore the relationship between factors of role stress, Type-A pattern of behavioural disposition and State-Trait anger among three categories of management personnel. A battery of three psychometric instruments, namely, 'ORS Scale', State-Trait Anger Scale' and 'Can You Type Your Behaviour?' were administered on 221 top managers, 326 middle managers and 77 IAS officers. Critical ratio test, median test and product moment coefficients of correlation were used to analyse the data.

Result of the present study suggests that interrole distance and role erosion are the most dominant contributor of role stress whereas role ambiguity and personal inadequacy are the least important contributor for the total sample of management personnel. Comparison of scores on ORS Scale revealed that by and large all the three comparison groups differ from one another. Type-A and trait-anger scores were found to be statistically insignificant whereas state-anger scores were significantly different in all the three comparison groups. Study of correlation coefficients revealed that more correlation coefficients among role stress factors as well as ORS vs S/T anger were significant in case of TMG, followed by MMG and IAS personnel. More correlation coefficients between Type-A score and ORS factors were found to be significant in case of IAS group as compared to other datasets.

Datasets were also dichotomized on the basis of age of the respondants. Statistical differences as well as correlation coefficients pertaining to variables understudy were analysed for both, low and high age group management personnel of each categories.

INTRODUCTION

INTRODUCTION

An extremely important part of life, the work, plays a central role in overall health and happiness of individuals. There is a growing awareness of significant impact of work on life welfare and mental health as well as high cost of dissatisfied workers to both, industry and society (Cooper and Payne, 1978). Growing body of empirical researches in various organisational settings have concluded that almost every aspect of the job context for example, work activities, supervisory style, interpersonal patterns, the structure of job characteristics etc. can act as potential stressors. Scholars for example, Beehr and Newman (1978) and Van-Sell et al (1981) among others, have found that personal characteristics are equally responsible for both, the focal person's perception of stressors as well as reactions to them. Some of the personality variables which were examined to assess the individual's sensitively to stress situations are locus of control (Baehr & Newman 1970, Spielberger, 1966), job involvement (Weissenberg and Gruenfeld, 1968) and many demographic variables like age, sex, educational level, organisational tenure etc. An overview of the large literature that deals with these spheres reveal important achievements mixed with certain discontinuities and deficiencies. For example, it is especially striking that despite the attention given seperately to various personal and job/organisational stressors in causation of stress reactions there is hardly any study which dealt with the intricate linkage that prevail between different type of role stresses and state-trait anger and/or type-A pattern of behavioural disposition. The present study is an attempt to explore the relationship among such variables in case of different categories of managers.

Scholarly work, so far done in the field of stress may be categorised

in three major conceptual domains (i) the sources of stress (ii) the

mediators of stress and (iii) the manifestations of stress (Peartin,

Menaghan, Lieberman and Mullan, 1981). As regards sources of stress,

researchers reports of two major segments namely, environ-

ment and person. that interacts, resulting in various stress reactions.

Emprical findings suggest that occupational stress is not a characteri-

stic of either environment or person. Instead, it is the consequence of

interaction of these two categories. For example, Lazarus (1971)

emphasized that an individual's perception of a situation, referred to

as the 'cognitive appraisal', defines that situation as stressful.

Individual's response depends on the appraisal and it is this appraisal

which concludes that the situation is harmful, disgusting or challenging.

Appley (1962) designated this appraisal by the term 'threat perception'.

Stress, thus can be viewed as the outcome of incongruence or lack of

person-environment fit. Hence, greater the incongruence of fit, the

more significant the level of experienced stress (Lofquist and Dawis,

1969; Marshal and Cooper, 1978).

Figure 1 presents conceptual framework used to formulate this study in

which stress is presented as the outcome of the interaction of environ-

ment and person factors. Organisational behaviour scientists (Kahn et al

1964; Rizzo, House and Lirtzman; 1970, Pareek, 1981; Morris and Koch,

1979) attempted to identify role stresses in the conceptual frame-work

of role theory. The stressors are the elements in the organisational

environment that contribute to the personally experienced stress. The present

study focuses on only the potential role stresses arising from the role set and

role space of the managers/administrators working in public and private organi-

sations. In this regard a fit between a person and the environment implies

conditions that are described by Lofquist and Dawis (1969) as 'harmonious'.

In such a situation, there would be low levels of stress as well as high levels

of satisfaction (Van Harrison, 1978). The framework presented in fig. 1 suggests,

among other things, that an individual's experience of stress is reflected in

discrepencies between the environmental stressors (e.g. role conflict, role

ambiguity, role overload, self-role distance, interrole distance etc.) and

person-stressors (e.g., type-A behaviour, state anger, trait-anger, locus of

control ect.).

Organisational Role Stressors

Environmental Stressors
(Examples only)

Job & organisational elements: Time pressure communications Lack of career progression

Role elements: Role ambiguity Role conflict Role overload etc.

Relationships: With peers With supervisors With subordinates etc.

Person-Stressors
(Examples Only)

-Type-A behaviour pattern -State-Trait anger -Locus of tontrol -Maturity etc. -Age

Stresses viz.

- Interrole distance
- Role Stagnation
- Role Expectation Conflict
- Role erosion
- Role overload
- Role Isolation
- Personal Inadequacy
- Self role distance
- Role ambiguity
- Resource Inadequacy

Fig. 1

Katz and Kahn (1966) suggest that role concepts are the major means
for linking the individual and the organisation. It is at once the
building block of social systems and the summation of the requirements
with which such systems confront (1976) defined this term as "any
their members as individual Pareek
position a person holds in a systeme (organisation) as defined by the
expectations of various significant persons including himself have
from that position". Since the concept of "role" is inextricably
linked with "expectation", the organisational factors like time
pressure, frequency of change, organisational level, task characteri-
stics etc. as well as organisational context assume importance due to
their influence on the moulding of proscriptic and proscriptions
associated with a particular position. Further, the concept of 'role'
as proposed above involves several variables like the self, the other
roles, the expectation held by the other roles and the expectations
held by the self. It is, therefore extremely difficult to imagine a
situation in an organisation in which there is no conflict among these
variables. The very nature of role, in fact, has built-in potential
for stress.

The area of role stress has been systematically explored. In their
initial attempt, Kahn et al (1964) identified four basic types of role
strain or job related tensions such as person-role conflict, intrasender
conflict, interrole conflict and intersender conflict. Rizzo, House and
Litzman (1970) in a factorial analysis, verified two basic constructs of
role stress, namely, role conflict and role ambiguity and related these

constructs to threat and anxiety, discomfort, pleasantness, work

satisfaction, turnover and decision delay. Kiretz and Moes (1974)

proposed three factors in the effect of stress. These are: kind of

adjustment required; perception of control over stress source and

valance (for example, loss in death vs. gain in marriage or bussiness).

Pareek (1981) on the basis of theoretical speculation and statistical

analysis has identified ten different type of role stresses prevalent

in any organisational settings. These are described by him as follows:

1. <u>Inter-role distance (IRD)</u>:

> An individual occupies more than one role at a time. His organi-
> sational role may often come into conflict with his family roles
> or with roles in other organisations or groups. The distance or
> conflict among these various'roles represents to inter role
> distance.

2. <u>Role Stagnation (RS)</u>:

> This kind of stress is the result of gap between demand to outgrow
> his previous role and to occupy new role effectively. Such a type
> of stress results into perception that there is no opportunity for
> one's career progression. This perception may be more intense when
> the role occupant holds a role for longer period and enters in new
> role in which he feels less secure.

3. Role Expectation Conflict (REC):

This type of stress is generated by different expectations by different significant persons about the same role. It is possible that the significant persons differ in their expectation about the same role; and the role occupant is ambivalent as to whom to please.

4. Role Erosion (RE):

This type of role stress is the function of the role occupant's feeling that some functions which should properly be belonging to his role are transferred to/or performed by some other role. This can also happen whe the functions are performed by the role occupant but the credit for them had gone to someone else.

5. Role Overload (RO):

When the role occupant feels that there are too many expectations from the significant roles in his role set, he experiences role overload. There are two aspects of this stress, quantitative and qualitative. The former refers to having 'too much to do' while later refers to 'too difficult'.

6. Role Isolation (RI):

This type of role stress refers to psychological distance between the occupant's role and other roles in the same role set. It is also defined as role distance which is different than inter role distance in sense that IRD refers to the distance among various roles occupied by same individual. The frequency and ease of interaction among the roles is a measure of the strength of the linkage among the roles.

7. Personal Inadequacy (PI):

This type of stress arises when the role occupant feels that he does not have the necessary skills and training for effectively performing the functions expected from his role. This is found to happen when the organisation do not import periodic training to enable the employees to cope with the fast changes both within and outside the organisation.

8. Self-Role Distance (SRD):

When the role, person occupies goes against his self concept, then he feels self role distance type of stress. This is essentially a conflict arising out of mismatch between the person and his job.

9. Role Ambiguity (RA):

It refers to the lack of clarity about the expectations of role which may arise out of lack of information or understanding. It may exist in relation to activities, responsibilities, personal styles and norms; and may operate at three stages:

a) when the role sender holds his expectations about the role

b) when he sends it, and

c) when the occupant receives those expectations.

10. Resource Inadequacy (RIn):

This type of stress is evident when the role occupant feels that he is not provided with adequate resources for performing the functions expected from his role.

The role stresses identified by Pareek (1981) and presented above seem
to account for overall role stress experienced by role occupants as it
encounters all the stressors, one may have on his job. Several areas
of research, especially those pertaining to the coronary-prone behaviour
pattern (Davidson & Cooper, 1980; Ivancevich, Matteson and Preston, 1982)
and human agression (Donnerstein and Wilson 1976; Rule and Nesdate, 1976)
indicate that organisational/environmental constraints can induce both
physiological and psychological stress as well as performance deficits.
Coronary-prone behaviour syndrome or Type-A pattern of behaviour is
defined as "an action-emotion complex that can be observed in any person
who is aggressively involved in a chronic, incessant struggle to achive
more and more in less and less time, and if required to do so, against
the opposing efforts of other things or other persons" (Friedman and
Rosenman, 1974, P. 67). The overt manifestations of this struggle
include explosive, accelerated speech; a hightened pace of living;
impatience with slowness; concentrating on more than one activity at
a time; self-preoccupation; dissatisfaction with life; evaluation of the
worthiness of one's activities in terms of numbers; a tendency to
challenge and compete with others even in non-competetive situation and
a free floating hostility. The major factors or 'core' elements of
Type-A behaviour pattern are extremes of competetiveness, a constant
struggle against time, an achievement orientation, aggressiveness and
an intense sense of time urgency. This is in contrast to a Type-B
individual who shows the inverse behavioural pattern and displays relative
immunity to coronary heart disease.

One striking characteristic of Type-A individual is **involvement**
and preoccupation with work and the neglect of other life persuits.
From clinical interviews with large number of man, Friedman and
Rosenman (1974) and Jenkins (1975) provide a portrait of Type-A
man as work adict with an exaggerated sense of the success ethic.
They work for long hours under deadline pressures and conditions of
overload; they often carry work at home and show inability to relax.
They, in addition to competing with others, also compete with self
by setting high standards of productivity. They are found feeling
frustrated in the work-situation, irritable with the work efforts
of subordinates, and misunderstood by superiors. Interactionist
theory of stress (Appley and Trumbell 1967; Glass and Singer, 1972)
however, suggests that when the work environment is ambiguous, hinders
achievement because of excessive role conflict and includes supervisors
who discourage competitiveness and would not fit well with type-A
pattern individuals, then, a discrepancy might arise as the work-
environment is not matched with these behaviours.

Researches, so far reported on Type-A behaviour indicate that it is
significantly related with role stress. Sales (1969), for example,
reported a significant positive correlation between a measure of
subjective, quantitative role overload and Type-A behaviour. He
found that Type-A measure is directly associated with involved
striving, persistence, acceleration of functions, competitive orien-
tation, range of activities, positive attitude toward pressure,

irritability, environmental overburdening, sense of time urgency, desire
for objective public esteem, need for task independence, leadership and
history of past achievement. Caplan (1972) in a study of National
aeronautics and space administration managers, scientists and engineers
also found that Type-A scores were significantly and positively related
to subjective overload. Howard, Cunningham and Rechnitzer (1976)
observed Type-A individuals as working for more hours per week and
travel more days per year than Type-B's. Further Type-A's were more
upwordly mobile in their career and yet, were found to be less satisfied
with their jobs. Above findings conclude that excessive involvement of
men in demanding work roles can result in increased experience of various
types of role stress. Present study, therefore, attempts to explore the
influence of Type-A behaviour of managers on different types of role
stresses.

Further, careful examination of literature, however revealed that a very
little effort was made to find out the effect of anger on role stress or
vice versa. It seems logical to look into this potential personal
veriable because human aggression and certain form of role stress are
closely related (e.g. they involve similar emotions, similar motives
and even corresponding form of behaviour). The maladaptive effects of
anger was traditionally emphasized as important in the etiology of
psychoneurosis, depression and schizophrenia. Recent research findings
suggest that Type-As are more aggressive, angry, dominant and quick in

action (Cafferey, 1968; Chesney, Black, Chadwick and Rosenman, 1981).
On the other hand, anger and hostility contribute to the pathogenesis
of hypertension (Crane, 1981) and coronary heart disease (Friedman and
Rosenman, 1974). Since organisational environments create pressure on
role-incumbents, it, therefore, seems to associate directly with state_
trait anger in the individuals.

In the psychological studies, so far done on anger, state-trait distin-
ction of anger was not considered appropriately. Moreover, anger was
interchangeably used with hostility and aggression in research literature,
and this conceptual confusion is reflected in a diversity of measurement
operations of questionable validity (Biaggio, Supplee and Curis, 1981).
It is therefore, worthwhile to differentiate these constructs. Hostility
has the connotation of a complex set of attitudes that motivate aggressive
behaviours directed toward destroying objects or injuring other people.
The concept of agression generally implies destruction or punitive behaviour
directed towards other persons and objects. As compared to hostility and
aggression, the concept of anger usually stands for an emotional state that
consists of feelings that vary in intensity, from mild irritation or annoyance
to fury and rage (Spielberger, Jacobs, Russell and Crane, 1983). Hence, anger
refers to phenomena that are both more fundamental and less complex than
hostility and agression.

Conceptualizing anger as an emotional state that varies in intensity and as a relatively stable personality trait, state-trait distinction of anger is made. Spielberger et al (1983) defined state anger as an emotional state or condition that consists of subjective feelings of tension, annoyance, irritation, fury and rage, with concommitant activation or arousal of the autonomic nervious system. Further, state anger vary in intensity and fluctuate over time as a function of perceived affronts or injustice. or frustration resulting from the blocking of goal directed behaviour.

Trait-anger, on the other hand is defined in terms of individual differences in the frequency that state-anger was experienced over time. It was assumed that persons high in T-anger were more likely to perceive a wide range of situations as anger provoking (e.g., annoying, irritating, frustrating), and to respond to such situations with elevations in state-anger. In addition to experiencing the arousal of state-anger more often, persons high in trait anger were expected to experience more elevations in state-anger whenever annoying or frustrating conditions were encountered (Spielberger et al., 1983, P. 167).

Further, some of the traits (like trait-anger; state-anger) as well as pattern of individual's behaviour (e.g., Type-A behaviour) are themselves potent personal stressors. Researchers have argued that occupational

stress may be an etiological factor in almost all diseases (Syme, 1974).
However, majority of researchers have concentrated on the relation of one
or a few stressors to a single disease (e.g., type-A behaviour pattern
or anger as related to coronary heart disease). Moreover, majority of
studies have focused merely on seemingly highly stressful occupations
such as air traffic controllers (Rose, Jenkins and Hurst, 1978), police
officers (Kroes, 1975) and army personnel in combat (Lazarus, 1966). Is
it that jobs of traffic controllers, police officers or army personnel
are only stressful? Is it not that priori judgements about the stress
associated with any occupation or specially within an occupation can be
inaccurate, and that inaccuracy can result in lack of management action
to improve the work situation (person-environment fit), so that stress
is minimized. For example, management research literature for years
has projected the assumptions that top level managers in the organi-
sations suffer the highest job-stress (Coates and Pallegrin, 1975).
However, the impricial findings portrait a very different picture.
Pell and D'Alonzo (1958) in a longitudinal study found that the incid-
ence of heart attack was inversely related to occupational level.
Marshall and Cooper (1978) reported that middle level managers experience
higher job pressures than did their counterparts in a number of job areas.
Kahn et al (1964) argued that role conflict and ambiguity are probably
greater in middle management group as compared to their seniors or juniors.
Thus, although a great deal of speculation and description about the
sources of stress and pressure for different levels of management is avail-
able, special attention usually is paid to top level managers (Goldberg, 1978).

The reoccurring question is whether the top level managers are more at risk from occupational stress problems than other levels of management such as middle managers and IAS personnel.

Many research findings have revealed that age of the role incumbent is inversely proportional to role stress. Sen (1981) for example, observed that in case of bank employees, role stagnation decreases as people advances in age. He found that in general, age is negatively related with role stress. On the other hand, study conducted by Bhatnagar and Bose (1985), refuted the popular impression that advancing age makes a person more nervous so that his perception of different stressors gets exaggerated.

HYPOTHESES

In the light of above facts, for an adequate understanding of the stressors and their interaction on employees, it is important to study (i) multiple stressors in varying managerial groups and (ii) to examine the organisational factors (e.g. job level; type of organisation) and personality predispositions (e.g., type-A pattern of behavioural disposition, state and trait anger) that influence the amount of stress a person experiences. We, therefore, propose to test following hypotheses:

1 A.   There will be no difference in level of different factors of role stress including overall role stress, experienced by TMG, MMG and IAS group.

1 B.   All the correlation coefficients between factors of role stress in case of TMG, MMG and IAS group will be statistically significant.

2 A.   There will be no difference in level of Type-A pattern of behaviour
scores obtained by TMG, MMG and IAS group.

2 B   The correlation coefficients between Type-A scores and factors of
role stress including overall role stress scores in case of TMG,
MMG and IAS groups will be statistically significant.

3 A.   There will be no difference in level of state-trait anger scores
of TMG, MMG and IAS group.

3 B.   The correlation coefficients between state-trait anger scores and
various types of role stresses including overall role stress in
case of TMG, MMG, and IAS group will be statistically significant.

3 C.   The correlation coefficients between scores on state anger, trait-
anger and Type-A pattern of behaviour in case of TMG, MMG and IAS
group will be statistically significant.

4 A.   There will be no difference in level of role stress factors, Type-A
behaviour and state-trait anger scores between agewise dichotomized
datasets of TMG, MMG and IAS group.

4 B.   All the correlation coefficients among role stress including overall role
stress, Type-A pattern of behaviour and state-trait anger scores
will be statistically significant in both low and high age groups
of TMG, MMG and IAS group.

METHODOLOGY

METHODOLOGY

A. Sample:

Data for this study were collected from 221 top managers (TM), 326 middle managers (MMG) and 77 Indian Civil Service Officers/administrator (IAS). The average age of three job category of management personnel namely, top management, middle management and IAS were 48.22, 41.58 and 42.88 years respectively.

As age is hypothesized to account for experience of role stress and change in Type-A pattern of behaviour as well as state-trait anger, therefore, each sample group was dichotomized at the threshold age of 45 years. In the process, following age groupings of the sample were found:

Sl. No.	Job Category	Number	Mean Age (Years)	Range (in years)
1.	Top management of High age group (TM-HAG)	168	50.26	46 - 57
2.	Top management of low age group (TM-LAG)	53	41.75	33 - 45
3.	Middle management of high age group (MMG-HAG)	95	50.14	46 - 55
4.	Middle management of low age group (MMG-LAG)	231	38.05	22 - 45
5.	IAS of high age group (IAS-HAG)	26	49.81	46 - 55
6.	IAS of low age group (IAS-LAG)	51	38.90	27 - 45

Instruments:

'Organisational Role Stress Scale' developed and standardized by Pareek
(1981) has been used to obtain scores on different type of role stresses
one encounters in his job. This scale measures ten different types of
role stresses viz. interrole distance, role stagnation, role expectation
conflict, role erosion, role overload, role isolation, personal inade-
quacy, self role distance, role ambiguity and resource inadequacy. There
are 50 items in the questionnaire, 5 for each role stress dimension.
The respondent is adked to mark 'Zero' if he rarely or never feels the
way described in the item and 'four' if he very frequently or always
feels the way described in the item. The total score for each item are
obtained simply by adding the scores of each item to a particular area.
Total role stress score is obtained by adding the scores of various
dimensions. The test-retest reliability was found to be .45, .58, .63,
.65, .53, .37, .58 and .73 for self role distance, interrole distance,
role stagnation, role ambiguity, role overload, role erosion, role
inadequacy, and total role stress.

'The State-Trait Anger Scale' developed and standardized by Spielberger
(1980) has been used to measure two types of angers, namely, state anger
and trait anger. There are total 30 items in this instrument in which
first fifteen items represent state anger, and later 15 items
trait anger. In responding to the S-anger items, subjects were asked to
report the intensity of their feelings of anger "right now" by rating
themselves on the following four-point scale: (1) Not at all, (2) Somewhat

(3) Moderately so; and (4) very much. In responding to trait anger items, subjects were instructed to report the frequency that they had experienced feeling of anger by rating themselves on the following four point rating scale: (1) almost never; (2) sometimes; (3) often; and (4) almost always. The total score for each type of anger is obtained simply by adding the scores of first fifteen and last fifteen items.

'Can You Type Your Behaviour?' developed by Gmelch (1982) is used to obtain the scores on Type-A pattern of behaviour. This instrument has total 20 items. Each item would be responded in term of 'Yes' or 'No'. The items are framed in the form of interrogatory statements. The respondent's total score on Type-A Behaviour can be obtained simply by adding number of 'Yes' responses. A score higher than 10.50 represented Type-A pattern of behaviour.

C. Procedure:

The questionnaire-battery consisting of Organisational Role-Stress Scale, S and T anger Scale, and 'Can You Type Your Behaviour? was administered. The participation of respondents in this study was voluntary and confidentiality of responses was fully assured.

D. Analysis Technique:

As the objective of present study was comparison across job-levels pertaining to role stress, type-A behaviour and anger S/T, the aggregated

RESULTS

scores of each individuals in each category had been used as data for analysis of objectives. In order to compare the mean scores obtained by each category on factors of role stress, type-A behaviour and state-trait anger, critical ratio test and median test was carried out for all the comparison groups. Critical ratio/ and median test were performed also to compare the differences in mean scores of variables understudy in case of high and low age groups of each job category.

Further, product moment coefficients of correlation were computed between the variables understudy, namely, role stress factors including overall role stress, type-A behaviour and state-trait anger scores, for TMG, MMG and IAS groups as well as for the data sets of dichotomized low and high age groups of each job category. It was performed to find out the bivariate relationship among the variable understudy. The critical ratio value, chisquare value and correlation coefficients obtained for the above were checked at .05 and .01 level of significance.

RESULTS

Hypothesis 1 A: There will be no difference in level of different factors of role stress including overall role stress experienced by TMG, MMG and IAS group.

Table 1 presents descriptive statistics namely; means, medians and standard deviations pertaining to different factors of role stresses, Type-A pattern of behaviour and Anger S and T, for data on three sample groups, namely, top management, middle management and IAS officers. As regards overall

Table 1

Means, Medians and Standard Deviation scores (Column 1 to 9) and Critical Ratio Value (with level of significance) pertaining to role stress factors type-A pattern of behaviour and state-trait anger scores of TMG, MMG and IAS

Sl. No.	Variables	MEAN			MEDIAN			STANDARD DEVIATION			Comparison Group I CR (TMG vs MMG)	Comparison Group II CR (MMG vs IAS)	Comparison Group III CR (TMG vs IAS)
		I Category	II Category	III Category	I Category	II Category	III Category	I Category	II Category	III Category			
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1.	IRD	6.07	6.06	6.29	7.00	5.00	5.00	4.67	4.50	5.02	2.02**	.37	1.24
2.	RS	3.56	4.09	2.48	3.00	3.00	1.00	3.26	3.47	3.25	1.82	3.67*	2.51**
3.	REC	4.01	4.60	3.10	4.00	4.00	2.00	3.36	3.55	3.11	1.97**	2.69**	2.16**
4.	RE	6.94	7.09	5.57	7.00	7.00	4.00	3.88	3.92	4.50	NS	2.73*	2.38**
5.	RO	3.45	4.01	3.11	3.00	3.00	2.00	3.34	3.83	3.40	1.81	1.93**	.76
6.	RI	4.78	4.86	3.75	4.00	5.00	3.00	3.79	3.47	3.65	NS	2.42**	2.11**
7.	PI	2.66	3.83	2.35	2.00	3.00	2.00	2.70	3.50	2.36	6.03*	4.46**	.95
8.	SRD	3.54	4.22	4.51	3.00	3.00	4.00	2.89	4.63	3.41	6.56*	.62	2.23**
9.	RA	2.29	2.63	1.53	1.00	2.00	1.00	2.85	3.00	2.18	5.20*	3.68*	2.42**
10.	RIn	3.90	5.29	4.48	3.00	4.00	3.00	3.45	7.13	4.02	2.95*	1.34	.97
11.	ORS (Total)	41.95	45.95	36.79	39.00	43.00	33.00	22.72	23.59	22.32	1.99**	3.20*	1.74
12.	Type-A	9.99	10.04	9.69	10.00	9.00	10.00	7.73	4.60	3.72	.09	.70	.45
13.	Anger-S	17.36	19.13	17.97	15.00	17.00	17.00	3.89	5.55	3.99	4.30*	1.97**	1.16
14.	Anger-T	27.14	26.67	26.03	27.00	26.50	26.00	6.79	7.43	6.96	.76	.19	.34

Category I = TMG
Category II = MMG
Category III = IAS Group

* Significant at .01 level
** Significant at .05 level

Table 2

Relative standing of mean scores of role stress factors in top management

middle management and IAS personnel.

Sl. No.	Variables	Category I Top Mgt.	Category II MMG	Category III IAS
1.	IRD	II	II	I
2.	RS	VI	VII	VIII
3.	REC	IV	V	VII
4.	RE	I	I	II
5.	RO	VIII	VIII	VI
6.	RI	III	VI	V
7.	PI	IX	IX	IX
8.	SRD	VII	VI	III
9.	RA	X	X	X
10.	RIn	V	III	IV

organisational role stress, middle management group scored higher (45.95
followed by top management (41.95) and IAS (36.79).

On role stagnation, MMG scored higher (4.09) followed by TMG (3.56) and
IAS (2.58); on role expectation conflict, MMG scored higher (4.60)
followed by TMG (4.01) and IAS (3.10); on role erosion, MMG scored highe.
(7.09) followed by TMG (6.94) and IAS (5.57); on role overload, MMG scorec
higher (4.01) followed by TMG (3.45) and IAS (3.11); on role isolation,
MMG scored higher (4.86) followed by TMG (4.78) and IAS (3.75); on
personal inadequacy, MMG scored higher (3.83) followed by TMG (2.66)
and IAS (2.35); on role ambiguity, MMG scored higher (2.63) followed by
TMG (2.29) and IAS (1.53) end on resource inadequacy, MMG scored higher
(5.29) followed by IAS (4.48) and TMG (3.98).

TMG scored higher on one role stress factor, namely, inter-role distance
(6.87) followed by IAS (6.29) and MMG (6.06). IAS group however, also
scored higher on one role stress factor, namely, self role distance
(4.51) followed by MMG (4.22) and TMG (3.54). It is evident from above
that among three management groups, MMG experience more role stress and
as IAS people are least under role stress. Table 2 shows at a glance,
ranks secured by each category on various factors contributing to
overall role stress where '1' represents to the highest score;
'2' represents to next highest score and so on uptil '10' which des-
cribes to lowest obtained score. As can be seen from the table inter-
role distance and role erosion are the common contributer of role stress
where as role ambiguity and personal inadequacy rank the same in each
group being the remote contributer of role stress.

Table 3

Median test for comparison of scores on factors of role stress, type-A behaviour and state-trait anger in case of TMG and MMG.

Sl. No.	Variables		Category I (TMG)	Category II (MMG)	x^2	p
1.	IRD	High	113	135	5.57	.02
		Low	93	173		
2.	RS	High	117	200	3.35	.10
		Low	72	84		
3.	REC	High	114	176	.86	NS
			87	111		
4.	RE	High	117	172	.37	NS
		Low	89	115		
5.	RO	High	87	146	1.56	NS
		Low	110	144		
6.	RI	High	108	168	.36	NS
		Low	91	125		
7.	PI	High	98	189	8.55	.01
		Low	99	109		
8.	SRD	High	96	161	4.54	.05
		Low	99	119		
9.	RA	High	107	166	.42	NS
		Low	81	109		
10.	RIn	High	103	186	5.36	.05
		Low	93	107		
11.	ORS(T)	High	111	184	1.36	NS
		Low	104	138		
12.	Type-A	High	92	139	.17	NS
		Low	107	164		
13.	Anger-S	High	86	173	8.95	.01
		Low	113	129		
14.	Anger-T	High	101	151	.24	NS
		Low	107	163		

Apparent differences in average scores of variables understudy were tested for significance of difference in three comparison groups. Critical ratio test and median test were computed for this purpose. Its result is discussed as follow:

A. Top Management vs. Middle Management Group:

It can be seen from table-1 that on all the factors of role stress as well as overall role stress, middle management group scored higher than the top management. The only exception is inter role distance. On some factors of role stress, it can be seen (table 1) that MMG scored marginally high in comparison to TM, viz. on role erosion (MMG = 7.09, TM = 6.94), role isolation (MMG = 4.86, TM = 4.78) and role ambiguity (MMG = 2.63, TM = 2.29). When the apparent differences in average scores of TM and MMG were tested for statistical difference, difference in mean scores of interrole distance (CR = 2.02, P $<$.05), role expectation conflict (CR = 1.97, P $<$.05), personal inadequacy (CR = 6.03, P $<$.01), self role distance (CR = 6.56, P $<$.01), role ambiguity (CR = 5.28, P $<$.01), resource inadequacy (CR = 2.85, P $<$.01) and overall role stress (CR = 1.99, P $<$.05) were found to be significant (Column 10; table-1). Table-3 summarizes the findings of median test for this comparison group. It can be seen from the table-3, that median-test further verified the significance of difference in mean scores of four role stress factors of this comparison group. The Chi-squire value for these factors, namely interrole distance (x^2 = 5.57, P $<$.02), personal inadequacy (x^2 = 8.55, P $<$.01), self

Table 4

Median test for comparison of scores an factors of role stress including overall role stress, type-A behaviour and state-trait anger obtained by MMG and IAS groups.

Sl. No.	Variables		Category II (MMG)	Category III (IAS)	χ^2	P
1.	IRD	High	135	29	.11	NS
		Low	173	42		
2.	RS	High	200	27	19.19	.001
		Low	84	39		
3.	REC	High	176	31	6.02	.02
		Low	111	39		
4.	RE	High	172	23	16.31	.001
		Low	115	48		
5.	RO	High	164	29	1.02	NS
		Low	144	39		
6.	RI	High	168	26	9.04	.01
		Low	125	45		
7.	PI	High	189	30	7.07	.01
		Low	109	37		
8.	SRD	High	161	41	.47	NS
		Low	119	24		
9.	RA	High	166	27	5.33	.05
		Low	109	35		
10.	RIn	High	186	34	1.28	NS
		Low	107	28		
11.	ORS (T)	High	194	31	5.50	.02
		Low	138	44		
12.	Type-A	High	139	32	.34	NS
		Low	164	37		
13.	Anger-S	High	173	40	.95	NS
		Low	129	29		
14.	Anger-T	High	151	33	.45	NS
		Low	163	39		

role distance (x^2 = 4.54, P $<$ .05) and resource inadequacy (x^2 = 5.36 P $<$ .05) were found to be statistically significant. As compared to the findings of critical ratio test, in median test, role expectation conflict (x^2 = .06, P = NS), role ambiguity (x^2 = .42, P = NS) overall rolesstress (x^2 = 1.36, P = NS) were found to be statistically insignificant indicating that apparent differences in mean scroes of these factors may be attributed to the artifact of sampling flactuations.

B. MMG versus IAS Group:

It can be seen from the table-1 that MMG scored higher than IAS on all the role stress factors including overall role stress. However, the exception is only interrole distance (MMG = 6.06, IAS = 6.29) and self role distance (MMG = 4.22, IAS = 4.51). In critical ratio test, difference mean scores of role stagnation (CR = 3.67, P $<$ .01) role expectation conflict (CR = 2.69, P $<$ .01), role erosion (CR = 2.73, P $<$ .01), role isolation (CR = 2.42, P $<$ .05), personal inadequacy (CR = 4.46, P $<$ .01), role ambiguity (CR = 3.68, P $<$ .01), and overall role stress (CR = 3.20, P $<$ .01) were found to be statistically significant. These results have been further varified by the median test (Table-4). It can be seen from the table 4 that chi-square values for role stagnation (x^2 = 19.19, P $<$ .001), role expectation conflict (x^2 = 6.02, P $<$ .02), role erosion (x^2 = 16.31, P $<$ .001), role isolation (x^2 = 9.04, P $<$ .01), personal inadequacy (x^2 = 7.07, P $<$ .01), role ambiguity (x^2 = 5.33, P $<$ .05) and overall role stress (x^2 = 5.50, P $<$ .02) were statistically significant indicating a true statistical difference between two management groups as regards the scores on said factors of role stress.

Table 5

Median test for comparison of scores on factors of role stress, type-A pattern of behaviour and state-trait anger obtained by TMG and IAS group

Sl. No.	Variables		Category I (TMG)	Category III (IAS)	χ^2	p
1.	IRD	High	113	29	3.61	.10
		Low	93	42		
2.	RS	High	117	27	7.94	.01
		Low	72	39		
3.	REC	High	114	31	2.74	NS
		Low	87	39		
4.	RE	High	117	23	11.62	.001
		Low	89	48		
5.	RO	High	87	29	.125	NS
		Low	110	39		
6.	RI	High	108	26	5.84	.02
		Low	91	45		
7.	PI	High	98	30	.32	NS
		Low	99	37		
8.	SRD	High	96	41	3.21	.10
		Low	99	24		
9.	RA	High	104	27	2.83	.20
		Low	81	35		
10.	RIn	High	103	34	.28	NS
		Low	93	28		
11.	ORS (T)	High	111	31	1.96	NS
		Low	104	44		
12.	Type-A	High	92	32	.14	NS
		Low	107	37		
13.	Anger-S	High	86	40	3.91	.05
		Low	113	29		
14.	Anger-T	High	101	33	.69	NS
		Low	107	39		

C. TMG versus IAS Group:

It can be seen from table-1 that TMG in comparison to IAS group have scored higher on all factors of role stress including overall role stress. **The only expection was** resource inadequacy. When this apparent difference in the average score on factors of role stress including overall role stress were tested for statistical difference   role stress factors like role stagnation (CR = 2.51, P $<$ .05), role expectation conflict (CR = 2.16, P $<$ .05), role erosion (CR = 2.38, P $<$ .05), role isolation (CR = 2.11, P $<$ .05), self role distance (CR = 2.23, P $<$ .05) and role ambiguity (CR = 2.42, P $<$ .05) turned out to be statistically significant indicating that above apparent differences in mean scores **are not** due to artifacts of sampling **flactuation.** To support this statistical observation, when median test was performed on data of TM and IAS groups, role stagnation (X^2 = 7.94, P $<$ .01) role erosion (X^2 = 11.62, P .001) and role isolation (X^2 = 5.84, P $<$ .02) were again, found to be statistically and significantly different (table 5). In the median test, value of chi-squire for role expectation conflict (X^2 = 2.74, P $<$ .20) and role ambiguity (X^2 = 2.83, P $<$ .10) were found to be significantly different at .20 level whereas self role distance (X^2 = 3.21, P $<$ .10) and interrole distance (X^2 = 3.61, P $<$ .10) were found to be significantly different at .10 level of confidence. Since the degree of confidence in case of above four factors of role stress were found to be **below** .05 level, the difference in average scores of these factors as regard to TM and IAS groups may be attributed to artifacts of sample flactuations or so. Stricktly, median test did not wholly support the findings of critical ratio test.

Hypothesis 1 B: All the correlation coefficients between different factors of role stress including overall role stress in case of TMG, MMG and IAS group will be statistically significant.

Intercorrelation pertaining to factors understudy for three data sets, namely, top management group (TMG), middle management group (MMG) and IAS group are presented in table 6, 7 and 8 respectively. Results of intercorrelation among factors of role stress including overall role stress for three datasets are discussed as follow:

Scores on interrole distance, in case of all the three datasets, correlated positively and significantly with role expectation conflict (r = .36, .36 and .41, P < .01), role overload (r = .53, .55 and .68, P < .01), and self role distance (r = .30, P < .01, r = .25 and .23, P < .05). In case of TMG and MMG, intercorrelation between interrole distance and role stagnation (r = .30 and .31, P < .01), role isolation (r = .15, P < .05 and r = .25, P < .01), personal inadequacy (r = .19 and .28, P < .01), role ambiguity (r = .26 and .15, P < .01) and resource inadequacy (r = .28 and .28, P < .01) were found to be statistically significant. Role stagnation however, was found to be significantly correlated with interrole distance (r = .14, P < .05) in case of TMG only.

As regards correlation coefficients between role stagnation and factors of role stress, six role stress factors as well as overall role stress were found to be significantly associated in case of all the three job categories. These role stress factors were found to be role expectation conflict (r = .54, .45 and .50, P < .01), role isolation

Table 6

Intercorrelation among role stress factors including overall role stress, type-A pattern of behaviour and state-trait anger scores in case of top management group (TMG).

Sl. No.	Variables	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIn	ORS(T)	Type-A	Anger-S	Anger-T
1.	IRD	X	.30*	.36*	.14**	.53*	.15**	.19*	.30*	.26*	.28*	.56*	.10	.07	.28*
2.	RS		X	.54*	.44*	.33*	.59*	.53*	.51*	.50*	.48*	.75*	.02	.15**	.36*
3.	REC			X	.28*	.49*	.53*	.41*	.61*	.62*	.56*	.79*	.02	.19*	.31*
4.	RE				X	-.06	.50*	.03	.46*	.40*	.30*	.54*	.08	.09	.30*
5.	RO					X	.22*	.34*	.30*	.32*	.38*	.57*	.07	.14**	.29*
6.	RI						X	.28*	.55*	.60*	.56*	.74*	.07	.14**	.35*
7.	PI							X	.35*	.31*	.33*	.50*	.05	.14**	.22*
8.	SRD								X	.50*	.51*	.75*	.05	.15**	.31*
9.	RA									X	.52*	.75*	.06	.10	.29*
10.	RIn										X	.73*	.08	.19*	.31*
11.	ORS (T)											X	.10	.21*	.46*
12.	Type-A												X	.02	.11
13.	Anger-S													X	.18*
14.	Anger-T														X

* Significant at .01 level

** Significant at .05 level

Table 7

Intercorrelation among role stress factors including total role stress, type-A behaviour and state-trait anger scores

Middle Management Group (MMG).

Sl. No.	Variables	IRD	RS	REC	RE	RD	RI	PI	SRD	RA	RIn	ORS(T)	Type-A	Anger-S	Anger-T
1.	IRD	X	.31*	.36*	.03	.55*	.25*	.28*	.25*	.15*	.20*	.50*	.21*	.10	.27*
2.	RS		X	.45*	.25*	.43*	.47*	.35*	.40*	.43*	.29*	.71*	.08	.19*	.25**
3.	REC			X	.16*	.44*	.50*	.38*	.41*	.44*	.37*	.73*	.22*	.13*	.27**
4.	RE				X	-.04	.27*	.05	.24*	.30*	.10	.41*	.01	.03	.12**
5.	RC					X	.29*	.32*	.31*	.24*	.32*	.63*	.24*	.15*	.20*
6.	RI						X	.31*	.30*	.44*	.26*	.69*	.21*	.23*	.24*
7.	PI							X	.26*	.35*	.22*	.56*	.07	.18*	.21*
8.	SRD								X	.41*	.23*	.55*	.15*	.09	.18*
9.	RA									X	.35*	.65*	.09	.21*	.24*
10.	RIn										X	.49*	.12**	.12**	.19*
11.	ORS (T)											X	.21*	.27*	.36*
12.	Type-A												X	.25*	.07
13.	Anger-S													X	.19*
14.	Anger-T														X

* Significant at .01 level

** Significant at .05 level

Table 8

Interrelation among role stress factors including role stress, type-A behaviour and state-trait anger in case of IAS group

Sl. No.	Variables	IRD	RS	REC	RE	RD	RI	PI	SRD	RA	RIn	ORS(T)	Type-A	Anger-S	Anger-T
1.	IRD	X	.10	.41*	-.09	.68*	.25**	.21	.23**	+.00	.21	.52*	.39	.11	.41*
2.	RS		X	.50*	.59*	.19	.59*	.12	.48*	.42*	.36*	.68*	.26**	.07	.34*
3.	REC			X	.23**	.69*	.58*	.34*	.47*	.39*	.47*	.30*	.27**	-.02	.19
4.	RE				X	-.08	.56*	-.02	.39*	.25**	.29*	.52*	.22**	-.07	.22**
5.	RD					X	.41*	.35*	.31*	.19	.42*	.67*	.32*	-.01	.18
6.	RI						X	.33*	.53*	.54*	.48*	.81*	.33*	-.01	.24**
7.	PI							X	.26**	.41*	.17	.43*	.16	-.16	.17
8.	SRD								X	.44*	.32*	.70*	.23*	-.09	.37*
9.	RA									X	.37*	.51*	.51*	.27**	.12
10.	RIn										X	.56*	.20	.31*	.12
11.	ORS (T)											X	.39*	.02	.39*
12.	Type-A												X	.29*	.32*
13.	Anger-S													X	.17
14.	Anger-T														X

*Significant at .01 level

**Significant at .05 level

(r = .59, .47 and .59, P < .01), self role distance (r = .51, .40 and
.48, P < .01), role ambiguity (r = .50, .43, and .42, P < .01), resource
inadequacy (r = .48, 29 and .36, P< .01) and overall role stress
(r = .75, .71 and .68, P < .01) (table 6, 7 and 8). In case of TMG and
MMG role stagnation also intercorrelated with role overload (r = .33
and .35, P < .01). Since role stagnation is concerned with problem
of role growth and career progression, it may be argued that in case
of TMG and MMG, it is more potent source of stress as compared to
IAS group.

It is evident from table 6, 7 and 8 that role expectation conflict
is one of the most potential stressor for TMG, MMG as well as for
IAS group. It seems that expectations of significant others in case
of all the three groups is too high and therefore when scores on role
expectation conflict were correlated with factors of role stress including
overall role stress score, all the correlation coefficients turned out to
statistically significant in case of TMG, MMG and IAS group. The
factors of role stress which correlated significantly with role
expectation conflict were found to be role erosion (r = .28, .18,
P < .01 and r = .23, P < .05), role overload (r = .49, .44 and .69,
P < .01), role isolation (r = .53, 50 and .58, P< .01), personal
inadequacy (r = .41, .38 and .34, P< .01), self role distance
(r = .61, .41 and .47, P < .01), role ambiguity (r = .62, .44 and
.39, P < .01), resource inadequacy (r = .56, .37 and .47, P < .01)
as well as overall role stress (r = .79, .72 and .80, P < .01).
The correlation coefficients ranged from moderate to high.

As regards role erosion, the findings reported in table 6, 7 and 8,
however identified role erosion as a/stressor. In case of TMG, MMG
and IAS group, it did not correlate significantly with role overload
and personal inadequacy indicating that feeling of **role erosion** . .
has nothing to do with increased work load as well as one's skill,
ability or training to perform their work effectively. In all the
three datasets, intercorrelations between role erosion and role isolation
($r = .50$, .27 and .56; $P < .01$), self role distance $(r = .46$, .24 and .39,
$P < .01$), role ambiguity $(r = .40$, .30, $P < .01$ and $r = .25$, $P < .05$) and
overall role stress $(r = .54$, .41 and .52, $P < .01$) were found to be
statistically significant. In case of TMG and IAS group, role erosion
was found to be correlated significantly also with resource inadequacy
$(r = .30$ and .29, $P < .01$) (table 6 & 8). We already have noted elsewhere
that role stagnation and role expectation conflict had also correlated
significantly with role erosion in all the three datasets.

When the scores on role overload were correlated with factors of role
stress including overall role stress score, role isolation $(r = .22$, .29
and .41, $P < .01$), personal inadequacy $(r = .34$, .32 and .35, $P < .01$),
self role distance $(r = .30$, .31 and .31, $P < .01$), resource inadequacy
$(r = .38$, .32 and .42, $P < .01$) as well as overall role stress $(r = .57$,
.63 and .67, $P < .01$) were found to be significantly associated in all
the three datasets (table 6, 7 and 8). Role ambiguity, however, was
found to be correlated with role overload $(r = .32$ and .25, $P < .01$) in
case of TMG and MMG only indicating that experience of role overload in

these management personnel is influenced by lack of clear role-expectation, informations and understandings. In case of IAS personnel, however, such things do not account for increased role overload. According to Kahn and Quinn (1970) role overload is likely to occur in the absence of mechanism of role integration, in the absence of power of role occupants, in the large variations in the expected output and when delegation or assistance cannot procure more time.

Table 6, 7, and 8 revealed that in all the three datasets of management personnel, role isolation associated positively and significantly with all the role stress factors as well as overall role stress. Correlation coefficients varied from moderate to high with role stress factors (.28 to 60) where as, it was found to be quite high with overall role stress (69 to .81). When in a role set, role occupant feels that certain roles are psychologically nearer to him than other roles, than this type of stress occurs. Kahn et al (1964) and French and Caplan (1970) observed in their respective studies that mistrust of persons one worked with was positively related to high role ambiguity which led to inadequate communication between people and psychological strain in the form of low job satisfaction and feeling of job related threat to one's well being. It is interesting to note that in present study too, role isolation positively and significantly related to other role stress factors such as personal inadequacy (r = .28, .31 and .33, P < .01), self role distance (r = .55, .38 and .53, P < .01), role ambiguity (r = .60, .44 and .54, P < .01), resource inadequacy (r = .56, .26 and .48, P < .01) as well as overall role stress (r = .74, .69 and .81, P < .01). Thus role isolation is correlated with all the role

stress factors in case of TMG, MMG and IAS group, some of these role

stressers are at the roof of role isolation where as others outcome of

it.

The role stress created in role occupant due to lack of proper skill,

ability and training to perform their role is represented by personal

inadequacy. It seems that personal incompetence to handle the job

effectively is one of the major source of stress for management personnel.

It can be seen from table 6, 7 and 8 that in case of all the three datasets

personal inadequacy found to be associated positively and significantly

with self role distance ($r = .31, .26, P < .01$ and $r = .26, P < .05$), role

ambiguity ($r = .31, .35,$ and $.41, P < .01$) and overall role stress

($r = .50, .56$ and $.43, P < .01$). In case of TMG and MMG, personal inade-

quacy was found to be significantly correlated also with resource inade-

quacy ($r = .33$ and $.22, P < .01$). We had noted already (elsewhere in this

discussion) that personal inadequacy had been significantly corre-

lated with remaining factors of role stress such as role isolation, role

overload, role expectation conflict, role stagnation and interrole

distance in all the three datasets. The exception were only role stagnation

in case of IAS group. It may be therefore argued that lack of skill and

proper training results into role occupant's hostility towards himself for

he has failed to live up to the expectations due to his personal lackings.

We had noted elsewhere in this presentation that in case of these datasets,

self role distance interrelated significantly with inter-role distance,

role stagnation, role expectation conflict, role erosion, role overload,

role isolation and personal inadequacy. Further (table 6, 7, and 8),
intercorrelation between self role distance and role ambiguity
($r = .58$, $.41$ and $.44$, $P < .01$), resource inadequacy ($r = .51$, $.23$ and
$.32$, $P < .01$) and overall role stress ($r = .75$; $.55$ and $.70$, $P < .01$)
were found to be statistically significant in case of TMG, MMG and IAS.
Since self-role distance explains the role occupant's conflict between
the self concept and the expectations from the role, it may be argued
that the roles occupied by managers in this study do not go in accordance
to their self conception. In other words, they often experience stress
in this regard which is one of the very potent stressor and associate
significantly with other stressors of the role self and role space.
Pestonjee and Singh (1982), in their study of Electricity Supply Company
personnel had observed that role stress factors including overall role
stress score correlated significantly with self-role distance.

It can be seen from table 6, 7 and 8 that intercorrelation between role
ambiguity and resource inadequacy ($r = .52$, $.49$ and $.37$, $P < .01$) as well
as overall role stress score ($r = .75$, $.65$ and $.51$, $P < .01$) were found
to be positive and statistically significant in case of TMG, MMG and IAS
group. It is noted already that, role ambiguity had correlated signifi-
cantly with other role stress factors too such as interrole distance, role
stagnation, role expectation conflict, role erosion, role overload, role
isolation, personal inadequacy and self-role distance in case of all the
three datasets. However, in case of IAS group only, role ambiguity had
been found to be insignificantly associated with two role stress factors,

namely, personal inadequacy and interrole distance indicating that IAS personnel frequently suffer due to lack of clear information and improper understanding. **It seems**, as Kahn and Quinn (1970) had suggested, new organisational roles, roles in **expanding** or contracting organisations, roles in organisation exposed to frequent changes in demand and roles on process which result in role ambiguity are more in role set of MMG and TMG as compared to IAS group.

Resource inadequacy type of stress results in role occupant when he does not have adequate resources and equipments to perform his role effectively. It can be seen from table 6, 7 and 8 that resource inadequacy **is significantly** associated with overall role stress in case of TMG ($r = .73$, $P < .01$), MMG ($r = .49$, $P < .01$) and IAS group ($r = .56$, $P < .01$) indicating that resource inadequacy is one of the potential role stressor, and significantly accounts for increase in overall role stress in different categories of managers. As we had observed elsewhere in this discussion, resource inadequacy also correlated significantly with interrole distance, role stagnation, role expectation conflict, role erosion, role overload, role isolation, personal inadequacy, self-role distance and role ambiguity in case of all the three datasets of management personnel. However, interrole distance as well as personal inadequacy in case of IAS had correlated insignificantly with resource inadequacy. Pareek (1981) argued that in case of resource inadequacy, a person may turn hostile towards management for their failure to provide adequate resources in order to meet the job challenge effectively. Pestonjee and Singh (1981) observed that in any case role inadequacy might be accompanied with lower morale, job

dissatisfaction and psychological strain and will have a bearing on the individual either in the form of poor mental health or physical health or both. All this in turn, increase experience of role stress and hence, role stress factors correlate significantly with resource inadequacy.

It is evident from above discussion that, by and large, all the correlation coefficients between factors of role stress were found to be positive and statistically significant. However, the only exception were two correlation coefficients (RE vs RO, RE vs PI, RE vs RIn) in case of TMG; four correlation coefficients (RE vs RO, RE vs PI, RE vs RIn and RE vs IRD); in case of MMG; and eleven correlation coefficients in case of IAS group. The value of correlation ranged between .14 to .79 in case of TMG; .15 to .73 in case of MMG and .22 to .81 in case of IAS group. Hence the present hypothesis is wholly retained in case of TMG and MMG where as partly rejected as regards IAS group.

Hypothesis 2 A: There will be no difference in type-A pattern of behaviour scores obtained by TMG, MMG and IAS group.

As regards hypothesis 2 A, it can be seen from table 1 that scores on type-A pattern of behaviour did not depict any of the three management group as Type-As. Minimum score for one's being Type-A individuals is 10.50. It can be seen from table-1 that MMG scored higher on this variable (10.04) followed by TMG (9.99) and IAS group (9.69). Apparent differences in Type-A scores of three datasets were found to be very low. It suggest that depending on situations, all the three groups of

management personnel may exhibit type-A pattern of behaviour.

However, when this apparent differences in Type-A scores of TMG and MMG were subjected for statistical difference, the critical ratio value was found to be statistically insignificant (CR = .09, P = NS) (table 1). This result was further varified in median test (X^2 = .17, P = NS) (table 3). When the differences in mean scores in case of MMG versus IAS group were tested for statistical difference, the value of critical ratio (see table 1) was again found to be statistically insignificant (CR = .70, P = NS). Median test, again varified to this finding. The difference in Type-A pattern of behaviour score in third comparison group, namely, TMG versus IAS group, was also found to be statistically insignificant (CR = .20, P = NS). It can be seen from table 5 that median test further varified this finding of critical ratio test (X^2= 0.14, P = NS). It may be therefore, argued that observed apparent differences in Type-A scores of three datasets are not actual. Instead, it is the artifact of sampling fluctuations. Hence in the light of findings the hypothesis that there will be no difference in Type-A scores of three management groups namely TMG, MMG and IAS group is retained.

Hypothesis 2 B: Intercorrelation between Type-A scores and role factors of role stress including overall role stress scores in case of TMG, MMG, and IAS groups will be statistically significant.

Various findings confirmed that Type-A persons experience increased emotionality, marital disagreement, personal worries, daily stress, tension, anxiety, anger, neuroticism and depression (Haynes et al. 1978;

Chesney, Black et al. 1981). Over all, type-As experience the negative
affect and adverse symptoms that are associated with stress, pressure
and competetive life style. In the present study, management personnel
of all the three job categories were found to be at the border
Type-A pattern of behavioural disposition (ranging between 9.69 to 10.04).

However, when the Type-A scores of TMG was intercorrelated with role
stress factors, none of the correlation coefficients were found to be
statistically significant. Quantitatively, the value of correlation
ranged between .02 to .10. In case of MMG, Type-A scores correlated
positively and significantly with interrole distance ($r = .21$, $P < .01$),
role expectation conflict ($r = .22$, $P < .01$), role overload ($r = .24$,
$P < .01$), role isolation ($r = .21$, $P < .01$), self-role distance ($r = .15$,
$P < .01$), resource inadequacy ($r .12$, $P < .05$) and overall role stress
($r = .21$, $P < .021$). The correlation coefficients ranged between zero
to moderate. Inter-correlation between Type A scores was found to be
significantly associated with interrole distance ($r = .39$, $P < .01$),
role stagnation ($r = .26$, $P < .05$), role expectation conflict ($r = .27$,
$P < .05$), role erosion ($r = .22$, $P < .05$), role overload ($r = .32$, $P < .01$),
role isolation ($r = .33$, $P < .01$), self role distance ($r = .23$, $P < .05$),
role ambiguity ($r = .31$, $P < .01$), as well as overall role stress ($r = .39$
$P < .01$) in case of IAS group.

As it is evident from above discussion of intercorrelation between Type-A scores and role stress factors, the hypothesis that role stress factors, including overall role stress will be significantly correlated with type-A score in all the datasets, is partly rejected. Scores on type-A pattern of behaviour significicabtly associated with 8 factors of role stress in case of IAS group; with six role stress factors in case of MMG, and with none of the role stress factor in case of TMG.

Hypothesis 3 A:

There will be no difference in level of state-trait anger scores of TMG, MMG and IAS group.

It is evident from table 1 that on state-anger, MMG scored higher (19.13) followed by IAS group (17.97) and TMG (17.36) where as on trait-anger, TMG scored higher (27.14) followed by IAS group (26.83) and MMG (26.67). It is of worth to note that TMG stood at bottom and MMG at top in scores on state anger where as this picture was reversed in scores on trait anger scale. Spielberger et al. (1983) observed that on both state and trait angers high school students scored highest followed by military recruits and college students.

However, when this apparent difference in average scores of TMG and MMG were tested for significance of difference; anger-S was found to be statistically significant (CR = 4.38, P < .01) whereas scores on trait-anger turned out to be statistically insignificant (CR = .76, P = NS)

(table 1). This result was further, varified in median-test. Chi-squire value for scores of state anger (x^2 = 8.95, P <.01) was found to be statistically significant whereas that for scores of trait anger (x^2 = .24, P = NS) was statistically insignificant (Table 3). In case of second comparison group, namely, MMG versus IAS group, the apparent difference in average scores on state-anger was found to be significantly different (CR = 1.97, P <.05) whereas scores on trait anger were statistically insignificant. Median-test however didn't provide further support to this finding indicating that this difference in Anger-S score may be attributed to artifacts of sampling flactuations. The value of chi-square for both state anger (x^2 = .95, P = NS) and trait anger (x^2 = .45, P = NS) was found to be statistically insignificant (table 4).

In case of third comparison group, namely, TMG and IAS group, apparent differences in mean scores of two group for both, state anger (CR= 1.06, P = NS) as well as trait anger (CR = .34, P = NS) were found to be statistically insignificant (table 1). Median test, it can be seen from table 5, partly supported this finding. The value of chi-squire for trait anger (x^2 = .69, P = NS) was found to be statistically insignificant whereas the value of chi-squire for state anger (x^2= 3.91, P <.05) turned out to be statistically significant at .05 level indicating that differences in state-anger in these two groups may not be attributed to the artifacts of sampling flactuations.

Above discussion concludes that on state anger MMG scored significantly
high in comparison to TMG and IAS group whereas apparent differences
between average scores of TMG and IAS group was due to artifact of sampl-
ing flactuations. It indicates that middle management personnel in
comparison to others, are usually forced into an emotional state or
condition that create& more subjective feelings of tension, annoy-
ance, irritation and rage. As regards score on trait-anger, in none of
the comparison groups average mean difference between groups were found
to be significantly different. Overall the hypothesis that there will
be no difference in state-trait anger scores of TMG, MMG and IAS group
was retained as regards trait anger score; and rejected as regards state
anger scores of the three management job categories.

Hypothesis 3 B:

The correlation coefficients between state-trait anger scores and various
types of role stress including overall role stress in case of TMG, MMG
and IAS group will be statistically significant.

It is evident from table 6, 7 and 8, scores on state-anger correlated
significantly with only one role stress factor, namely, resource inade-
quacy ($r = .19$, $P < .01$, $r = .12$, $P < .05$ and $r = .31$, $P < .01$) in all the
three datasets. In case of TMG and MMG, state-anger score was found to
be positively and significantly associated with role stagnation ($r = .15$,
$P < .05$ and $r = .19$, $P < .01$), role expectation conflict ($r = .19$ and $.18$,
$P < .01$), role overload ($r = .14$, $P < .05$ and $r = .15$, $P < .01$), role Isolation

(r = .14, P < .05 and r = .23, P < .01), personal inadequacy (r = .14, P < .05 and r = .18, P < .01) and overall role stress (r = .21 and .27, P < .01). Further, some role stress factors like self-role distance (r = .15, P < .05) in case of TMG, role ambiguity (r = .21, P < .01 and r = .27, P < .05) in case of MMG and IAS group were also found to be associated with state anger scores.

As regards intercorrelation between scores on trait anger and factors of role stress, it is evident from table 6, 7 and 8 that all the correlation coefficients in case of TMG and MMG were found to be positive and statistically significant. However, in case of IAS group, intercorrelation between trait anger score and interrole distance, role stagnation, role erosion, role isolation, self-role distance and total role stress were found to be significant. The role stress factors which correlated significantly with trait anger score in all the three datasets were found to be interrole distance (r = .28, .27 and .41, P < .01), role stagnation (r = .36, .25 and .34, P < .01), role erosion (r = .30, P < .01; r = .12 and .22, P < .05), role isolation (r = .35, P < .01; r = .24 and .24, P < .01), self-role distance (r = .31, .18 and .37, P < .01) and overall role stress (r = .46, .36 and .39, P < .01).

This finding is indicative of the fact that trait anger is a more dominent and potential stressor than state-anger in case of TMG and MMG. As regards IAS group, there is no significant association between state trait anger and role stress factors. However, in comparison to state anger

trait -anger correlated with more role stress factors. Since trait-anger represents to individual differences in perceiving a wide range of situations as anger provoking, it may be therefore, concluded that different types of organisational/environmental stressors, are more annoying, irritating and frustrating for TMG and MMG in comparison to IAS group. Also that the subjective feeling of tension, irritation, fury and rage is more strongly provoked in presence of different types of stressors in MMG and TMG as compared to IAS group. The hypothesis that correlation coefficients between state-trait anger and role stress factors will be significant, is by and large, retained in case of TMG and MMG. However, it is partly rejected in case of IAS group.

Hypothesis 3 C:

The correlation coefficients between scores on state anger, trait anger and type-A pattern of behaviour in case of TMG, MMG and IAS group will be statistically significant.

It can be seen from table 6, 7 and 8 that scores on Type-A pattern of behaviour, in case of IAS group (table 8) positively and significantly correlated with state-anger ($r = .29$, $P < .01$) and trait-anger ($r = .32$, $P < .01$) whereas in case of MMG, only state anger ($r = .25$, $P < .01$) was significantly associated (table 7). In case of TMG (table 6) neither state nor trait anger was found to be significantly associated with scores on type-A pattern of behaviour. As regards intercorrelation between state

and trait anger, trait anger (r = .18 and .19, $P <$ .01) in case of TMG and MMG associated significantly with state anger whereas it was found to be insignificant in case of IAS group.

Above findings suggest that in case of both MMG and IAS group, Type-A behaviour like acceleration of function, subjective overload, competetive orientation, sense of time urgency, etc. positively and significantly effect to emotional-state of individual's feeling of tension, annoyance and rage. Further, Type-A behaviour, in case of IAS group, associated positively and significantly with role incumbent's perception of a wide range of organisational situation as anger provoking (i.e. trait anger). In other words, it indicates that type-A behaviour of administrators of non-profit organisations is significantly influenced by trait anger. Significant association between trait and state anger in case of TMG and MMG suggests that MMG and TMG who are high in state anger are also high in trait anger because trait anger represents the individual's frequency that state anger was experienced overtime. Hence, state and trait anger correlated positively and significantly.

Hypothesis 4 A:

There will be no difference in the level of average scores pertaining to role stress factors, Type-A behaviour and state-trait anger of each agewise dichotomized pair of TMG, MMG and IAS group.

To test the present hypothesis, data pertaining to variables understudy of TMG, MMG and IAS group were dichotomized on the age basis of 45 years. Afterward, difference in mean average scores pertaining to role stress

Table 9

Mean, Median, SD critical ratio value and level of significance for role stress factors, type-A behaviour and state-trait anger in case of TM-LAG and TM-HAG

Sl. No.	Variables	TM-LAG (N = 53)			TM-HAG (N = 168)				
		Mean	Median	SD	Mean	Median	SD	CR	P
1.	IRD	7.19	7.00	4.93	6.77	7.00	4.59	.55	NS
2.	RS	4.64	3.00	4.06	3.21	3.00	2.89	2.38	.05
3.	REC	4.75	4.00	4.25	3.78	3.00	3.00	1.54	NS
4.	RE	8.13	7.00	4.78	6.57	7.00	3.49	2.20	.05
5.	RO	3.62	3.00	3.70	3.40	3.00	3.22	.38	NS
6.	RI	5.62	5.00	4.80	4.52	4.00	3.38	1.55	NS
7.	PI	2.77	2.00	2.61	2.63	2.00	2.74	.33	NS
8.	SRD	4.62	4.00	3.62	3.20	3.00	2.53	2.680	.01
9.	RA	3.30	2.00	3.95	1.90	1.00	2.33	2.31	.05
10.	RIn	4.74	5.00	3.89	3.74	3.00	3.27	1.69	NS
11.	ORS (T)	49.40	44.00	28.41	39.61	37.00	20.14	2.33	.05
12.	Type-A	9.77	10.00	3.13	10.05	10.00	8.69	.35	NS
13.	Anger-S	17.74	16.00	3.81	17.24	15.00	3.92	.45	NS
14.	Anger-T	29.55	29.00	7.18	26.39	26.00	6.50	2.85	.01

Table 10

Median test for comparison of scores and state-trait anger in case of TMG-LAG and TMG-HAG.

Sl. No.	Variables		TMG-LAG	TMG-HAG	x^2	P
1.	IRD	High	23	64	.60	NS
		Low	26	82		
2.	RS	High	26	63	1.65	NS
		Low	21	83		
3.	REC	High	22	67	.13	NS
		Low	23	84		
4.	RE	High	27	74	.72	NS
		Low	22	82		
5.	RO	High	21	66	.74	NS
		Low	26	84		
6.	RI	High	29	79	1.92	NS
		Low	16	75		
7.	PI	High	24	74	.14	NS
		Low	21	78		
8.	SRD	High	28	68	2.13	.20
		Low	19	80		
9.	RA	High	32	75	1.03	NS
		Low	18	63		
10.	RIn	High	32	71	1.83	NS
		Low	20	73		
11.	ORS (T)	High	31	75	2.63	.20
		Low	21	90		
12.	Type-A behaviour	High	23	69	.11	NS
		Low	25	82		
13.	Anger-S	High	27	81	.22	NS
		Low	0	2		
14.	Anger-T	High	29	71	3.19	.10
		Low	19	89		

factors, Type-A score and state-trait anger of dichotomized datasets of each management group were subjected to critical ratio test. The result is summarized as follows:

A. TMG-HAG vs TMG-LAG:

Table 9 summarize scores of mean, median, standard deviation, critical ratio test and confidence level pertaining to each factors of role stress including overall role stress, type-A behaviour and state as well as trait anger scores for both dichotomized groups of top management (TMG-LHG and TMG-LAG) personnel. Result of median test is presented in table 10. It can be seen from table 9 that on all the role stress factors including overall role stress and state-trait anger, TMG.LAG scored higher than TMG-HAG. When these apparent difference in mean scores were tested for statistical difference, role stagnation (CR = 2.38, P < .05), role-erosion (CR = 2.20, P < .05), self-role distance (CR = 2.68, P < .01), role ambiguity and overall role stress (CR = 2.33, P < .05) were found to be significantly different indicating that young top managers (i.e. below 45 years in age) experience above types of role stress as well as overall role-stress significantly more than their colleagues of above age group. Median test, however, raised doubt against the findings of critical ratio test as none of the role stress factor, including overall role stress exhibited statistical difference significant at .05 or .01 levels (table 10). As regard type-A and anger scores, apparent difference in trait anger scores were found to be significantly

Table 11

Mean, Median, SD, CR value and level of singificance pertaining to factors of role stress, type-A behaviour state-trait anger in case of MMG-LAG and MMG-HAG.

Sl. No.	Variables	MM-LAG (N = 231)			MM-HAG (N = 95)				
		Mean	Median	SD	Mean	Median	SD	CR	P
1.	IRD	6.23	5.00	4.77	5.65	5.00	3.77	1.16	NS
2.	RS	4.01	3.00	3.46	4.30	4.00	3.52	0.67	NS
3.	REC	4.39	4.00	3.37	5.12	4.00	3.94	1.72	NS
4.	RE	7.34	7.00	3.85	6.49	7.00	4.02	1.77	NS
5.	RO	3.99	3.00	3.93	4.06	3.00	3.85	.33	NS
6.	RI	4.65	4.00	3.36	5.38	5.00	3.68	1.70	NS
7.	PI	3.91	3.00	3.49	3.64	3.00	3.54	.56	NS
8.	SRD	4.23	3.00	5.03	4.22	3.00	3.48	.05	NS
9.	RA	2.58	2.00	2.95	2.77	2.00	3.13	.5	NS
10.	RIn	5.25	4.00	7.96	5.40	5.00	4.81	.20	NS
11.	ORS (Total)	45.75	43.00	22.90	46.43	44.00	25.31	.23	NS
12.	Type-A	10.13	10.00	4.31	9.81	9.00	5.24	.52	NS
13.	Anger-S	19.03	17.00	5.63	19.38	18.00	5.35	.53	NS
14.	Anger-T	27.03	27.00	6.81	25.79	25.00	8.75	-1.24	NS

Table 12

Median test for comparison of scores on role stress factors, type-A behaviour and state-trait anger in case of MMG-LAG and MMG.HAG.

Sl. No.	Variables		MMG-LAG	MMG-HAG	x^2	P
1.	IRD	High	101	35	.88	NS
		Low	124	48		
2.	RS	High	138	63	.10	NS
		Low	60	24		
3.	REG	High	123	53	.19	NS
		Low	81	30		
4.	RE	High	122	50	.80	NS
		Low	75	40		
5.	RO	High	103	43	.27	NS
		Low	101	43		
6.	RI	High	112	56	2.45	.20
		Low	94	30		
7.	PI	High	136	53	.85	NS
		Low	71	37		
8.	SRD	High	115	46	.30	NS
		Low	83	36		
9.	RA	High	116	50	.24	NS
		Low	77	32		
10.	RIn	High	128	58	.23	NS
		Low	78	30		
11.	ORS (T)	High	131	53	.38	NS
		Low	96	40		
12.	Type-A Behaviour	High	107	32	3.57	.10
		Low	109	55		
13.	Anger-S	High	116	56	.87	NS
		Low	95	35		
14.	Anger-T	High	111	39	1.78	NS
		Low	109	55		

different (CR = 2.85, P .01) in critical ratio test whereas other two

variables turned out to insignificantly different. Median test provided

weak support to this finding. The value of chi-squire for trait anger

(X^2 = 3.19, P .10) was found to be significant only at .10 level.

B. MMG-HAG vs MMG-LAG

Table 11 summarizes the mean, median, SD, value of critical ratio

and level of significance pertaining to role stress factors, Type-A

behaviour, state-trait anger scores for two dichotomized groups of

MMG (MMG-LAG and MMG-HAG). Results of median test is presented in table 12.

It can be seen from table 11 that as regards factors of role stress, Type-A

behaviour and state-trait anger scores, MMG-LAG scored higher on all the

factors of role stress and state anger. The only expectation were interrole

distance role erosion, personal inadequacy, Type-A scores and trait anger on

which MMG-LAG scored higher. However, when the critical ratio test was

computed to test the apparent differences in average scores of above vari-

ables none of the role stress factor including overall role stress was found

to be significantly different indicating that high or low age of middle

management personnel may not held accountable for differences in experience

of any type of role stress (table 11). This finding was further, varified

in median test. Chi-squire value for all the role stress factors as well as

overall role stress score turned out to be insignificant (table 12). When

the apparent differences in average scores of type-A behaviour, state and

trait anger were tested for statistical difference, result recorded in

table 11 indicate that MM-LAG and MM-HAG do not differ significantly on

on these variable. This finding was further varified in median test
as none of the chi-squire value was found to be statistically signi-
ficant. However, the exception was only Type-A behaviour. The value
of chi-squire for Type-A score was found to be 3.57 which is signifi-
cant at .10 level. Overall it may be concluded that age-difference in
middle management personnel do not account for apparent differences
in scores on role stress factors, Type-A pattern of behaviour and
state-trait anger. In other words, these differences in mean scores
may be attributed to chance factor instead of being real.

C.   IAS-HAG vs IAS-LAG:

Table 13 presents mean, median, standard deviation, value of critical
ratio and significance level pertaining to factors of role stress as
well as overall role stress, Type-A behaviour and, state and trait
anger for IAS-HAG and IAS-LAG. Table 14 summarises the result of median
test. As regards factor of role stress including overall role stress,
Type-A behaviour and state-trait anger, it can be seen from table 13
that IAS-LAG scored higher on   the factors of role stress including
overall role stress and trait anger. IAS-HAG scored higher on resource
inadequacy, role overload, Type-A behaviour and state-anger. When this
apparent difference in average scores were tested for statistical differ-
ence, one role stress factor, namely, self role distance (CR = 2.02, P < .05)
was found to be significantly different in these groups. None of the other
the role stress factor or overall role stress itself (except to self role
distance) differed significantly with increase in age of role incumbents.
Median test, as it can be seen from table 14, had further supported to

Table 14

Median test for comparison of scores on role stress factors, type-A behaviour and state-trait anger in case of IAS-LAG and IAS-HAG.

Sl. No.	Variables		IAS-LAG	IAS-HAG	x^2	P
1.	IRD	High	20	9	.30	NS
		Low	28	14		
2.	RS	High	20	8	1.00	NS
		Low	22	17		
3.	REC	High	24	8	1.56	NS
		Low	22	16		
4.	RE	High	18	5	2.13	NS
		Low	20	21		
5.	RO	High	19	10	.68	NS
		Low	24	15		
6.	RI	High	19	8	.50	NS
		Low	26	18		
7.	PI	High	22	7	2.87	NS
		Low	20	18		
8.	SRD	High	31	10	6.08	.01
		Low	9	14		
9.	RA	High	21	6	1.47	NS
		Low	21	14		
10.	RIn	High	20	14	.12	NS
		Low	17	11		
11.	ORS (T)	High	23	8	1.23	NS
		Low	26	18		
12.	Type-A Behaviour	High	18	14	.64	NS
		Low	26	12		
13.	Anger-S	High	28	13	.51	NS
		Low	19	9		
14.	Anger-T	High	26	7	1.76	NS
		Low	24	15		

this finding. It can be seen (table 14) that value of chi-squire for

self role distance (x^2 = 6.88, P < .01) was found to be significantly

different in this comparison group. Secondly, for personal inadequacy

value of critical ratio was found to be 1.89 which turned out to be

statistically significant at .10 level in median test (x^2 = 2.87,

P < .10). As regard Type-A behaviour and state-trait anger, in critical

ratio test, mean difference in trait anger score was found to be signi-

ficantly different (CR = 2.60, P < .05). Critical ratio value for state

anger and Type-A scores exhibited insignificant difference (Table 13).

This result, however, has not got support from median test as all the

value of chi-squire were found to be statistically insignificant (table 14).

Overall, it may be concluded that by and large, the apparent differences

in average scores of role stress factors, Type-A behaviour and state-trait

anger in case of low and high age group of TMG, MMG and IAS group are due

to chance factor like sampling flactuation etc. It is evident from above

discussion that TMG-HAG scored significantly higher than TMG-HAG on role

stagnation, role erosion, self role distance, role ambiguity, overall

role stress and state anger (in CR test). Though this finding was not

precisely supported (table 9) by median test, it is indicative of fact

that role of TMG-LAG is more streneous and ambiguous which significantly
                                    role stresses and
results in wide range of/anger provoking situations in comparison to

TMG-HAG. As regards dichotomized IAS groups, self role distance, personal

inadequacy (significant at .10 level in median test) and trait anger were

found to be significantly high in case of IAS-LAG indicating that lack of

skill and proper training as well as conflict between self concept and

nature of role are more dominant cause of stress in case of IAS-LAG

which significantly inhance level of trait-anger in them ## compare
                                                    of MMG,
to IAS-HAG. Agewise dichotomized datasets/ namely, MM-HAG & MM-LAG

however were not found to differ significantly from one another. Hence

major part of the hypothesis 4 A is retained.

Hypothesis 4 B:

All the correlation coefficients of role stress including overall role

stress, Type-A pattern of behaviour, and state-trait anger scores will

be statistically significant in both, low and high age groups of TMG,

MMG and IAS group.

Product moment coefficient of correlation pertaining to role stress

factors, Type-A behaviour and state-trait anger obtained for TM-HAG

TM-LAG, MM-HAG, MM-LAG, IAS-HAG and IAS-LAG are summarized in table

15, 16, 17, 18, 19 and 20 respectively. Results of the intercorre-

lation among variables understudy for each pair of the dichotomized

datasets are summarized as follow:

> Scores on interrole distance correlated significantly only with
> role overload and overall role stress in case of all the six
> datasets (table 15 to 20). More precisely, in case of TM-HAG,
> all the role stress factors whereas role expectation conflict
> $(r = .33, P < .05)$, role overload $(r = .58, P < .01)$ and total
> role stress $(r = .43, P < .01)$ in case of TM-LAG were found to
> be positively and significantly associated with interrole dist-
> ance (table 15 and 16). In case of MM-HAG and MM-LAG, it associated

Table 15

Intercorrelation between role stress factors, type-A behaviour and state-trait anger scores in case of TM-HAG

Sl. No.	Variables	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIn	ORS (T)	Type-A	Anger-S	Anger-T
1.	IRD	X	.33*	.37*	.16**	.15*	.24*	.20*	.35*	.32*	.31*	.64*	.08	.05	.32*
2.	RS		X	.49*	.36*	.34*	.53*	.36*	.01	.01	.36*	.71*	-.01	.09	.27*
3.	REC			X	.18**	.46**	.53*	.42*	.51*	.54*	.50*	.75*	-.02	.15**	.28*
4.	RE				X	-.10	.35*	.02	.37*	.28*	.13	.45*	.06	.13	.18**
5.	RO					X	.28*	.34*	.26*	.34*	.41*	.59*	.04	.08	.32*
6.	RI						X	.31*	.51*	.53*	.47*	.72*	.06	.18**	.24*
7.	PI							X	.34*	.36*	.31*	.53*	.04	.06	.25*
8.	SRD								X	.59*	.37*	.69*	.02	.11	.28*
9.	RA									X	.43*	.70*	.03	.05	.22*
10.	RIn										X	.65*	.06	.17**	.26*
11.	ORS (T)											X	.07	.07	.41*
12.	Type-A												X	.01	.08
13.	Anger-S													X	.21*
14.	Anger-T														X

* Significant at .01 level

** Significant at .05 level

Table 16

Intercorrelation between factors of role stress, type-A behaviour and state-trait anger in case of TM-LAG

Sl. No.	Variables	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIn	ORS (T)	Type-A	Anger-S	Anger-T
1.	IRD	X	.22	.33**	.11	.58*	-.04	.16	.21	.16	.21	.43*	.33**	.14	.17
2.	RS		X	.60*	.50*	.31**	.65*	.28**	.62*	.59*	.69*	.79*	.26	.28**	.65*
3.	REC			X	.40*	.55*	.52*	.39*	.76*	.72*	.65*	.84*	.30**	.28**	.31**
4.	RE				X	.02	.71*	.05	.56*	.51*	.58*	.67*	.28**	-.05	.48*
5.	RO					X	.11	.33**	.37**	.29**	.32**	.54*	.28**	.30**	.18
6.	RI						X	.24	.58*	.67*	.71*	.75*	.26	.06	.56*
7.	PI							X	.41*	.25	.40*	.45*	.23	.42*	.15
8.	SRD								X	.67*	.75*	.84*	.29**	.22	.30**
9.	RA									X	.66*	.80*	.35*	.18	.34**
10.	RIn										X	.85*	.33**	.24	.29**
11.	ORS (T)											X	.42*	.27**	.49*
12.	Type-A												X	.13	.44**
13.	Anger-S													X	.08
14.	Anger-T														X

* Significant at .01 level
** Significant at .05 level

Table 17

Intercorrelation between role stress factors, type-A behaviour and state-trait anger scores in case of MM-HAG

Sl. No.	Variables	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIn	ORS (T)	Type-A	Anger-S	Anger-T
1.	IRD	X	.35*	.33*	.15	.41*	.28*	.34*	.30*	.17	.20**	.53*	.19	.13	.27*
2.	RS		X	.47*	.49*	.42*	.56*	.53*	.62*	.54*	.33*	.79*	.15	.25**	.43*
3.	REC			X	.19	.31*	.53*	.50*	.66*	.50*	.42*	.70*	.30*	.22**	.35*
4.	RE				X	.00	.41*	.35*	.46*	.41*	.23**	.58*	.00	.05	.18
5.	RO					X	.28*	.32*	.30*	.28*	.30*	.54*	.26*	.13	.27*
6.	RI						X	.42*	.60*	.44*	.33*	.72*	.26*	.19	.33*
7.	PI							X	.46*	.49*	.30*	.31*	.69*	.17	.16
8.	SRD								X	.64*	.43*	.78*	.29*	.23**	.27*
9.	RA									X	.49*	.71*	.16	.27*	.27*
10.	RIn										X	.57*	.10	.23**	.29*
11.	ORS (T)											X	.22**	.29*	.46*
12.	Type-A												X	.15	.05
13.	Anger-S													X	.43*
14.	Anger-T														X

* Significant at .01 level

** Significant at .05 level

Table 18

Intercorrelation between role stress factors, type-A behaviour and state-trait anger scores in case of MM-LAG

Sl. No.	Variables	IRS	RS	REC	RE	RO	RI	PI	SRD	RA	RIn	bRS (T)	Type-A	Anger-S	Anger-T
1.	IRS	X	.30*	.39*	-.03	.61*	.25*	.27*	.24*	.15**	.30*	.61*	.22*	.09	.28*
2.	RS		X	.44*	.15**	.43*	.43*	.27*	.34*	.39*	.29*	.67*	.06	.16**	.15**
3.	REC			X	.16**	.50*	.48*	.33*	.37*	.41*	.37*	.74*	.18*	.17*	.24*
4.	RE				X	-.06	.22*	-.08	.18*	.26*	.07	.34*	.00	.03	.08
5.	RO					X	.29*	.32*	.32*	.22*	.34*	.68*	.24*	.16**	.16**
6.	RI						X	.26*	.32*	.45*	.26*	.67*	.19*	.25*	.21*
7.	PI							X	.21*	.28*	.21*	.50*	.02	.18*	.15**
8.	SRD								X	.35*	.19*	.50*	.11	.05	.16**
9.	RA									X	.32*	.63*	.06	.18*	.24*
10.	RIn										X	.48*	.13**	.10	.16**
11.	ORS (T)											X	.21*	.26*	.30*
12.	Type-A												X	.30*	.07
13.	Anger-S													X	.09
14.	Anger-T														X

* Significant at .01 level
** Significant at .05 level

Table 19

Intercorrelation between factors of role stress, type-A behaviour and state-trait anger in case of IAS-HAG

SL. No.	Variables	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIn	ORS (T)	Type-A	Anger-S	Anger-T
1.	IRD	X	.09	.23	.17	.69*	.26	.39**	.18	.07	.37	.45**	.36	.22	.62*
2.	RS		X	.78*	.57*	.50*	.59*	.31	.55*	.65*	.53*	.76*	.29*	.23	.32
3.	REC			X	.47**	.75*	.78*	.57*	.70*	.66*	.71*	.90*	.25	.10	.35
4.	RE				X	.10	.64*	.27	.53*	.49**	.50*	.60*	.11	.67	.08
5.	RO					X	.64*	.43**	.53*	.42**	.65*	.80*	.37	.00	.52*
6.	RI						X	.43**	.58*	.59*	.63*	.85*	.33	.11	.30
7.	PI							X	.48**	.34	.43**	.60*	.33	.15	.36
8.	SRD								X	.68*	.68*	.79*	.24	.03	.15
9.	RA									X	.51*	.71*	.42*	.34	.34
10.	RIn										X	.84*	.16	.03	.44**
11.	ORS (T)											X	.39**	.04	.49**
12.	Type-A												X	.45**	.40**
13.	Anger-S													X	.35
14.	Anger-T														X

* Significant at .01 level

** Significant at .05 level

Table 20

Intercorrelation between factors of role stress, Type-A behaviour and state-trait anger in case of IAS-LAG

Sl. No.	Variables	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIn	ORS (T)	Type-A	Anger-S	Anger-T
1.	IRD	X	.10	.57*	.04	.70*	.24	.11	.25	.06	.12	.59*	.42*	.06	.33**
2.	RS		X	.26	.60*	.07	.60*	.01	.44*	.25	.27**	.62*	.24	.01	.36*
3.	REC			X	.02	.63*	.37*	.17	.29**	.14	.31**	.69*	.30**	.04	.12
4.	RE				X	.22	.49*	.22	.27**	.06	.18	.45*	.32**	.06	.27**
5.	RO					X	.20	.35*	.19	.00	.26	.56*	.26	.02	.02
6.	RI						X	.25	.29**	.50*	.39***	.77*	.34**	.06	.20
7.	PI							X	.08	.45*	.05	.30**	.07	.15	.04
8.	SRD								X	.25	.15	.65*	.24	.17	.42*
9.	RA									X	.29***	.32***	.21	.26	.02
10.	RIn										X	.38*	.24	.47*	.02
11.	ORS (Total)											X	.40*	.01	.35*
12.	Type-A												X	.17	.33**
13.	Anger-S													X	.13
14.	Anger-T														X

*Significant at .01 level

**Significant at .05 level

significantly with all the factors of role stress including overall role stress (Table 17 and 18). The only exception were found to be role erosion (r = .15, P = NS) and role ambiguity (r = -.17, P = NS) in case of MM-HAG and role erosion (r = -.03, P = NS) in case of MM-LAG. In case of IAS group role overload (r = .70 and .69, P< .01) and overall role stress (r = .59 and .45, P< .01) were found to be statistically significant in both dichotonized IAS data sets. The only exception was role expectation conflict in case of IAS-HAG and personal inadequacy in case of IAS-LAG which did not correlate significantly (table 19 and 20) with role expectation conflict.

Role stagnation was found to be positively and significantly associated with role erosion, role isolation, resource inadequacy and overall role stress in all the six datasets (table 15 to 20). More precisely, except to self role distance (r = .01, P = NS) and role ambiguity (r = .01, P = NS) in case of TM-HAG, all the role stress factors including overall role stress were found to be significantly associated with role stagnation in case of TM-LAG (table 15 and 16) as well as in case of MM-HAG and MM-LAG (table 17 and 18). In case of both datasets of IAS group some role stress factors such as role erosion (r = .60 and .57, P< .01), role isolation (r = .60 and .59, P< .01), self role distance (r = .44 and .55, P< .01), resource inadequacy (r = .27, P< .05 and r = .53, P< .01) as well as overall role stress (r = .62 and .76, P< .01) exhibited positive and significant correlation with role stagnation (table 19 and 20). Further, in case of IAS-HAG, role expectation conflict (r = .78, P< .01), role overload (r = .50, P< .01) and role ambiguity (r = .65, P< .01) were also found to be significantly associated with it. Correlation coefficients ranged between .27 to .79 in these datasets (table 19 and 20).

It can be seen from tables (table 15 to 20) that intercorrelation between role expectation conflict and role overload, role isolation, self-role distance, resource inadequacy and overall role stress were found to be positive and statistically significant in case of all the six dichotomized datasets of TMG, MMG and IAS group. All the role stress factors, in case of both dichotomized datasets of top management (TM-HAG and TM-LAG) were found to be significantly associated with role expectation conflict (table 15 and 16). Quantitatively, value of correlation coefficients ranged between .18 to .84 in these groups. In case of MM-HAG and MM-LAG, it significantly related with role overload ($r = .52$ and $.31$, $P < .01$) role isolation ($r = .22$ and $.53$, $P < .01$), personal inadequacy ($r = .33$ and $.50$, $P < .01$) self-role distance ($r = .37$ and $.60$, $P < .01$), role ambiguity ($r = .41$ and $.50$, $P < .01$), resource inadequacy ($r = .37$ and $.42$, $P < .01$) and total role stress ($r = .74$ and $.70$, $P < .01$). Further, it was found to be significantly associated with role erosion in case of MM-LAG. Correlation coefficients ranged between moderate to high. In the case of IAS-HAG role expectation conflict significantly correlated with role erosion ($r = .47$, $P < .05$), role overload ($r = .75$, $P < .01$) role inadequacy ($r = .78$, $P < .01$), personal inadequacy ($r = .57$, $P < .01$), self-role distance ($r = .70$, $P < .01$), role ambiguity ($r = .66$, $P < .01$), resource inadequacy ($r = .71$, $P < .01$) and overall role stress ($r = .90$, $P < .01$) (table 19). The same observation was repeated in case of IAS-LAG. The only exception were role erosion ($r = .02$, $P = NS$), personal inadequacy ($r = .17$, $P = NS$) and role ambiguity ($r = .14$, $P = NS$) (Table 20).

In all the six dichotomized datasets of management personnel, role erosion positively and significantly associated with self-role distance, role isola-tion and overall role stress score (see table 15 to 20). It is apparent from table 15 and 16 that in case of TM-LAG and TM-HAG, role erosion correlated significantly with role isolation ($r = .36$, and $.71$, $P < .01$), self role distance ($r = .37$, and $.56$, $P < .01$), role ambiguity ($r = .28$ and $.51$, $P < .01$) and overall role stress ($r = .45$ and $.67$, $P < .01$). Resource inadequacy, however, correlated significantly with role erosion in case of TM-LAG only. In case of MM-HAG and MM-LAG role erosion associated significantly with role isolation ($r = .41$ and $.22$, $P < .01$), self-role distance ($r = .46$ and $.18$, $P < .01$), role ambiguity ($r = .41$ and $.26$, $P < .01$) and overall role stress ($r = .58$ and $.34$, $P < .01$) (table 17 and 18). Intercorrelation between role erosion and personal inadequacy ($r = .35$, $P < .01$) and resource inadequacy ($r = .23$, $P < .05$) were found to be significant in case of MM-HAG only (table 17). As regards dichotomized IAS groups, in case of IAS-HAG, role isolation ($r = .64$, $P < .01$), self-role distance ($r = .53$, $P < .01$), role ambiguity ($r = .49$, $P < .05$), personal inadequacy ($r = .50$, $P < .01$) and overall role stress ($r = .60$, $P < .01$) whereas in case of IAS-LAG, role isolation ($r = .49$, $P < .01$), self-role distance ($r = .27$, $P < .01$) as well as overall role stress ($r = .45$, $P < .01$) were found to be positively and significantly related with role erosion scores. Correlation coefficients, in all the six datasets ranged between moderate to high.

The intercorrelation between role overload and personal inadequacy as well as overall role stress were found to be statistically significant inaall the dichotomized datasets (see table 15 to 20) of management personnel.

In fact, correlational analysis revealed that role overload is one of the most potential stressor as it correlated significantly with all the role stress factors in five datasets (table 15 to 19). However, the only exception was found in case of IAS-LAG (table 20). In case of TM-HAG and TM-LAG, role overload exhibited significant relationship with personal inadequacy (r = .34 and .33, P < .01), self-role distance (r = .26 and .37, P < .01), role ambiguity (r = .34 and .29, P < .01), resource inadequacy (r = .41 and .32, P < .01), and overall role stress (r = .59 and .54, P < .01) (table 15 and 16). Further, role isolation (r = .28, P < .01) correlated significantly with role overload in case of TM-HAG only. In case of MM-HAG and MM-LAG, all the factors of role stress including overall role stress were found to be positively and significantly associated with role overload (table 17 and 18). As regards dichotomized IAS groups, all the factors of role stress in case of IAS-HAG where as only personal inadequacy (r = .35, P < .01) and overall role stress (r = .56, P < .01) in case of IAS-LAG related significantly with role overload (table 19 and 20). Correlation coefficients ranged between low to high in these datasets.

Intercorrelation between role isolation and factors of role stress such as self-role distance, role ambiguity, resource inadequacy and overall role stress were found to be statistically significant in all the six dichotomized datasets of management personnel (table 15 to 20). In case of TM-HAG and TM-LAG, role isolation correlated significantly with self role distance (r = .51 and .58, P < .01), role ambiguity (r = .53 and .67, P < .01), resource inadequacy (r = .47 and .71, P < .01) and overall role stress (r = .72 and .75, P < .01) (table 15 and 16). Personal inadequacy

(r = .31, P < .01) in case of TM-LAG was also found to be significantly

associated with role isolation (table 15). In case of MM-HAG and

MM-LAG, role isolation was found to be positively and significantly

related with all the factors of role stress including overall role

stress (table 17 and 18). In case of IAS-HAG and IAS-LAG self-role

distance (r = .58, P < .01 and r = .29, P < .05), role ambiguity (r = .59

and .50, P < .01), resource inadequacy (r = .63, P < .01 and .39, P < .05),

and overall role stress (r = .85 and .77, P < .01) were found to be

significantly associated with role isolation (table 19 and 20). Personal

inadequacy was again found to be significantly related with role isolation

in case of IAS-HAG only.

Scores on personal inadequacy correlated significantly with overall

role stress in all the datasets (table 15 to 20). In case of TM-HAG

and TM-LAG, intercorrelation between personal inadequacy and self

role distance (r = .34 and .41, P < .01), resource inadequacy (r = .31

and .40, P < .01) and overall role stress (r = .53 and .45, P < .01)

were statistically significant. Further role ambiguity in case of

TM-LAG was insignificantly associated with it (r = .25, P = NS)

(table 15 and 16). In case of MM-HAG and MM-LAG, personal inadequacy

significantly associated with all the factors of role stress includ-

ing overall role stress score (table 17 and 18). In case of IAS-HAG

personal inadequacy correlated positively and significantly with

self role distance (r = .48, P < .05), resource inadequacy (r = .43,

P < .05) and overall role stress (r = .60, P < .01) whereas in case

of IAS-LAG, only role ambiguity (r = .45, P < .01) and overall role

stress (r = .30, P < .01) were significantly associated with it.

Quantitatively, value of correlations ranged between low to moderate.

Self-role distance was found to be significantly associated with

overall role stress score in all the six dichotomized datasets

(table 15 to 20). As regards dichotomized TMG datasets, namely,

TM-HAG and TM-LAG, self role distance correlated significantly

with role ambiguity (r = .59 and .67, P < .01), resource inadequacy

(r = .37 and .75, P < .01) and overall role stress (r = .69 and .84,

P < .01) (table 15 and 16). In case of MM-HAG and MM-LAG, it was

significantly and positively associated with role ambiguity (r = .64

and .35, P < .01) resource inadequacy (r = .43 and .19, P < .01) and

overall role stress (r = .78 and .50, P < .01) (table 17 and 18).

Correlated significantly with self role distance in case of IAS-HAG

intercorrelation between self-role distance and role ambiguity

(r = .68, P < .01), resource inadequacy (r = .68, P < .01) and total

role stress score (r = .79, P < .01) (table 19) whereas in case of

IAS-LAG correlation coefficient of overall role stress were found to

be statistically significant (table 20).

Role ambiguity, in case TM-HAG and TM-LAG was significantly associated
with resource inadequacy (r = .43 and .66, P < .01) and overall role
stress score (r =.70 and .80, P < .01). The same observation was
repeated in case of MM-HAG and MM-LAG. It was found to be significantly
related with resource inadequacy (r = .49 and .32, P < .01) and overall
role stress (r = .73 and .63, P < .01). In case of IAS-HAG and IAS-LAG
also, role ambiguity correlated significantly with resource inadequacy
(r = .51, P < .01 and r = .29, P < .05) and overall role stress (r = .71,
P < .01 and r = .32, P < .05).

It is evident from table 15 and 16 that in case of both dichotomized/of subgroups
TMG, resource inadequacy correlated significantly with overall role stress
(r = .85 and .65, P < .01). In case of MM-HAG and MM-LAG, resource inade-
quacy was again found to be significantly associated with total role stress
score (r = .48 and .57, P < .01) (table 17 and 18). Positive and signi-
ficant intercorrelation between resource inadequacy and overall role
stress (r = .38 and .84, P < .01) was also found in case of IAS-HAG and
IAS-LAG (table 19 and 20).

Above discussion suggests that most of the correlation coefficients among
role stress factors are found to be significant in case of MM-HAG and
MM-LAG, followed by TM-HAG, TM-LAG, IAS-HAG and IAS-LAG. In other words,
out of 55 correlation coefficients among role stress factor of each
dichotomized datasets, 51 correlation coefficients are significant in case
of MM-HAG and MM-LAG; 50 correlation coefficients are significant in case
of TM-HAG; 44 correlation coefficients are significant in case of TM-LAG

and IAS-HAG and, 29 correlation coefficients are significant for IAS-LAG. Further, equal number of correlation coefficients were found to be significant in both datasets of MMG. Whereas more correlation coefficients are found to be significant in case of TM-HAG and IAS-HAG as compared to TM-LAG and IAS-LAG respectively. It is important to note and can be seen from preceeding discussion that some correlation coefficients among role stress factors are statistically significant in all the six datasets whereas others are significant only in few datasets and insignificant in case of other datasets.

Type-A Behaviour versus Role Stress:

None of the role stress factors was found to be significantly related with scores on Type-A behaviour in case of all the six data sets (table 15 to 20). More precisely, in case of TM-HAG none of the role stress factor whereas in case of TM-LAG, six role stress factors were found to be significantly associated with Type-A scores (table 15 and 16). These role stress factors were found to be inter-role distance ($r = .33$, $P < .05$), role expectation conflict ($r = .30$, $P < .05$), role erosion ($r = .28$, $P < .05$), role overload ($r = .28$, $P < .05$), self-role distance ($r = .29$, $P < .05$), role ambiguity ($r = .35$, $P < .05$), resource inadequacy ($r = .33$, $P < .05$), and overall role stress score ($r = .42$, $P < .01$). In case of MM-HAG, personal inadequacy ($r = .69$, $P < .01$) and self-role distance ($r = .29$, $P < .01$) (table 17) whereas in case of MM-LAG, interrole distance ($r = .22$, $P < .01$) and resource inadequacy ($r = .13$, $P < .05$) were significantly related with

Type-A score (table 18). Some role stress factors, such as role expectation conflict (r = .30 and .18, P< .01), role overload (r = .26 and .24, P <.01), role isolation (r = .26 and .19, P <.01) and overall role stress (r = .22 and .21, P <.01) were positively and significantly related in case of both, MMG-HAG and MMG-LAG (table 17 and 18). As regards dichotomized IAS group, in case of IAS-HAG, role ambiguity (r = .42, P .01) and overall role stress (r = .39, P <.05) (table 19) whereas in case of IAS-LAG, interrole distance (r = .42, P <.01), role expectation conflict (r = .30, P <.05), role erosion (r = .32, P <.05), role inadequacy (r = .34, P <.05) and overall role stress (r = .40, P <.05) associated positively and significantly with type-A pattern of behaviour (table 20).

Above discussion of intercorrelation between Type-A scores and factors of role stress including overall role stress score revealed that type-A pattern of behaviour is more significantly associated with TMG and IAS personnel of low age as compared to their colleagues of high age group whereas in case of MMG, equal number of role stress factors correlated significantly with Type-A score in both, low and high age groups. Eight ORS factors correlated with type-A score in case of TM-LAG followed by MM-LAG and MM-HAG (6 factors) IAS-LAG (5 factors), IAS-HAG (2 ORS factors).

State-trait Anger versus Role Stress Factors:

It can be seen from tables(15 and 16) that in case of TM-HAG, three role stress factors namely, role expectation conflict (r = .15, P< .05), role isolation (r = .18, P<.05) and resource inadequacy (r = .17, P<.05) (table 15) whereas in case of TM-LAG four role stress factors, namely,

role stagnation (r = .28, P .05), role expectation conflict (r = .28, P < .05), role overload (r = .30, P < .05), personal inadequacy (r = .47, P < .01) as well as overall role stress (r = .27, P < .05) (table 16) significantly associated with state anger. In case of MM-HAG and MM-LAG, role stress factors like role stagnation (r = .16 and .25, P < .05), role expectation conflict (r = .17, P < .05 and r = .22, P < .05), role ambiguity (r = .18 and .27, P < .01), as well as overall role stress (r = .26 and .29, P < .01) turned out to be positively and significantly related with state anger (table 17 and 18). Further, self-role distance (r = .23, P < .05) and resource inadequacy (r = .29, P < .01) in case of MM-HAG (table 17) and role overload (r = .16, P < .05), role isolation (r = .25, P < .01) and personal inadequacy (r = .18, P < .01) in case of MM-LAG were also observed to be significantly related with it. As regards dichoto-mized IAS groups, only one role stress factor, namely, resource inade-quacy (r = .47, P < .01) in case of IAS-LAG (table 20) whereas none of the role stress factors in case of IAS-HAG (table 19) correlated significantly with state anger.

More correlation coefficients between role stress factors and trait anger were found to be significant as compared to that of state anger. It was observed that in case of TM-HAG and TM-LAG, trait anger correlated signi-ficantly with role stagnation (r = .27 and .45, P < .01), role expectation conflict (r = .28 and .31, P < .01), role erosion (r = .18, P < .05 and r = .48, P < .01), role isolation (r = .24 and .56, P < .01), self role distance (r = .28, P .01 and .30, P < .05), role ambiguity (r = .22, P < .01 and r = .34, P < .05), resource inadequacy (r = .26, and .49, P < .01)

and overall role stress (r = .41 and .49, P< .01) (table 15 and 16).

Further, in case of TM-HAG, it also correlated significantly with

personal inadequacy (r = .25, P < .01), role overload (r = .32, P < .01)

and interrole distance (r = .32, P < .01) (table 15). In case of MM-HAG

and MM-LAG, correlation coefficients between trait anger and interrole

distance (r = .29 and .28, P < .01), role stagnation (r = .43, P < .01)

and r = .15, P < .05), role expectation conflict (r = .35 and .24, P < .01),

role overload (r = .27 and .16, P < .01), role isolation (r = .33 and .21,

P < .01), self role distance (r = .27, P < .01 and r = .16, P < .05), role

ambiguity (r = .27, and .24, P < .01), resource inadequacy (r = .29, P < .01

and r = .16, P < .05) and overall role stress (r = .46 and .30, P < .01)

(table 17 and 18) were found to be positive and statistically significant.

Further, score on personal inadequacy was found to be significantly

associated (r = .18, P < .01) in case of MM-LAG only (table 18). As

regards IAS-HAG and IAS-LAG , can be seen from table 19 and 20 that

statistically significant correlation coefficients were found between trait

anger and interrole distance (r = .33, P < .05 and r = .62, P < .01) as well as

overall role stress (r = .35, and .46, P < .01) (table 19 and 20). Further

intercorrelation between trait-anger and two role stress factors, namely,

role overload (r = .52, P < .01) and resource inadequacy (r = .44, P < .05)

in case of IAS-HAG (table 19) and, three role stress factors, namely, role

stagnation (r = .36, P < .01), role erosion (r = .27, P < .05) and self role

distance (r = .42, P < .01) in case of IAS-LAG were found to be positive

and statistically significant (table 20).

It is evident from above discussion that when the data was dichotomized, significant correlation coefficients between role stress factors and state/trait anger have not revealed any particular trend. However, significant correlation coefficients are found to be more in case of low age groups of management personnel as compared to their colleagues of high age group. More precisely, out of eleven correlation coefficients between state anger and role stress factors of each dataset, seven were significant in case of MM-LAG followed by MM-HAG (6), TM-LAG (5), TM-HAG (3) and IAS-LAG (1). As regards intercorrelation between ORS factors and trait anger, eleven correlation coefficients were significant in case of TM-HAG followed by MM-LAG (10), MM-HAG (9), TM-LAG (8), IAS-LAG (5) and IAS-HAG (4).

Type-A Pattern of Behaviour vs. State-Trait Anger:

It can be seen from table 15 and 16 that type-A score in case of TM-HAG and TM-LAG correlated insignificantly with state-trait anger. In case of MM-LAG, Type-A score correlated significantly with state anger (table 18) whereas it was found to be insignificant in case of MM-HAG (table 17). In case of IAS-HAG, intercorrelation between type-A score and state anger ($r = .45$, $P < .05$) and trait anger ($r = .40$, $P < .05$) were found to be statistically significant (table 19). Trait anger, in case of IAS-LAG, was found to be significantly associated with type-A score (table 20).

As regards intercorrelation between state and trait anger scores, it can be seen from table 15, 16, 17, 18, 19 and 20 that state anger correlated positively and significantly with trait anger in case of TM-HAG ($r = .21$,

P < .01) (table 15) and MM-HAG (r = .43, P < .01) (table 17) only.
In case of remaining datasets, namely, TM-LAG, MM-LAG, IAS-HAG and
IAS-LAG, intercorrelation between these variables were found to be
statistically insignificant.

Overall, above discussion of correlation coefficients among variables
understudy highlight the effect of age on role stress, Type-A behaviour
and state-trait anger in different categories of management personnel.
As regards intercorrelation among role stress factors, TM-HAG and IAS-
HAG exhibited more significant correlation coefficients as compared to
TM-LAG and IAS-LAG. Intercorrelation between type-A score and role stress
factors revealed that in case of TM-LAG and IAS-LAG, more correlation
coefficients were significant in comparison to their colleagues of high
age group. Number of significant correlation coefficients remained same
in case of dichotomized datasets of MMG. Computation of intercorrelation
between state/trait anger scores and role stress factors revealed that in
case of management personnel of low age group, more correlation coefficients
were significant as compared to high age group of management personnel.
Hence in the light of above findings, the hypothesis that all the corre-
lation coefficients among variables understudy will be significant in both,
low and high age groups of management personnel may not be wholly supported.
Instead the findings suggest that high age of management personal accounts
for more number of significant correlation coefficients among role stress
factors and less number of significant correlation coefficients between
type-A behaviour and role stress factors as well as state/trait anger and
role stress factors as compared to low age groups of management personnel.

SUMMARY AND CONCLUSION

SUMMARY AND CONCLUSION

The purpose of present study could be concised in the following way:
To study the relationship between factors of role stress, type-A
pattern of behavioural disposition and state-trait anger among three
categories of management personnel such as top managers, middle managers
and IAS officers. The psychometric devices, namely, ORS Scale State-trait
Anger Scale and Can You Type Your Behaviour were used to assess factors
of role stress including overall role stress, type-A behaviour and state
and trait anger. The study is conducted on sample of 326 management
personnel comprising of 221 TMG, 326 MMG and 77 IAS officers. Further,
the datasets of above sample (three groups) were dichotomized on the
basis of role incumbent's age levels. The significance of
difference in average scores pertaining to factors understudy were
computed for three comparison group of management personnel as well as
for dichotomized low and high age groups of each management category.
Relationship among role stress factors, type-A behaviour and state-trait
anger for each management category as well as dichotomized groups were
also studied.

The main findings of the present study are summarized as follow:

1. Inter-role distance and role erosion are the most dominant contributor
   of role stress where as role ambiguity and personal inadequacy are the
   least important contributor for the total sample fo management personnel

2. MMG differ significantly in their magnitude of perception of inter-role distance, personal inadequacy, self-role distance, and resource inadequacy as compared to TMG.

3. TMG differ significantly in their magnitude of perception of role stagnation, role erosion and role isolation types of role stresses as compared to IAS group. Evidences also suggest that TMG experience significantly high role expectation conflict, role ambiguity, self-role distance and interrole distance (verified in CR test).

4. As compared to IAS group, MMG scored significantly high on role stagnation, role expectation conflict, role erosion, role isolation and role ambiguity. Further in median test, personal inadequacy and overall role stress whereas in critical ratio test, self-role distance were also found to be high and significant in case of MMG as compared to IAS group.

5. Differences in scores on Type-A pattern of behaviours were found to be statistically insignificant in case of all the three datasets of management personnel.

6. Differences in scores on state anger were found to be statistically significant in MMG as compared to TMG. Further, statistical tests also revealed MMG and TMG as significantly high in mean scores on state-anger as compared to IAS group.

7. Differences in scores on trait anger were statistically insignificant in case of all the three comparison groups of TMG, MMG and IAS people.

8. TM-LAG scored significantly high on role stagnation, role erosion, self-role distance, role ambiguity, overall role stress and trait-anger in comparison to TM-HAG.

9. Apparent differences in average scores pertaining to variables understudy were found to be statistically insignificant in case of MM-LAG and MM-HAG.

10. Statistical tests identified IAS-LAG as significantly high on self-role distance type of role stress and trait anger as compared to IAS-HAG.

11. Higher number of correlation coefficients among factors of role stress including overall role stress were found to be positive and statistically significant in case of TMG (53 out of 55 correlation coefficients were significant), followed by MMG (51 out of 55) and IAS group (44 out of 55).

12. Scores on Type-A pattern of behaviour correlated significantly with 8 factors of role stress in case of IAS group and 6 factors of role stress in case of MMG. All the correlation coefficients between type-A behaviour and role stress factors were found to be insignificant in case of TMG.

13. State anger correlated significantly with eight factors of role
    stress including overall role stress scores in case of both, TMG
    and MMG followed by significant correlation coefficients with
    two role stress factors in case of IAS group. However role stress
    factors which correlated significantly with state anger in case of
    TMG did not necessarily correlate significantly in case of MMG.

14. All the role stress factors including overall role stress corre-
    lated positively and significantly with trait anger in case of
    TMG and MMG. In case of IAS personnel, however six correlation
    coefficients between trait anger and role stress factors were
    found to be significant.

    Intercorrelation among factors of role stress, type-A pattern of
    behaviour and state trait anger, in case of agewise dichotomized
    datasets of TMG, MMG and IAS personnel revealed following infor-
    mations:

(a) In case of TM-HAG, 50 correlation coefficients among role stress
    factors were found to be statistically significant followed by
    44 significant correlation coefficients of TM-LAG.

(b) In case of both, MM-HAG and MM-LAG, equal number of correlation
    coefficients among role stress factors (each 51) were found to be
    statistically significant.

(c) In case of IAS=HAG 44 correlation coefficients among role stress
    factors including overall role stress were found to be statistically
    significant followed by 29 significant correlation coefficients of
    IAS-LAG.

(d) Out of eleven correlation coefficients between type-A pattern

of behaviours and role stress factors including overall role

stress, eight correlation coefficients were found to be signi-

ficant in case of TM-LAG followed by MM-LAG and MM-HAG (6 each),

IAS-LAG (5) and IAS-HAG (2).

(e) When state anger was correlated with role stress factors, seven

correlation coefficients were found to be statistically signi-

ficant in case of MM-LAG followed by MM-HAG (6), TM-LAG (5),

TM-HAG (3), and IAS-LAG (1).

(f) When the trait anger was correlated with role stress factors

all the eleven correlation coefficients were found to be

statistically significant in case of TM-HAG followed by MM-LAG

(10), MM-HAG (9), TM-LAG (8), IAS-LAG (5) and IAS-HAG (4).

REFERENCES

REFERENCES

1. Appley, M.H. Motivation, threat perceiption and the induction of psychological stress. Preceedings of Sixteenth International Congress of Psychology, 1962, B.M: Amsterdam: North Holland, 880-881.

2. Appley, M.H. and Trumbell, R. (Ed.). Psychological Stress. New York: Appleton-Century-Crofts, 1967.

3. Beehr, T.A. and Newman, J.E. Job stress, employee health, and organisational effectiveness: A facet analysis, model and literature review. Personal Psychology, 1978, 31, 665-699.

4. Bhatnagar, D. and Bose, K. Organisational role stress and branch managers, Prajanan: Journal of Social and Management Sciences, 1985, Vol. XIV, 4, 349-360.

5. Biaggio, M.K., Supplee, K. and Curtis, N. Reliability and validity of four anger scales. Journal of Personality Assessment, 1981, 45, 639-638.

6. Caffrey, B. Reliability and validity of personality and behavioural measures in a study of coronary heart disease. Journal of Chronic Disease, 1968, 21, 191-204.

7. Caplan, R.D. Organisational stress and individual strain: A social psychological study (Doctoral dissertation, University of Michigan, 1971). Dissertation Abstracts International, 1972, 32, 6706B-6707B (University Microfilms No. 72-14822).

8. Cheaney, M.A., Black, G.W., Chadwick, J.H. and Rosenman, R.H.
    Psychological correlates of the coronary-prone behaviour
    pattern. Journal of Behavioural Medicine, 1981, 4, 217-230.

9. Coates, C.H. and Pellegrin, R.J. Executives and superiors.
    American Sociological Review, 1975, 22, 217-220.

10. Cooper, C.L. and Payne, R. Stress at work. New York: John Wiley,
    1978.

11. Crane, R. The role of anger, hostility and aggression in essential
    hypertension. Unpublished doctoral dissertation, University
    of South Florida, 1981.

12. Davidson, M.J., and Cooper, C.L. Type-A coronary-prone behaviour
    in the work environment. Journal of Occupational Medicine,
    1980, 22, 375-383.

13. Donnerstein, E. and Wilson, D.W. Effects of noise and perceived
    control on on-going and subsequent aggressive behaviour.
    Journal of Personality and Social Psychology, 1976, 34,
    774-781.

14. French, J.R.P. Jr. and Caplan, R.D. Psychological factors in
    coronary heart disease. Industrial Medicine, 1970, 39,
    383-397.

15. Friedman, M. and Rosenman, R.H. Type-A behaviour and your heart.
    New York: Knopf, 1974.

16. Glass, D.C. and Singer, J. Urban Stress: experiments on noise and social stressors. New York: Academic Press, 1972.

17. Gmelch, W.H. Beyond stress to effective management. New York: John Wiley, 1982.

18. Goldberg, P.. Executive health. New York: McGraw-Hill, 1978.

19. Haynes, S.G., Levine, S., Scoteh, N., Feinleib, M., and Kannel, W.B. The relationship of psychosocial factors to coronary heart disease in the Framingham study-I. Methods and risk factors. American Journal of Epidemiology, 1978, 167, 362-383.

20. Howard, J.H., Cunningham, D.A. and Rechnitzer, P.A. Health patterns associated with Type-A behaviour: A managerial population. Journal of Human Stress, 1976, 2, 24-31.

21. Ivancevich, J.M., Matteson, M.T. and Preston, C. Occupational stress, Type-A behaviour and physical well-being. Academy of Management Journal, 1982, 25 (2), 373-391.

22. Jenkins, C.D. The coronary-prone personality. In W.D. Gentry and R.B. Williams, Jr. (Eds.), psychological aspects of myocardial infection and coronary care. St. Louis: Mosby, 1975.

23. Kahn, R.L., and Quinn, R.P. Role Stress: A framework for analysis. In A Mclean (Ed.), Occupational Mental Health. Chicago: Rand McNally, 1970, 50-115.

24. Kahn, R.L., Wolfe, D.M., Quinn, R.P., Snoek, J.D. and Rosenthal, R.A.
Organisational stress: studies in role conflict and ambiguity.
New York: Wiley, 1964.

25. Katz Denial and Kahn, R.L. The social psychology of organisations,
New York: Wiley, 1966, 172 p.

26. Kiretz, S. and Moos, R.H. Physiological efforts of social environ-
ments. Psychosomatic Medicine, 1974, 36, 94-114.

27. Kroes, W. Psychological job stress and worker health: A programmatic
effort. In L. Levi (Ed.), society, stress and disease: Working
life. London: Oxford, 1975, 74-89.

28. Lazarus, R.S. Psychological stress and the coping process. New York:
McGraw-Hill, 1966.

29. Lazarus, R.S. The concept of stress and disease. In Levi, L. (Ed.),
Society, stress and disease, Vol. 1. London: Oxford University
Press, 1971.

30. Lofquist, L.H., and Dawis, R.V. Adjustment to work. New York:
Appleton-Century-Crofts, 1969.

31. Marshall, J. and Cooper, C.L. Work, stress and the executive.
London: Macmillan, 1978.

32. Morris, J.H. & Hand Koch, J.L. Impact of role perceptions on organi-
sational commitment, job envolvement and psychosomatic illness
among three vocational groupings. Journal of Vocational
Behaviour, 1979, 14, 88-101.

33. Pareek, U. Interrole exploration. In J.W. Pfeiffer and J.E. Jones (Eds.), The 1976 Annual Handbook for Group Facilitators. Lajolla, California: University Associates, 1976, 211-224.

34. Pareek, U. Role Stress Scale (Research Report), Indian Institute of Management, 1981.

35. Peartin, L.I., Menaghan, E.G., Lieberman, M.A., and Mullan, J.T. The stress process, Journal of Health and Social Behaviour, 1981, 22 (Des): 337-356.

36. Pell, S. and D'Alonzo, C.A. Myocardial infection. in a one year industrial study, Journal of American Medical Association, 1958, 166, 332-337.

37. Pestonjee, D.M. and Singh, U.B. Locus of Control as a moderator of role stress-job satisfaction relationship, Working Paper No. 402, Indian Institute of Management, Ahmedabad, 1981.

38. Pestonjee, D.M. and Singh, U.B. Job satisfaction as a function of role stress, locus of control, participation and organisational climate in a Electricity Supply Company, PSG Monograph No. 47, Indian Institute of Management, Ahmedabad, August, 1982.

39. Rizzo, J.R., House, R.J. and Litzman, S. Role conflict and ambiguity in organisations. Administrative Science Quarterly, 1970, 15, 150-163.

40. Rose, R.M., Jenkins, C.D. and Hurst, M.W. Air-traffic Controller health change study: A prospective investigation of physical, psychological and work related changes. Galveston, Texas: Published by authors, 1978.

41. Rule, B.G. and Nesdate, A.R. Environmental stressor, emotional arousal and aggression. In I.G. Sarason and C.D. Spielberger (Eds.), Stress and anxiety (Vol. 3). New York: Holsted Press, 1976.

42. Sales, S.M. Differences among individuals in affective, behavioural, biochemical and physiological responses to variations in work load (Doctoral dissertation, University of Michigan, 1969). Dissertation Abstracts International, 1970, 31, 8162A.

43. Sen, P.C. Personal and organisational correlates of role stress and coping strategies in some public sector banks. Unpublished Doctoral Dissertation, Gujarat University, Ahmedabad 1981.

44. Spielberger, C.D. Theory and research on anxiety. In C.D. Spielberger (Ed.), Anxiety and behaviour. New York: Academic Press, 1966.

45. Spielberger, C.D. Test anxiety inventory: Preliminary professional manual. Palo Alto, California: Consulting Psychologists Press, 1980.

46. Spielberger, C.D., Jacobs, G., Russell, S., and Crane, R.S. Assessment of anger: The state-trait anger scale. In J.N. Butcher and C.D. Spielberger (Eds.), Advances in personality assessment (Vol. 2). Hillsdate, NJ: LEA, 1983.

47. Syme, S.L. Behaviour factors associated with the etiology of physical disease: A social epidemiological approach. American Journal of Public Health, 1974, 64, 1043-1045.

48. Van Sell, M., Brief, A.P. and Schuler, R.S. Role conflict and ambiguity: Integration of the literature and direction for future research, Human Relations, 1981, 34, 43-91.

49. Weissenberg, P., and Gruenfeld, L. Relationship between job satisfaction and job involvement, Journal of applied Psychology, 1968, 52, 469-473.

APPENDIX

ORS SCALE

Please do not write anything on these pages. Responses should be given on a separate answer sheet provided to you.

People have different feelings about their roles. Statements describing some such feelings are given below. Use the answer sheet to write your responses. Read each statement and indicate in the space against the corresponding number in the answer sheet how often you have the feeling expressed in the statement in relation to your role in your organisation. Use the numbers given below to indicate your own feelings.

If you find that the category to be used in answering does not adequately indicate your own feelings, use the one which is closest to the way you feel. Do not leave any item unanswered. Answer the items in the order given below.

Write 0   if you never or rarely feel this way

   " 1   if you occasionally (a few times) feel this way

   " 2   if you sometimes feel this way

   " 3   if you frequently feel this way

   " 4   if you very frequently or always feel this way

1. My role tends to interfere with my family life.

2. I am afraid I am not learning enough in my present role for taking up higher responsibility.

3. I am not able to satisfy the conflicting demands of various people over me.

4. My role has recently been reduced in importance.

5. My workload is too heavy.

Write 0   if you never or rarely feel this way

         1   if you occasionally (a few times) feel this way

         2   if you sometimes feel this way

         3   if you frequently feel this way

         4   if you very frequently or always feel this way

---

6. Other role occupants do not give enough attention and time to my role.

7. I do not have adequate knowledge to handle the responsibilities in my role.

8. I have to do things in my role that are against my better judgement.

9. I am not clear on the scope and responsibilities of my role (job).

10. I do not get information needed to carry out responsibilities assigned to me.

11. I have various other interests (social, religious, etc.) which remain neglected because I do not get time to attend to these.

12. I am too preoccupied with my present role responsibility to be able to prepare for taking higher responsibility.

13. I am not able to satisfy the conflicting demands of the various peer level people and my juniors.

14. Many functions of what should be a part of my role have been assigned to some other role.

15. The amount of work I have to do interferes with the quality I want to maintain.

16. There is not enough interaction between my role and other roles.

17. I wish I had more skills to handle the responsibilities of my role.

18. I am not able to use my training and expertise in my role.

19. I do not know what the people I work with expect of me.

20. I do not get enough resources to be effective in my role.

Write 0   if you never or rarely feel this way

"   1   if you occasionally (a few times) feel this way

"   2   if you sometimes feel this way

"   3   if you frequently feel this way

"   4   if you very frequently or always feel this way

21. My role does not allow me to have enough time with my family.

22. I do not have time and opportunities to prepare myself for future challenges of my role.

23. I am not able to satisfy the demands of clients and others, since these are conflicting with one another.

24. I would like to take more responsibility than I am handling at present.

25. I have been given too much responsibility.

26. I wish there was more consultation between my role and other roles.

27. I have not had pertinent training for my role.

28. The work I do in the organisation is not related to my interests.

29. Several aspects of my role are vague and unclear.

30. I do not have enough people to work with me in my role.

31. My organisational responsibilities interfere with my extra-organisational roles.

32. There is very little scope for personal growth in my role.

33. The expectations of my seniors conflict with those of my juniors.

34. I can do much more than what I have been assigned.

35. There is a need to reduce some parts of my role.

3

Write 0   if you never or rarely feel this way

    1   if you occasionally (a few times) feel this way

    2   if you sometimes feel this way

    3   if you frequently feel this way

    4   if you very frequently or always feel this way

---

36. There is no evidence of involvement of several roles (including my role)in joint problem solving or collaboration in planning action.

37. I wish I had prepared myself well for my role.

38. If I had full freedom to define my role I would be doing some things different from what I do now.

39. My role has not been defined clearly and in details.

40. I am rather worried that I lack the necessary facilities needed in my role.

41. My family and friends complain that I do not spend time with them due to heavy demands of my work role.

42. I feel stagnant in my role.

43. I am bothered with the contradictory expectations different people have from my role.

44. I wish I had been given more challenging tasks to do:

45. I feel overburdened in my role.

46. Even when I take initiative for discussions or help, there is not much response from other roles.

47. I need more training and preparation to be effective in my work role.

48. I experience conflict between my values and what I have to do in my role

49. I am not clear as to what are priorities in my role.

50. I wish I had more financial resources for the work assigned to me.

ANSWER SHEET ORS SCALE

Read instructions carefully before responding on this sheet

NAME   SEX   AGE   DATE

ROLE   ORGANISATION

1. ——	11. ——	21. ——	31. ——	41. ——	—— IRD	1
2. ——	12. ——	22. ——	32. ——	42 ——	—— RS	2
3. ——	13. ——	23. ——	33. ——	43. ——	—— REC	3
4. ——	14. ——	24. ——	34. ——	44. ——	—— RE	4
5. ——	15. ——	25. ——	35. ——	45. ——	—— RO	5
6. ——	16. ——	26. ——	36. ——	46. ——	—— RI	6
7. ——	17. ——	27. ——	37. ——	47. ——	—— PI	7
8. ——	18. ——	28. ——	38. ——	48. ——	—— SRD	8
9. ——	19. ——	29. ——	39. ——	49. ——	—— RA	9
10. ——	20. ——	30. ——	40. ——	50. ——	—— RIN	10

Directions: A number of statements that people use to describe themselves
are given below. Read each statement and then encircle the appropriate
number on the answer sheet to indicate how you feel _right now_. There are
no correct or incorrect answers. Do not spend too much time on any one
statement but give the answer which seems to describe your _present feelings_
best.

		NOT AT ALL	SOME WHAT	MODERATELY SO	VERY MUCH SO
1.	I am furious	1	2	3	4
2.	I am annoyed	1	2	3	4
3.	I feel like banging on the table	1	2	3	4
4.	I feel angry	1	2	3	4
5.	I feel aggravated	1	2	3	4
6.	I feel irritated	1	2	3	4
7.	I feel like yelling at somebody	1	2	3	4
8.	I feel like breaking things	1	2	3	4
9.	I am resentful	1	2	3	4
10.	I am mad	1	2	3	4
11.	I feel like I'm about to explode	1	2	3	4
12.	I feel frustrated	1	2	3	4
13.	I feel like hitting someone	1	2	3	4
14.	I am burned up	1	2	3	4
15.	I feel like swearing	1	2	3	4

SELF-ANALYSIS QUESTIONNAIRE (STAS FORM X)

Directions: A number of statements which people have used to describe them-
selves are given below. Read each statement and then encircle the appropri-
ate number on the answer sheet to indicate how you generally feel. There
are no right or wrong answers. Do not spend too much time on any one state-
ment but give the answer which seems to describe how you generally feel.

|		ALMOST NEVER	SOME-TIMES	OFTEN	ALMOST ALWAYS
16.	I am quick tempered	1	2	3	4
17.	I get annoyed when I am singled out for correction	1	2	3	4
18.	I am a hot-headed person	1	2	3	4
19.	I have a fiery temper	1	2	3	4
20.	I feel angry	1	2	3	4
21.	I feel irritated	1	2	3	4
22.	I get angry when I'm slowed down by others' mistakes	1	2	3	4
23.	I feel annoyed when I am not given recognition for doing good work	1	2	3	4
24.	I fly off the handle	1	2	3	4
25.	When I get mad, I say nasty things	1	2	3	4
26.	People who think they are always right irritate me	1	2	3	4
27.	When I get frustrated I feel like hitting someone	1	2	3	4
28.	I feel infuriated when I do good job and get a poor evaluation	1	2	3	4
29.	It makes my blood boil when I am pressured	1	2	3	4
30.	It makes me furious when I am criticized in front of others	1	2	3	4

Are you Type A? Do you characteristically exhibit Type A traits? Answer the questions in "Type Your Behavior." Better yet, ask your spouse or best friend to answer the questions for you. Assessing your own personality is seldom accurate. Doctor Friedman believes that because so many Type A individuals rationalize their own behaviors, they seldom can type themselves honestly. They deny their Type A traits since they see them as signs of "normal, healthy, vibrant living."

The best method for deciphering behavior types is the structured interview, where you would ask individuals questions similar to those in 'Type Your Behaviour. Their answers would only provide the first clue since a trained interviewer observes the behaviors exhibited as the questions are asked. The interviewer would state: "When you go on a vacation do you always...." then pause and see if the person being interviewed would jump in with impatient expressions like "uh, huh, uh, huh, you mean..." or even finish the question for the interviewer. Other clues would come in the form of rapid eye movements, posture, jiggling of the knee, facial tautness, and explosive speech patterns Without the clinical assistance of a trained interviewer, take the second best method and ask a friend who knows you well for their honest impressions.

You have just completed your personal "Richter" scale on how voatile your personality is. Add the number of "Yes" responses and plot that number on the continuum scale that follows.

Type A and Type B managers characteristically are dicotomized as polar opposites; one being hurried, get-ahead, competitive while the other is relaxed, easy going and secure. While they appear to be polar opposites, for more practical interpretation you should consider yourself on a continuum from A_1 to B_1. Place an X on the continuum below that corresponds with your score in 'Type Your Behavior.'

Your position is important in determing the strategy you will use to change your behavior.
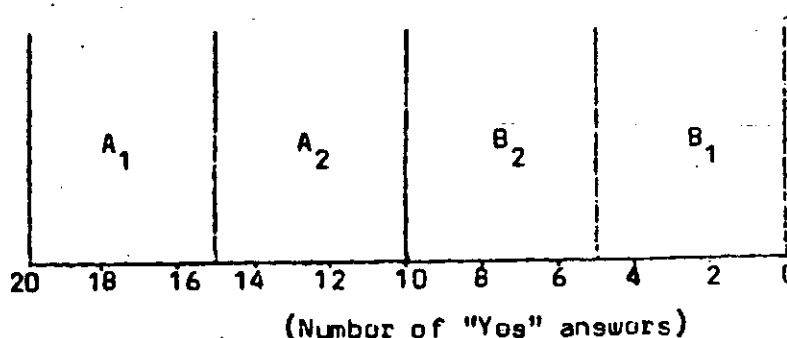
A_1	A_2	B_2	B_1

20 18 16 14 12 10 8 6 4 2 0

(Number of "Yes" answers)

Positions A_1 and B_1 represent the extreme Type A and Type B individuals. Few of us fall into either extreme position. While a recent study of managers placed 60 percent as Type A, 27 percent were A_1. At the other end, only 12 percent were fully developed B_1's. We all have a bit of Type A within us.

Where did your score fall? Are you strict Type A in the A_1 position? If so, Dr. Friedman has bad news since he has yet to change an A_1 to any shade of B unless they have first had a heart attack and survived. In other words, the Type A pattern is so ingrained that it requires strong motivation to overcome.

If you have classified yourself as A_1 do not let this alone cause you heart failure. Remember, self-assessment is seldom totally accurate and should be followed up by a trained physician or clinician—using the structured interview technique, if possible.

For all the rest of us who are A-ish there are many techniques we can use to become shades of B if we choose. First, review the questions in "Type Your Behaviour" where you indicated "Yes", a sign of a Type A trait. Ask yourself the simple question, do I want to change? Is this trait detrimental to me, my colleagues, my relationship with my friends and family? If the answer is yes, then write in the space next to the question a simple technique on how to begin changing that part of your behavior.

For example, if you tend to speak rapidly so people have a hard time understanding what you say, remind yourself twenty times a day to "speak slowly." Use any gimmick that works. For instance write "speak slowly" on a piece of paper and put it in your pocket or purse. Every time you put your hand in your pocket or purse (dozens of times a day for most of us) you feel that piece of paper and automatically remind yourself to "speak slowly." Keep carrying the paper with you for a few weeks and like magic you will find a change in your speech pattern. Once you from habits, they will help form you.

TYPE YOUR BEHAVIOUR

Answer the following questions by indicating what applied to you often

Yes	No	
___	___	1. Do you feel compelled to do most things in a hurry?
___	___	2. Are you usually the first one through during a meal?
___	___	3. Is it difficult for you to relax, even for a few hours?
___	___	4. Do you hate to wait in line at a restaurant, bank, or store?
___	___	5. Do you frequently try to do sevel things at the same time?
___	___	6. Are you generally dissatisfied with what you have accomplished in life?
___	___	7. Do you enjoy competition and feel you always have to win?
___	___	8. When other people speak slowly do you find yourself trying to rush them along by finishing the sentence for them?
___	___	9. Do you become impatient when someone does the job slowly?
___	___	10. When engaged in conversation do you usually feel compelled to tell others about your own interests?
___	___	11. Do you become irritated when something is not done exactly right?
___	___	12. Do you rush through your tasks to get them done as quickly as possible?
___	___	13. Do you feel you are constantly under pressure to get more done?
___	___	14. In the past few years, have you taken less than your allotted vacation time?
___	___	15. While listening to other people do you usually find your mind wandering to other tasks and subjects?
___	___	16. When you meet aggressive people, do you usually feel compelled to compete with them?
___	___	17. Do you tend to talk fast?
___	___	18. Are you too busy with your job to have time for hobbies and outside activities?
___	___	19. Do you seek and need recognition from your boss and peers?
___	___	20. Do you take pride in working best "under pressure?"