Chapter VI
Discussions on the
Findings of the Study
The exploration of the job stressors of the academic managers of the higher educational institutions has given some insight into the environmental as well as behavioural limitations of the academic managers. The three important questions answered by the study were, 1. whether the academic managers faced any specific stressor at their institution, 2. whether there was any relationship between role stress and personality factors including behaviour patterns such as motivation, conflict management style and the coping behaviour and 3. whether the combination of role stress, specific stressor, and behavioural pattern indicated any manifestation in the form of somatic and / or other disease symptoms.

If one realises the value of objective and systematic study, some of the conclusions of the present study still need further probing with a bigger sample size and a refined tool for systematic data collection.

Research has always been a combination of hunches, speculations, subjectivity, imagination and hope blended with precisely and objectively gathered data tied down to the reality of a quantitative science. One without the other seems incomplete. This Chapter is a presentation of discussion that looks at both, quantitative calculations and the findings of earlier researches along with speculations, imagination and hope.
6.1 Findings in relation to the Organisational Role Stress experienced by the Academic Managers:

The selected sample of 48 academic managers showed high level of role stress in the areas of Role Overload (m: 11.29 and 77.1% of AMHE), Resource Inadequacy (m: 10.65 and 68.7%), Inter-Role Distance (m: 9.88 and 50%), Role Isolation (m: 9.40 and 50%), Role Erosion (m: 8.90 and 29.1%), Personal Inadequacy (m: 8.48 and 47.9% of AMHE), Role Expectation Conflict (m: 8.23 and 50% of AMHE) and Role Stagnation (m: 8.10 and 41.7% of AMHE). The Self Role Distance (m: 8.50 and 41.7%) and Role Ambiguity (m: 7.08 and 41.7% of AMHE) showed low levels of mean score. On an average majority showed high role stress and many have reported a very high experience of stress on many dimensions of ORS (See Table 5.1 and 5.2).

Academic managers have shown an overall high role stress and these levels are much higher than the stress levels reported by the managers from an industrial set-up. In his study on 221 top managers, Pestonjee (1989) reported that Role Erosion was the highest (m: 6.94), followed by Inter Role Distance (m: 6.87), Role Isolation (m: 4.78), Role Expectation Conflict (m: 4.01), Resource Inadequacy (m: 3.90), Role Stagnation (m: 3.56), Self – Role Distance (m: 3.54), Role Overload (m: 3.45), Personal Inadequacy (m: 2.66) and Role Ambiguity (m: 2.29).

Also Gupta (1988), Khanna (1985), Luhadia (1991) and Rajgopalan and Khandelwal (1988) in their studies on executives from public and private
sectors found that RE is the highest role stress reported and contributes to a great deal of stress.

Whereas, the studies conducted on teachers by Paratkar (1993) and Vas (1994) indicated that the Role Overload was the highest reported stress amongst the teachers. The academic managers, by and large, have reported high Role Overload as against the high Role Erosion experienced by the top and middle level managers from industrial set-up. This indicates that AMHEs feel that they are overloaded with tasks, however, they don't experience the erosion at work i.e. a feeling as if someone else is grabbing away their task.

The perceived high RO was indicative of the academic manager's perception that there are too many expectations from significant others such as university authority, government, management trustees and so on. The high Rln indicated that AMHEs felt that the resources required for performing their role effectively were not available. This is a common feeling amongst the managers working for government or semi-government enterprises. (See Table 5.1 and 5.2)

The heads of the university departments, apart from RO and Rln, have reported high RI, REC, and RA (64.7%) indicating that they are more stressed due to insufficient interactions, conflicting, unclear and ambiguous expectations or demands from others. In their study on 60 executives from public and private sectors Ahmad, Bhardwaj and Narula
(1985) found that executives from private sectors experienced more role stress on the dimensions of RI, RA and SRD. Like in public and private sectors, a difference in the experience of stress between the university set-up and the college set-up was found.

This difference in the experience of role stress could be attributed to various reasons. However, one of the most obvious and vocalised reasons by the heads of university departments is that they do not have any control over the situations. The power attributed to this role and the infrastructure provided to them is very limited. The conflict management style used by the heads of departments is Compromising, against the Competing style by the principals of the colleges (see Table 5.61), which shows the helplessness experienced by the heads of the departments.

The lower levels of RE and SRD among the academic managers point out towards the positive environmental factors at educational system. The findings show that the present environment does not challenge value systems of academic managers and does not make them feel eroded at work.

The high ORS scores however, pointed out the fact that the academic managers are experiencing many constraints related to their role and these constraints need to be addressed by studying the role of academic
managers in detail by conducting a 'role – making', 'role – centering' and 'role linking' exercise.

One must add that the scatter in score distribution of ORS dimensions do not permit any concluding remarks on the role stress of academic managers and that the sample was not homogeneous (see Table 5.2). It is possible that the academic managers who participated in the study were already stressed out and therefore they were more willing to verbalise their frustrations.

6.2 Findings in relation to Intrinsic Job Stressors at the higher educational institutions of the Academic Managers:

The main objective of the present study was to delineate the intrinsic stressors at the higher educational institutions. However, the quantification of intrinsic stressors was not easy since there is no ready-made tool for this purpose. The check-list was developed on the basis of interviews and discussions with the academic managers. This check-list has been a contribution of the present study.

Table 5.3 and 5.4 have presented the findings in relation to the intrinsic stressors at job faced by the academic managers of the sample.

1. Maximum number of principals (61.3 %) were found with high experience of stress due to the 'Government Functioning' and the 'General Administration of the Institution'. A 74.2 % of principals have reported low stress in relation to the functioning of the
Management Trustees of their institutions and 75 % of AMHE have reported low stress due to External Factors such as pressure from parents or press. They have also reported that handling students is less stressful as compared to handling the staff.

2. Whereas 58.8 % of the heads of the university departments were found to report stress due to the ineffective University Functioning itself.

3. On the whole, 56.3 % of the academic managers found the 'Government Authority' as the most stressful phenomenon and 54.2 % of AMHE found the 'General Administration' as highly stressful. Whereas, 52.1 % of the AMHE found handling Staff very stressful.

Analysis of the correlation coefficient (Table 5.11), the t-test results (Table 5.5 to 5.10) and the stepwise multiple regression (Table 5.12) showed some significant relationships that pointed out to the following inferences:

1. It was found that IRD increased with increase in stress due to University Functioning. Almost 17.8 percent of the variance in IRD had been explained by University Functioning and

2. Almost 30.5 percent of variance in RS had been explained by stress due to University Functioning and Student – Activities and RS increased with University Functioning and deceased with increase in Student Activities.
3. REC increased with increase in the pressure from 'University Functioning' and 'General Administration of the institutions' and REC decreased due to activities with Management Trustees. A 36.7 percent of variance in REC had been explained by these factors.

4. A 24.0 percent of variance in RE had been explained by University Functioning and Student Related Activities. It was found that RE is positively correlated to stress due to University Functioning and negatively correlated with student activities.

5. The RO increased with stress due to Administration of the institutions and decreased due to activities with Management Trustees and almost 27.7 percent of the variance was explained by these variable.

6. The RI as well as PI increased with increase in stress due to University Functioning.

7. The SRD decreased with Student Related Activities and increased due to increase in stressors like University Functioning, and the General Administration.

8. RA increased with increase in stress due to University Functioning and 25.5 percent of variance in RA was explained.

9. RIn increased with increase in stress due to University Functioning and 26.0 percent of variance in RIn was explained.

Based on the above analysis, one can say that the stressors related to University Functioning, Government Authority and the General
Administration of the institution do seem to play a very significant role in the experience of role stress in case of the academic managers.

It was found that stress due to discrepancy in the rules and regulations stipulated by the university, the non-involvement of principals / heads of the departments at the decision making stages, delays and lack of communications, deadlines and expectations of periodically repeated lengthy reports, politics and power play at the level of university, partiality / favouritism and preferential attitude of the university officials, conflicts with university officials over infrastructural problems/bureaucracy, stress due to non-appreciation of efforts by University authorities and marginalisation of some subjects due to the biased attitude of university authority were major reasons for this stress. The academic managers very strongly verbalized that the above-mentioned discrepancies in the university functioning acted as stressors from their environment. It was found that this stressor increased IRD, RS, REC, RE, RI, SRD, RA and RIn dimensions of role stress.

Also it was found that stress of Internal audit of accounts, Academic audit / LiC audit, financial crunch, limited infrastructure such as, classroom problems, laboratory and inadequate library facilities, non-cooperation from the non-teaching staff in computerisation of procedures, changes in rules and regulations and bureaucracy in the office administration, union activity of the non-teaching staff and the incompetent non-teaching staff acted as environmental stressor for the
academic managers. The helplessness in relation to the office setup and the work overload due to general administrative activities may cause environmental constraint that the academic managers face on every-day basis. It was found that REC, RO and SRD dimensions of role stress increased due to stressor such as 'General Administration'.

However, the activities of students at the institution seem to help in reducing the role stress among academic managers, especially, RE, SRD have shown the impact of this. The academic managers find student related activities as a breather and not as a stressor which probably gives them enough opportunity to use their potential to handle the student related issues; quite similar to a fire-fighter who finds the fire more challenging instead of a stressful experience.

The academic managers were very vocal about various issues specially, due to government rules and delays in the procedure and conducting selection interviews. They mentioned that the long procedures, the discrepancies between the university rules and government procedures, and the rapid changes in rules and policies makes it difficult to carry out day to day activities. At times, the delays in appointments of teachers or the lack of funds imposed a phenomenal pressure on administrative functioning and effectiveness of the institution and it also developed a feeling of helplessness.
In 1966, Herzberg described that the motivation - hygiene factors are important for job satisfaction, which depend upon environmental hygiene as well as motivational factors. He explained that the job satisfaction depends upon physical and psychological need satisfaction. Mentally challenging work, personal interest in the work, working conditions, high self esteem on the part of the individual and basic values have good effects on physical and psychological health leading to satisfaction at the job and hence, needless to say that the opposite leads to ill health.

Frankenhaeuser (1981) in his study on 3000 workers from light and medium engineering firms found that certain demands of task could produce what he called as "work neurosis". Boring or disliked work, work requiring skills inappropriate to the workers level of attainment, work requiring constant attention, but little scope for initiation or responsibility, work programmes that offer little variety could cause work neurosis. Kumar (1992) in his study on managers found that greater the experience of daily hassles by manager, greater is the experience of strain, and hassles contribute more strongly towards strain.

Josi, Rizzo and Carroll (1998) in their study reported that there are many stressors due to the occupational factors that have psychological demand such as, the level of decision making and its resultant control over work, role pressure, participative opportunity in decision making.
responsibility of people, organisational levels, boundaries, climate and other complexities.

From these studies, one can say that the intrinsic stressors at the job are worth a deep study and the present study too, concluded that stress due to university functioning increased the IRD, RS, RE, RO, RI, PI, SRD, RA and RIn dimensions of role stress. Stress due to management of the Staff of institution increased IRD, REC, RI, PI and SRD. Whereas increased stress levels in RO, REC, SRD and RIn dimensions were observed as a result of stress due to General Administration of the Institution. The student – activities seemed to lower the stress levels in RS, SRD and RE dimensions in case of the AMHE.

However, it is possible that the AMHE are trying to unload their frustrations on the administrative activities and the university and government functioning rather than disclosing other drawbacks of the system and their own limitations. It is also possible that the sample of the study belong to a personality type that focuses on external reasons than internal and it is necessary to take a closer look at these tendencies of human nature.

Yet, from the main findings of this study and other references, it was found that the educational system does need an analysis and reorganisation exercise in relation to its structure and function, so as to be less complex, giving enough elbow – space for the academic managers
to run their individual institutions effectively, without feeling stressed, helpless, powerless and low on self-esteem and importance.

6.3 Findings on the Organisational Role Stress in relation to the Institutional Profile of the Academic Managers:

Every institution has a specific structure and function and a set of expectations and demands. It was assumed that the campus environment, working space, infrastructural facilities, institutions with more staff-student strength, and other such factors would have their impact on stress levels of AMHEs. Also, the workload at one institution would differ from the other. The study of the college and departmental profiles of the academic managers has pointed out following findings (refer Table 5.14):

1. The study of infrastructural facilities revealed that 58.4% of academic managers had small cabins i.e. less than 200 sq. ft., which is too small for a manager at an executive position. Overall, 64.6% of the AMHEs reported that they were not having sufficient infrastructural facilities such as an adequate cabin space, technological aid i.e. computer, fax machine in the cabin, enough air, light, and less noisy surroundings. About 48% of the principals and 11.8% of the heads of the university departments reported of enjoying adequate infrastructural facilities, which indicates that the principals seem to have better facilities than the heads of university departments.
2. A 68.8 % of AMHEs reported of having a very heavy workload whereby they experienced the work being taxing with long meeting hours and time consuming administrative tasks. At times, they have to carry their work back home, especially during certain peak periods of times such as admissions, results, annual reporting and so on.

3. A trend of high role stress among the AMHEs with high workload and insufficient infrastructure was visible. Sparks and Cooper (1997) found a positive correlation between overall health symptoms and hours of work, similarly, in the present study high workload showed a trend of experience of high role stress in the AMHE.

4. Irrespective of the universities, a high role stress was experienced by the AMHEs of both universities. The findings indicated that the academic managers of the SNDT Women's University do experience higher role stress in comparison to their counterparts from University of Mumbai. A significant difference was found between the two university groups on Role Erosion, Role Isolation, Role Ambiguity and Role Inadequacy.

5. The academic managers from the aided public institutions experienced more role stress than the minority institutions (Table 5.16). A significant difference was found on REC, RI, RA and RIn. It was also evident that the AMHEs of the aided minority
institutions reported having more clarity about their role, they feel more resourceful and more connected with the other roles and their institutional milieu was less stressful for them. However, it is possible that there are some other factors that are contributing towards this difference.

6. The analysis (Table 5.17) showed that there was no significant difference between the role stress faced by AMHEs from well-established and those from newly established institutions.

Table 5.24 and 5.25 showed the analysis of correlation coefficient and stepwise multiple regression and the findings were as follows:

Role Overload decreased with bigger cabin space. A 16.8 percent of the variance in RO was explained by this variable and Role Ambiguity decreased with increase in student-strength and 13.6 percent of variance in RA was explained by this variable (Table 5.25). Bigger cabin space and student strength have a buffering effect on the levels of RO.

Quible (1992) says that the minimum space for a top-level executive needs to be in the range of 425 square feet and cabin space for a supervisory category needs to be 200 sq. ft. This finding falls in line with suggestions from the science of Ergonomics and hence need to be considered while designing the room of academic managers.
Role Isolation was indicated to be high in academic managers of the SNDT Women’s University and 14.3 percent of variance in RE was explained. Also Resource Inadequacy was found to be high in AMHEs from SNDT Women’s University. It was visible that academic managers of SNDT Women’s University were at a higher risk of role stress. However, it is also possible that they are more aware and more vocal about the role stress.

The AMHEs from aided minority showed low role stress and academic managers belonging to institutions with more teaching staff experienced lower RE. This can be interpreted as an indication that interactions with teaching staff help AMHEs to feel as if they are doing challenging work of academic calibre. Whereas, they feel overloaded with work in relation to the non-teaching staff and it was found that Role Overload increased with increase in the non-teaching staff.

This finding tallies with the findings in relation to the intrinsic stressors. The stress due to ‘General Administration’ was identified as high internal stressor by the AMHEs, which is related to one-to-one interactions with non-teaching staff. Thus, in short the academic managers seem to enjoy the work of academic nature and do not like the administrative kind and almost disown their administrative work. It is necessary to address these feelings amongst the academic managers.
with specially designed training programmes having a focus on role - clarity exercise.

A number of researches have tried to study whether an institutional profile has any role to play in experience of stress. The factors inherent in the environment such as physical noise, pollution, climate of the organisation and organisational structure, intrinsic factors of job such as – role, career plan and relationships at the work have shown their negative effect on the physical and psychological stamina of individuals.

However, only a partial and not a clear picture seems to have evolved in relation to the effect of the external environmental factors on the role stress experienced by the AMHEs.

From the findings and discussions it is visible that institutional factors such as, infrastructural facilities, work - load, staff and student strength, minority status, university set – up and so on, play a significant role in the stress levels of academic managers.

6.4 Findings in relation to the Organisational Role Stress and the socio – demographic profile of the academic managers:

The socio – demographic profile of academic managers was assumed to have some relation to the experience of role stress. The findings of the study as seen in Table 5.26 to 5.31 indicate the following:
No significant difference was found between the role stress experienced by the age groups 35 – 50 years and more than 50 years. In a study on bank managers, Bhatnagar and Bose (1985) found no significant association between age and role stress variables. Chaudhary (1990) in a study conducted on bank officers (100) of two age groups (above 35 years and below 35 years of age), also found that two age groups did not differ on role stress dimensions.

No significant difference was found between the role stress levels of male and female academic managers and also those with management training. Surti (1982) and Surinder and Jagjit (1994) in their studies on male and female managers found that the female managers do experience more stress than the male managers. The finding of the present study does not tally with the findings of the studies mentioned above.

The AMHE with more than 5 years of experience as academic managers reported high RE as compared to AMHEs with lesser years of experience (Table 5.31)

The correlation matrix in Table 5.32 showed two significant correlations. It was found that AMHEs with Ph D qualifications experienced more REC and that RE increased amongst those with Ph D qualifications.
These findings indicated that the academic managers with Ph. D. qualification and with more than 5 years of experience, felt stressed in RE dimension. They felt that somebody else is doing their job and they are doing only the routine tasks. This can also be explained on the basis of their need to do academic than the administrative role. From the raw data it was visible that the heads of the university departments with Ph.D. qualification experienced high RE. Therefore, increase in RE could be due to the university set-up and their qualifications. Therefore, educational qualification does not give any clear conclusion on the role stress in AMHEs.

Dwivedi (1989) found that there was a significant negative relationship between most of the ORS measures and pay, followed by age, experience and education, and leader effectiveness.

However, in the present study, no significant associations between age, sex, marital status and the role stress among academic managers were found.

6.5 Findings related to the Organisational Role Stress and Life Style of the Academic Managers:

It was found that majority of the academic managers (81.3 %) followed a healthy life-style. They were concerned about their health and reported about following a healthy diet, having regular exercises and they spent
some personal time to recuperate from the stress at work (Table 5.33 and 5.34).

Steff, Jones and Noe (1990) studied the impact of health habits and lifestyle on the stress-strain relationship with a sample of 3337 employees. Their main findings were that lifestyle and health habits have a strong negative effect on strain outcomes.

Green (1991) has elaborated on the importance of health status and its correlation with stress experienced by an individual, his health status, lifestyle, education, family background, financial position and other similar variables.

Though the lifestyle inventory was developed to focus on the diet, exercise, hobbies, specific routines, family support, social activities and the likes of AMHEs, it probably did not give systematic data required for the study. Therefore, from the findings of the other studies, it can be mentioned that the inventory, rather than the hypothesis need a closer look. During this study no significant relation was obtained between the lifestyle and role stress dimensions.
6.6 Findings in relation to the Organisational Role Stress and the Health Status of the academic managers:

Almost 75.0% of AMHEs were found enjoying a healthy mental status and 25.0% were at a risk of mental health problems suffering from neurotic symptoms. Almost 30.0% of them reported that they suffered from various physical ailments (Table 5.39 and 5.40). The studies conducted on teachers in UK (1978), Japan (1982), and New York (1987), have proved that the teachers do show some serious health issues - mental as well as physical and these are stress related.

Majority of them complained high blood pressure or fatigue or constipation, indigestion, aches and pain due to sedentary job (see Table 5.41). Major physiological studies in the field of stress emphasised the importance of the autonomous and hormonal systems in relation to the responses to stress and coping. During these studies it was found that mass sympathetic discharge increases in many ways the capability of the body to perform vigorous muscular activities and the arterial pressure increases. The blood flow to active muscles and organs, rates of cellular metabolism, blood glucose concentration, glycolysis in muscles along with the rate of blood coagulation also increases.
It is a well-known fact that the Sympathetic Nervous System (SNS) activates many emotional states via the hypothalamus known as the "sympathetic alarm reaction." In this state, the individual decides almost instantly whether to stand and fight or to run. The 'alarm reaction leads to an increase in sympathetic adreno-cortical activity, whereby the adreno-corticotropic hormone (ACTH), corticotropin releasing factor (CRF), and cortico steroids levels increases in the blood; also the catecholamine levels and levels of 17-hydroxycorticosteroids increase. There is an increase in the blood glucose level in the initial stages of stressful experiences. Sometimes it remains normal, but in a prolonged stressful condition, final exhaustion occurs accompanied by a collapse mainly due to hypoglycaemia.

The correlation coefficient (Table 5.44) and the stepwise multiple regression analysis (Table 5.45) showed that IRD, RE, REC, RI, RO, PI, SRD, RA and RIn were positively correlated to mental health status as well as physical health status. High correlation obtained between high ORS scores and the mental and physical disease symptoms indicated that it is possible to quantify stress levels, based on the number of mental and physical disease symptoms.

Stress response has been often associated with emotions such as anger, fear, anxiety, depression, grief, guilt, jealousy and shame. Lachman (1985) classified these symptoms as emotional and intellectual. The emotional symptoms range from an irritable mood, over reaction to some
relatively minor situation, angry outbursts, short tempered reactions hostility, jealousy, lack of interest, withdrawal, apathetic behaviour, inability to get up in the morning, crying and feeling tearful, blaming others, having a suspicious attitude, self – depreciation, diminished initiative, reduced personal involvement with others, to negative or cynical attitude.

Whereas an intellectual reaction could be in the form of forgetfulness, preoccupation, an increased fantasy life, decreased concentration, inattention to detail, past rather than present orientation, decreased creativity, slower thinking, and a slower response, difficulty in learning, mental 'Laziness' and an inclination to the path of least resistance.

During physiological stress – tests, it was found that six out of fifteen AMHEs showed more resilience i.e. they showed high frequency in the heart rate variability (Frequency range : 0.15 – 0.50 Hz), showing high resilience toward stressful situation and it is probable that they follow healthier coping styles. They were classified under the category of "parasympathetics". Those with shorter frequency in the heart rate variability (frequency range : 0.05 – 0.15 Hz) were classified as "sympathetics" who showed low resilience.

The stress experienced by AMHEs during the performance-related task (eye – hand coordination in tracing the star - fish) was much higher in comparison to the physical task such as isometric grip. Since academic
managers belong to an intellectual group, they experienced more stress in tasks that reflect on their intellectual performance than on the task reflecting on their physical performance.

From these findings of the study, it is visible that there is high correlation between the ORS scores and the mental and physical disease symptoms amongst the academic managers and this association of role stress with poor psychological and physical well-being, can be considered as best predictors of stress at their institutions.

In their studies Edwards (1992), Dua (1990, 1994), Nowack (1990), Everly (1989), Matteson and Ivancevich (1987), Chansouria, Khatri and Udupa (1977) have found that the physiological well-being and psychological ill-health have direct effect on the stress experienced by an individual.

Based on these references and the findings of the study, hypothesis that academic managers reporting high role stress would manifest significantly more health problems than the ones' experiencing low-role stress has been accepted.

This finding also indicates that there is a need for a systematic study of health status of teachers and the academic managers who are handling the young population of our society. A regular health check-up and
stress tests could be made a part of the routine system at these institutions.

6.7 Finding in relation to Organisational Role Stress and Personality Profile of Academic Managers:

Almost 75% of the AMHE were belonging to type A personality and 68.8% of AMHEs showed high hardiness. Majority (41.7%) of the AMHEs showed a sensation / thinking combination followed by intuition / thinking (31.3%); the least of them showed sensation / feeling combination (8.3%) (See Table 5.46 and 5.49). The MBTI personality type, namely, ISTJ, INTJ, ESTJ and ENTJ dominated the sample population. The characteristics of these types as indicated by Myers and Briggs are as follows:

**ISTJ**: Serious, quiet, earn success by concentration and thoroughness, practical, ordinary, matter-of-fact, logical, realistic, and dependable. They see to it that everything is well organised and take responsibility of their job. They make up their own mind as to what should be accomplished and work towards it steadily, regardless of protests or distractions.

**ESTJ**: Practical, realistic, matter-of-fact, with a natural head for business. They are not interested in subjects they see no use of, but can apply themselves when necessary. They may make good administrators,
especially, if they remember to consider others' feelings and points of view

**INTJ**: Usually have an original mind and great drive for their own ideas and purposes, in fields that appeal to them. They have a fine power to organise a job and carry it through with or without help. They could be sceptical, critical, independent, determined, and sometimes stubborn. They must learn to yield less important points in order to win the most important.

**ENTJ**: Hearty, frank, decisive, leaders in activities and are usually good in anything that requires reasoning and intelligent talk such as public speaking. They are usually well informed and enjoy additions to their fund of knowledge and may sometimes appear more positive and confident than necessary.

It was found that the personality factors such as Sensation, Intuition, and Thinking were more common in sample population and academic managers preferred Judgement (m : 14.00) to Perception (m : 3.00), Thinking (m : 12.8) to Feeling (m : 5.52), Extroversion (m : 8.69) to Introversion (m : 7.35) and Sensation (m : 9.65) to Intuition (m : 7.90) (as seen in Table 5.50).
From the correlation coefficient (Table 5.59) and the stepwise multiple regression analysis (Table 5.60) following significant associations were found:

IRD increased with increase in the Sensation factor of the personality and decreased with increase in the Hardiness. Whereas, no significant difference was found between role stress experienced by type A and type B personality style (Table 5.48).

RE increased with use of Intuition and decreased with the Judgement factor of the personality. PI increased with Feeling and decreased with the Thinking factor of their personality. RA decreased with increase in the Thinking factor.

The above findings indicated that the personality factors such as Sensation, Thinking, Feeling and Judgement have played an important role in the experience of role stress. It was visible from the data analysis that 'Thinking' factor helped in reduction of Role Ambiguity and Personal Inadequacy, whereas 'Judgement' helped in reducing Role Erosion amongst AMHE. The 'Sensation' factor increased Inter - Role Distance, also the 'Feeling' factor increased Personal Inadequacy, and 'Intuition' factor too, increased Role Erosion amongst AMHE.

Dua (1992) as well as Rush, Schoel and Bernard (1995) in their study with managers, found that Hardiness does have a positive effect on the
stress levels. The findings indicated that IRD decreased with increase in Hardiness and academic managers with hardy personality were able to do their multiple activities, but this personality did not help them in dealing with other dimensions of role stress.

Many studies have proved that type A personality is a precursor of high role stress. Only some of these studies can be mentioned, such as, Dua (1992), Mittal and Uma (1992), Pestonjee (1987), Spector and O'Connell (1994) and Dhadda (1990). However, during the present study no significant relationship was observed between the type A personality and the stress experienced by the academic managers. Needless to say, that the finding in relation to type A factor of the present study is fragile and not strong enough to reject the hypothesis, instead, there is a needs for better tool to gather an objective data with a random sampling technique.

The findings from the Myer's Brigg Type Inventaory showed that 'Thinking' and 'Judgement' factors of the personality helped in reducing the role stress. These results showed that academic mangers who rely on their 'Thinking' factor with more experience in their field (Judging) were able to handle their role stress. At the same time, 'Intuition', 'Feeling' and 'Sensation' increased the role stress among academic managers, which indicates that academic managers, who show high reliance on feeling, sensation and intuition while handling stress, do feel stressed in such situations.
A study conducted by Taylor (1991) showed that people who are high on sensation seeking encounter higher stress. Personality factors such as ‘Hardiness’ and ‘Thinking’ do say a lot about the relation between the personality and the experience of stress. At the same time, it is visible that relation between stress and the personality needs to be done on one on one basis with more focus on the individual personality, instead of focusing on calculating group personality.

Therefore, no conclusions can be drawn in relation to the association between role stress and personality factors of AMHEs, also due to small sample size, these personality factors were not grouped into personality type for the study.

6.8 Findings on Organisational Role Stress and Conflict management Style of Academic Managers:
Organisational conflicts have always been a major concern to almost all institutional heads. Individuals equipped with better conflict management styles are at ease when they are at the helm of affairs. Conflicts were assumed to cause stress at work by many researchers. A correlation between the conflict management style and the role stress was studied amongst AMHEs and it has brought out following results:

About 29.2% of the academic managers used “Compromising” style while handling their conflicts, followed by 27.1% of AMHEs using
Competing style. The principals used more of Competing style (35.5 %) whereas the heads of the university departments (47.1 %) used Compromising Style while solving problems. This could be due to the fact that the principals are at a more controlling position than the heads of the university departments and they may use “Control” while handling the situation rather than yielding to it (see Table 5.61).

A significant difference was found in the experience of Role Ambiguity in relation to the use of Compromising Style. Those experiencing more Role Ambiguity used Compromising Style of conflict management (t-test results in Table 5.62 to 5.66).

The correlation coefficient (Table 5.67) and the stepwise multiple regression analysis (Table 5.68) showed that Role Ambiguity was positively correlated to the Compromising Style of conflict management. Also Role Ambiguity decreased with increase in the use of Competing Style of conflict management and 9.9 per cent of variance in RA was explained by this variable.

These findings point out to the fact that Competing Style helped in reduction of role stress, especially in the area of Role Ambiguity and the Compromise Style increased RA among academic managers.

The Competing Style is an indication of need to control the situation. Principals of colleges demonstrated this style of conflict management.
The Competing style also indicates a high concern for oneself and a very low concern for others, whereby the individual takes a highly competitive stance and would approach conflicts from 'I win – you lose' stance.

Whereas, the heads of university departments vocalised that they do not have any control over situations at work and they showed higher use of Compromising Style of conflict management. The Compromising style indicates a medium level of concern for both self and others, with an attitude of 'give and take'. The power attributed to heads of university departments and the infrastructure provided to them was found to be very limited. This feeling of helplessness experienced by the heads of university departments has been confirmed by their conflict management style.

However, from the results no clear conclusion can be drawn on the correlation between the conflict management style and the role stress experienced by the academic managers.

6.9 Findings on Organisational Role Stress and Motivational Needs of AMHEs:

Different motivational needs such as need for Achievement, need for Control, Dependency, Influence, Extension and Affiliation amongst academic managers were studied to analyze their impact on their stress levels. It was assumed that AMHEs with high role stress would show a specific motivational need.
Majority of academic managers (56.3%) were driven by Achievement Motivation (m: 22.0) and 18.8% of them showed a high need for Influencing others with expertise (m: 20.8) while 10.4 percent of academic managers were showing high Dependency – need (m: 18.1). The mean score of Extension motivation was 18.7 and that of Affiliation motivation was 18.5. The least score was found on 'Need for Control' (m: 16.5) (see Table 5.69).

The analysis of coefficient of correlation (Table 5.76) pointed out that Role Expectation Conflict was negatively correlated to the Dependency motivation. Role Erosion was negatively correlated to the Dependency Motivation. Role Isolation was negatively correlated to the Dependency Motivation. Personal Inadequacy was negatively correlated to the Need for Control.

The results from the stepwise multiple regression (Table 5.77) were as follows:

1. The Inter Role Distance decreased with increase in the Achievement Motivation and 8.7 percent of variance in IRD was explained by this variable.

2. The Role Stagnation decreased with increase in the Achievement Motivation and 12.6 percent of variance in RS was explained by this variable.
3. The Role Expectation Conflict decreased with increase in the Achievement Motivation and 20.1 percent of the variance in REC was explained by this variable.

4. The Role Erosion decreased with increase in the Dependency Motivation and 11.6 percent of the variance in RE was explained by this variable.

5. The Role Isolation decreased with increase in the Dependency Motivation and 10.9 percent of variance in RE was explained by this variable.

6. The Personal Inadequacy decreased with increase in the need for Control and increased with increase in the need for Influencing. Almost 21.1 percent of variance in PI was explained by these variables.

7. The Role Ambiguity decreased with increase in the Achievement Motivation and 15.9 percent of variance in RA was explained by this variable.

These findings are evident of the role of Achievement, Control and Dependency Motivation in reducing the experience of role stress, whereas the need for Influencing through expertise increased the role stress.

With high Achievement motivation amongst academic managers, it was found that IRD, RS, REC and RA levels decreased. Achievement motivation is characterised by a concern for excellence, competition with
the standards of excellence set by others or by oneself, the setting of challenging goals for oneself, awareness of the hurdles in the way of achieving these goals, and persistence in trying alternative paths to reach one's goals. Academic managers with this motivation were found able to handle their multi-dimensional activities (IRD, REC, RA) and were not feeling stagnated (RS).

Control motivation is characterised by a concern for orderliness, a desire to remain informed, and an urge to monitor and take corrective action, when needed. It was found that with the need for Control Personal Adequacy amongst AMHEs decreased i.e. AMHEs did not feel inadequate and were less stressed due to their inner motivation.

It was observed that with Dependency need, REC, RE and RI levels of role stress decreased amongst AMHEs. The need for Dependence is characterised by a desire for help from others in one's own self-development, checking with significant others (those who are more knowledgeable or have higher status, experts, close associates, etc.), submitting ideas or proposals for approval, having an urge to maintain an "approval" relationship. This indicates that by being close to others and relying on others, AMHEs experienced less isolation (RI) and felt that there were less inner (RE) as well as outer conflicting expectations (REC).

Influence motivation is characterised by a concern to make an impact on others, a desire to make people do what one thinks is right, and an urge
to change matters and (develop) people. With Influence Motivation of AMHEs, the PI stress levels increased. It shows that with this need, AMHEs experienced that their personal knowledge is not adequate.

Harigopal (1979) and Ravikumar (1978) observed that Role Ambiguity was negatively related to job involvement and intrinsic motivation. Narayanan and Venkatachalaram (1979) found that organisational role stress and motivation was negatively correlated. Whereas, Khanna (1985) observed that the role stress levels were fairly low in the organisations where motivational climate and organisational effectiveness was high.

Pandey (1994) with his study on bank officers, concluded that Achievement, Expert Influence and Extension Motivational climates were found negatively and significantly associated with organisational role stress factors whereas Control, Dependency and Affiliation motivation were found positively associated with ORS factors.

The findings of the present study and the above mentioned studies, especially with the one carried out by Pandey (1994), indicates that there is a significant correlation between the motivational needs showed by academic managers and the role stress experienced by them. Hence, motivational analysis can be considered as an important behavioural factor, while studying the stress levels of AMHEs. Also, while selecting
academic managers, the motivational analysis can be used as an aid in their selection procedure.

6.10 Organisational Role Stress and Coping Styles:

Research has proved that there are varied coping responses to a stressful situation and several factors are involved, in the final manifestation of the specific coping response (Folkman and Lazarus, 1980). It was assumed that a specific coping strategy would help in handling stressful situations at higher educational institutions.

During the study it was found that majority of AMHE used Planning (77.1%, m : 9.96), followed by Positive Reinterpretation (68.7 %, m : 9.58), Active Coping (62.5 %, m : 9.35), Seeking Social Support for Instrumental Reasons (56.3 %, m : 8.69) and Acceptance (52.1%, m : 8.65).

Some of them do use other coping styles such as Suppression of Competing Activities (50.0 %, m : 8.13), Seeking Social Support for Emotional Reasons (31.3 %, m : 6.48), Turning to Religion (29.2 %, m : 5.96), Restrained Coping ( 27.1 %, m : 6.96), Venting Emotions (12.5 %, m : 4.71), Denial (8.3 %, m : 3.69) and Behavioural Disengagement (6. 2 %, m : 3.48)( see Table 5.78).

The correlation coefficient (Table 5.92) and the stepwise multiple regression analysis (Table 5.93) brought out following observations:
1. With Active Coping of academic managers, the RS, RI, PI and RA levels decreased.

2. The Planning Style of coping helped in reducing RS, RE, RI, PI, RA, and REC in AMHEs.

3. The Denial helped in lowering SRD levels of role stress in AMHEs.

4. The Suppression of Competing Activity helped in the reduction of RA among Academic managers.

Based on these findings, the coping styles that have emerged as most useful were Active Coping and Planning. Planning is thinking about how to cope with a stressor. It involves coming up with action strategies, thinking about what steps to take and how best to handle the problem. While Active coping, according to Carvier and Scheler (1989), is the process of taking active steps to try to remove or circumvent the stressor. It includes initiating direct action, increasing one's efforts and trying to execute a coping attempt in stepwise fashion.

Active coping and Planning style of coping are similar to what Lazarus and Folkman (1984) and others term as problem-focused coping. Koeske, Kirk and Koeske (1993) found that control oriented coping strategies were commonly used by the managers. The main functional coping strategies that have emerged from the study, namely, Planning and Active Coping, are control oriented strategies. With use of such strategies, academic managers may experience a sense of being in
'charge'. This finding can be of great help to those, who are involved in the training of the academic managers.

Another interesting finding of the study is about 'Denial' style of coping that leads to reduction in Self - Role Distance i.e. the conflict between the self - concept and the expectations from the role decreases by denial style of coping. Those using denial, would invite themselves to feel that they are not really facing any internal conflict. Thus, the low SRD scores obtained in academic managers, have much to do with their 'denial' of the internal conflict of their own needs and others expectation from the role.

From this analysis and discussion, it is visible that there is a close relationship between the role stress and two coping style adopted by the AMHE, namely, Planning and Active Coping. Hence, the hypothesis that the coping strategy used by the academic managers experiencing high role stress would, differ significantly from those with low stress levels stands true and two distinct coping styles were found that reduced role stress levels amongst academic managers.

6.12 Coping Strategies and the Health Status:

It has been proved that an appropriate coping style leads to adequate appraisal of situation and subsequent conservation of energy. It was assumed that individuals following healthy coping styles would enjoy better health status.
With the help of correlation coefficient (Table 5.93) and step - wise multiple regression (Table 5.95) following results were found:

Planning behaviour of coping was negatively correlated to mental disease symptoms. The neurotic symptoms decreased with increase in Planning style of coping and 12.2 % of variance was explained. From these findings, it is visible that ‘Planning’ behaviour of academic managers reduced the neurotic symptoms however, its association with physical disease symptoms was not clear.

Seeking Social Support for Instrumental Reasons was positively correlated to number of physical disease symptoms. Acceptance style of coping behaviour was positively correlated to the number of physical disease symptoms and 10.6 % of variance was explained. Denial style was also positively correlated to the number of physical disease symptoms.

‘Seeking Social Support for Instrumental Reasons’, ‘Denial’ and ‘Acceptance’ style of coping have shown to increase the physical disease symptoms amongst AMHEs. This finding indicated that though academic managers felt that they were coping very well with their role stress, they were, definitely, harming their body by coping behaviours such as “Acceptance”, which is an emotion - focused coping behaviour and also a “Denial” style of coping.
It has been proved by past research that Denial only creates additional problems unless the stressor can be profitably ignored. Denying reality eventually makes the things worse (Matthews, Siegel, Kuller, Thompson and Varat, 1985). Carvier and Scheier (1989) have stated that ‘Acceptance’ behaviour is useful in circumstances in which the stressor is such that must be accommodated to, as oppose to circumstances in which the stressor can be easily changed.

The academic managers have reported a high use of Acceptance style (52.1% of AMHE, Acceptance with m : 8.65) and though they find it useful in their work, it has a negative impact on their health status. Hence, there is a need to invite them to be aware of the relationship between coping styles and stress levels found in the study.

Summarily, it was found that role stress experienced by AMHEs at their work is high. It was strongly and significantly related to their mental and physical health status, coping behaviour such as ‘Planning’ and ‘Active Coping’, and personality factors such as ‘Hardiness’ and ‘Thinking’. The intrinsic stressors at work, such ‘Universities and Government Functioning’ along with the ‘General Administration’ at institution, strongly affected their levels of role stress. It was found that various factors contribute towards the experience of stress. The responses to stress are multidimensional.
6.12 The case-study presentation:

Two cases, a principal of a college and a head of university department, were studied in detail and the data obtained from the questionnaire and from the physiological test was taken into consideration for case analysis.

CASE STUDY I:

Mr. X, a 52 years old principal of three-streamed college in town, appeared as a very sincere, hard-working, conscientious individual and he took great interest in research procedure of the study. He felt that his task-focused attitude, his ability to concentrate on job and his belief in the mission of his institution helped him to cope very well with his job.

Mr X has been married for more than 20 years and has three children. He was very happy to share interesting "good old days" of his youth when he had graduated with M.Sc degree. He had twenty-one years of experience at educational institution, with five years of experience as principal of his college.

The Institutional Profile and Discussion:

Mr. X belonged to a well-established college, standing for last 21 years with three streams, namely, Arts, Science and Commerce. The staff strength was roughly 200 and the student-strength was more than
4000. Being a principal of a big institution, Mr. X reported of heavy load of work.

His cabin space was of 300 sq. ft, which was not adequate on the standards suggested by science of ergonomics, but for Mr. X, the kind of infrastructural facilities that were provided at his college were sufficient and it did not put any pressure or strain on him. He seemed non-perceptive of these requirements. While in his cabin, it was visible that he was least bothered about cabin being neat and well organised and probably, it had much to do with his personality make-up.

While reporting about stressors at his institution he emphasised on insincere teaching staff and incompetent non-teaching staff being the major cause of his stress, whereas students, for him, were not in any ways contributing to his stress levels. He mentioned that his main frustration at work was about lack of cooperation from his staff.

The government rules that delayed teacher appointments, certain policies that caused hindrance in staff appointments, delays in salary-grants and resource crunch at institution were the most impacting stressors, according to Mr. X.

Mr. X reported high organisational role stress (Total score: 135). High levels of role stress were RE, RO (18 on max 20) followed by IRD, SRD (16), least being RA (6). Whereas, high intrinsic job stressors were due
to staff (14), general administration (7), government (7) and university functioning (7).

He reported of having very healthy life style, however he showed very high number of physical disease symptoms (21), major being high blood pressure, aches and pains, fatigue and complaints about digestive track. He did not report any neurotic conflicts on the PGI health questionnaire (N : 6).

Mr. X exhibited Hardy personality (31) with type A behavioural pattern (105) and his personality type was computed to be ESTJ. ESTJs are generally, practical, realistic, matter – of – fact, with a natural head for business. They are not interested in subjects they see no use of, but can apply themselves when necessary. They may make good administrators, especially, if they remember to consider others feelings and points of view.

His highest preferential style of conflict management was 'Compromising' style, which indicated that he has a medium level of concern for both self and others and he takes a compromising stance with an attitude of 'give and take' and with willingness to share resources.

He showed high need for 'Influence' on his motivational analysis (25). which means that internally, he is concerned about making an impact
on others, also he has a desire to make people do what he thinks is right and an urge to change and develop people.

The coping strategies used by Mr. X were 'Seeking Social Support - Instrumental' (13), 'Active Coping' (11) and 'Positive Reinterpretation' (11) also the 'Acceptance' (9) and 'Planning' (9) styles of coping.

The coping style maximally used by Mr. X was Seeking Social Support for Instrumental Reasons, which means that he seeks advice, assistance or information to solve the problem from others. This style has been proved to fall in the category "problem - focused" coping style by Carvier and Scheier (1989).

The Active coping used by Mr. X indicates that he takes active steps to try and remove or circumvent the stressor. It includes initiating direct action, increasing one's efforts and trying to execute a coping attempt in stepwise fashion.

Mr. X also showed high coping with Positive reinterpretation and growth which is aimed at managing emotional distress rather than dealing with the stressor. Lazarus and Folkman (1984) regarded this tendency as a type of emotion - focused coping.

On the physiological stress tests Mr. X came across as a very stressed - out individual, experiencing stress in the performance - oriented tasks.
After Test : 137 / 94, Pulse Rate : 105). Whereas, on the Isometric Grip Test he showed less stress.

On the Heart Rate Variability test he showed 'sympathetic' type of personality indicating lower resilience (0.098 Hz) while handling stressful situations.

From the data stated above, the personality of Mr. X, somehow, stands more prominent than his environmental stressors. The personality factors such as Hardiness, type A and high extroversion, sensation, thinking and judgement factors of his personality, helped him to carry on the administrative tasks at his institution. However, the Compromising style and motivational needs do not help him while handling stress at work. His coping styles, such as 'Seeking Social Support - Instrumental', 'Active Coping', 'Positive Reinterpretation', 'Acceptance' and 'Planning' do help him sort out his problems at work. However, his health status indicated that his body is not able to cope with the behavioural patterns that works very well at job, needless to say that one needs to study situations and circumstances at his home, before concluding on any assumptions.

The data obtained on ORS dimensions indicate that the highest role stresses experienced by Mr. X were RE and RO dimensions followed by IRD and SRD. This finding points out that Mr. X feels that he is not doing the job that he would like to do (RE) and also feels overloaded with
IRD and SRD. This finding points out that Mr. X feels that he is not doing the job that he would like to do (RE) and also feels overloaded with work (RO). At the same time, he experiences contradictory expectation from others (IRD) and also his own value system does not tally with the job he performs (SRD).

**Suggestions**:

If the data obtained from this case-study was shared with Mr X, he would be able to understand his personal and environmental status along with his health issues and achieve awareness about his own functioning along with the requirements of higher educational system.

With counselling and awareness Mr X would be able to develop better coping patterns to deal with stressful situations at work, without having to suffer physically.

**CASE – STUDY II**:

Mrs. Y appeared as tired, flustered, grouchy and grumbling individual and she looked disinterested in the research procedures. She reported of being very stressed-out and burnt-out and felt that she was unable to cope well with her job at the university.

Mrs. Y was a 56 years old lady, married with one child, Head of University department, with an experience of twenty years in educational set-up. She has been head of the department for last fifteen years.
While reporting about stressors at her department, she emphasised on the impersonal approach of university authorities, insincerity amongst her teaching staff coupled with scarcity of resources, both human and financial.

**Institutional Profile and discussion:**

Mrs. Y worked for a well-established university. The staff strength was six and the student-strength of her department was 40 and she reported of a heavy load of work.

With a cabin space of 100 sq. ft, Mrs. Y did not feel comfortable and found the infrastructural facilities at department very inadequate.

Mrs. Y reported high organisational role stress (160, maximum being 200). High stress levels were observed on Rln, (20 on max 20) followed by IRD, RS, RO, (19), least being RA (7). Whereas, high intrinsic job stressors were due to staff (9) and university functioning (9) followed by general administration (8).

The lifestyle adopted by Mrs Y was not very healthy. She reported on high Commuting Stress and her diet did not help her in maintaining good health. High physical disease symptoms (23), and neurotic conflicts (N : 26) on the PGI health questionnaire were reported by Mrs. Y.
Mrs. Y exhibited a moderate Hardy personality (23) with type A behavioural pattern (104) and her personality type was computed to be ISFJ. In general, ISFJs are quiet, friendly, responsible and conscientious. They work devotedly, to meet their obligations and lend stability to any project or group. Though painstakingly accurate, their interests are usually not technical. They can be patient with necessary details. They are concerned with how others are feeling about them.

She used Collaborative Style of conflict management with high concern, both for the self and the other whereby she tends to approach the conflict situation with a desire to solve whatever problem exists, in a way that would benefit both parties. A 'win – win' stance is usually taken in such a case and the resolution of conflict results in a satisfying experience for both parties.

The other style of conflict management was Competing with high concern for oneself and a very low concern for others, whereby she takes a highly competitive stance and would approach the conflict situation from a 'I win – you lose' stance.

The motivational analysis showed high 'Influence' Motivation (20) which is characterised by a concern to make an impact on others, a desire to make people do what one thinks is right and an urge to change matters and (develop) people.
Mrs. Y used 'Active coping' (9) and 'Planning' styles (9) of coping which means that she tends to take active steps to try to remove or circumvent the stressor. She also initiates direct action and tries to execute a coping attempt in stepwise fashion. Whereas, while Planning, she is thinking about how to cope with a stressor and comes up with action strategies, thinking about what steps to be taken and how best to handle the problem.

On the physiological stress - tests, Mrs. Y came across as a very stressed out individual, experiencing stress in the performance - oriented tasks (Basal BP: 123 / 78, Pulse Rate: 85, After test BP: 146 / 85, Pulse rate: 95).

The Heart Rate Variability Test showed 'sympathetic' type of personality (0.045), indicating that she had low resilience while handling stressful situations.

From the data stated above, it is visible that Mrs. Y showed moderate Hardiness, type A and high Introversion, Sensation, Feeling and Judgement factors of her personality. She used Collaboration and Competing style of conflict management. The coping styles such as, 'Active coping' and 'Planning' seemed to help her at work.
Her health-oriented issues indicated that her body is not able to cope with the behavioural patterns that seem very useful at work.

The role stress dimensions expressed by Mrs. Y showed very high values, especially Rfn (20), IRD (19), RS (19), and RO (19) and the total ORS score was 160. This data indicates that she really feels that her work environment is very stressful.

Mrs. Y could be helped only if she is made aware of her personality patterns and her health status. Counselling would help Mrs. Y to effectively handle the stress at her work situation.

In conclusion, the findings of this study could be shared with all academic managers of higher educational institutions, for better academic management and institutional administration. Also, academic managers may need counselling to develop better coping patterns to handle stressful situations at work. A counselling – cell can be established at the Universities and colleges for better functioning of academic managers to develop a stress-free work-life ...

6.13 Summary:
From discussion and the data obtained, it is evident that academic managers do experience role stress. As evident from the results, role stress is associated with factors such as intrinsic work-stressors,
personality, health status, coping styles and other behavioural patterns. In order to get an insight into 'person - environment' interaction, two cases of academic managers were studied. It was found that there is a need to share this information and use the same in training programmes of AMHEs.

In conclusion, it is hoped that a deep insight and awareness of the higher educational system, personality and behavioural patterns would lead to stress management amongst academic managers.