Psychological factors affecting work performance in senior nursing staff

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PSYCHOLOGICAL FACTORS AFFECTING WORK PERFORMANCE

in

SENIOR NURSING STAFF

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ABSTRACT

This study is concerned with the relationships between factors which may affect work performance in senior nursing staff. In the main these factors are seen as those events and interactions in the work/home and social environment which cause stress.

The first section deals with some of the general literature regarding stress, coping and burnout. It then focuses upon research which has been carried out in specific areas of nursing.

Two cohorts of data were collected over consecutive years from senior nurses employed by five Health Authorities. The first study required participants to complete a questionnaire and the Cattell 16PF test. Forty three nurses took part in this investigation and Pearson product-moment correlations were computed to consider relationships between the variables.

The second study was carried out on a similar group comprising 89 nurses. The subjects were required to complete a questionnaire, the Cattell 16PF test, the Spielberger Anxiety Questionnaire, and the AH4 General Intelligence Test. Significant positive correlations were found between work performance, outside work activities, and personal behaviour patterns. In both investigations negative correlations between anxiety and intelligence were found.

To relate these statistical findings to individual experiences, in-depth interviews were conducted with six senior nurses in their work environment. These interviews revealed the stressful aspects of the nurse manager's role cited by many researchers. However, more positive views regarding work/home interaction were found.

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GENERAL INTRODUCTION

In essence nursing means caring for sick people which, in itself, generates a high degree of stress. The concept of stress is being increasingly employed as a popular excuse for a wide range of shortcomings and failures both in personal and professional life. It is however extremely difficult to clearly identify the causes and effects of such stress or even if it is responsible for an individual's problems. There is however no disputing the fact that every day the nurse is confronted with suffering, grief and death at a level exceeding that of other professions.

The people nurses deal with are themselves suffering from excess stress since patients often fear the hospital environment and associated treatment. They resent being ill and are often concerned about the people left in their home environment. According to work carried out by Hingley (1984) these fears are passed on to the nurse who often feels irritable and frustrated at her inability to cope.

In a recent project Hingley claims that nursing seems to have a high degree of inbuilt stress with resulting costs in personal suffering and impaired health. Of all professional groups nursing has one of the highest suicide rates and they are high on the list of psychiatric out-patient referrals.

This state of affairs can lead to a condition described as burnout. Burnout, according to Maslach (1976), is an individual's behaviour manifestation of inability to cope. This may happen frequently in nursing where work demands and stress exceed a person's endurance and result in a breakdown (Pines and Kafry 1978). The general state is one of physical and emotional exhaustion involving the development of a negative self concept and job attitude.

There seems little doubt that nursing does in fact expose those working in the field to an unusually high risk.

This project is centred around nursing sisters and managers engaged in these stressful activities in our contemporary society whose very nature seems to generate problems which are associated with stress and which affect performance. It may then be of value to commence this study by considering the ways in which the concept of stress has been used by various researchers.

Physiological responses to stressors were described by Hans Selye (1956) when he attempted to explain the reactions of the pituitary-adrenal axis to pathogenic insults. Selye observed that when rats were exposed to various environmental insults a common pattern of physical reactions emerged. These reactions were consistent and were independent of the type of insult the body encountered. Therefore Selye described these non specifically induced changes in terms of a General Adaptation Syndrome (GAS). This is a three stage process brought about by a specific stressor which stimulates a general mobilisation. Stage two leads to a phase of resistance which sets up internal responses that stimulate tissue defence. Finally, if the stressor continues to affect the organism despite these responses, then the third stage, which is one of exhaustion, is reached and the body loses its capacity to attack or defend. This model of somatic responses is well accepted in the stress literature (Lacey, 1967; Mason, Hartley, Mougey, Perlow and Jones, 1976).

Many such studies have isolated specific physiological changes which may be produced by stressful stimuli. Basically these models fall into two broad categories. There are studies on the physiological processes of various parts of the body such as cardiac function (Stevenson and Duncan, 1950) and mucous membrane secretion (Wolff 1948) together with work on

gastric function (Margolin, 1950). Some researchers have examined the relationship between stress and the onset of specific disease syndromes such as cardio-vascular disorders (Wolff, 1950), ulcerative colitis, (Grace, 1950) and glaucoma (Ripley, 1950). Generally these studies are not explicit in a scientific sense and tend to make implicit assumptions about stimuli and how they affect the organism. They suggest a mechanical model of stress whereby a load is placed externally on the organism and the internal responses are those due to the load.

Dohrenwend (1961) has isolated five basic sets of factors concerned with stress reactions. These are - 1) external stressors that throw the organism into an imbalanced state; 2) factors that alleviate the effects of the stressor; 3) the stressful experience itself, which is produced by the interaction of the stressor and the mediating factors; 4) the coping strategy of the organism; 5) the response of the organism which may be adaptive or maladaptive.

Considering the physiological responses to stress in more detail it appears that there are two levels at which responses may occur. There are local level responses which are early events involving inflamatory responses and alterations in blood flow in local tissues and organs. The other responses are at a systematic level involving the activation of the major control systems of the body i.e. the central and autonomic nervous systems and the endocrine system.

According to Frankenhaeuser and Johansson (1986), two neuroendocrine systems are of primary importance. One is the sympathetic-adrenal medullary system with the secretion of the catecholamines, adrenaline, and noradrenaline. The other is the pituitary-adrenal cortical systems with the secretion of cortisol. Both systems are controlled by the brain. A massive body of literature has accumulated over the past 25 years on both these systems. Mason (1968) reviews

the pituitary-adrenal cortical system and the sympathetic-adrenal medullory system research. He points out that pituitary-adrenal cortical activity is increased under conditions in which there appears to be an undifferentiated state of arousal, alerting or involvement, perhaps in anticipation of activity or coping. Mason also emphasises that the sympathetic adrenal medullary system is highly sensitive to the influence of psychological factors. His conclusions are based not only on the observations of stimulus-response relationships, but upon the quantitative correlations between the magnitude of catecholamine response and the intensity of observed emotional response. According to Mason, catecholamine levels appear to reflect relatively common psychological reactions associated with everyday events. As in the case of the pituitary-adrenal cortico system it appears that the central nervous system may exert an ongoing "tonicity" on catecholamine levels which reflect environmental and psychological factors.

Frankenhaeuser (1980) observed that relatively minor changes in the environment are reflected in adrenal secretion. Thus by measuring catecholamine and cortisol levels, the impact on a person subject to overload at work or underload at work can be monitored. Normally urinary estimates are more convenient for this type of research than blood samples, since they can be obtained in the office or factory setting.

Frankenhaeuser and Johansson (1986) report that a state of active effort is accompanied by increased catecholamine secretion, whereas a distressed helpless state is accompanied by increased cortisol secretion.

This approach to the stress concept is particularly applicable to situations which may arise in most work settings and may pre-dispose the individual to stress related diseases. A further comment made by Frankenhaeuser and Johansson (1986), cites personal control as an important factor. A lack of control is almost invariably associated with feelings of distress, whereas being

in control may prevent this distressed feeling. It follows then that personal control may act as a buffer and change the neuroendocrine balance.

Psychological models of stress tend to emphasize the cognitive interpretations of environmental conditions. The work of Richard Lazarus (1966) has been a great influence in this field. According to Lazarus, people appraise how threatening events are. This appraisal depends on personal and contextual features. Individuals will consider how stressful an event is, based upon past experience and knowledge of its costs. Another consideration will be the ease with which it can be avoided or coped with. An appraisal of no threat, for example, is more likely when the organism thinks the stressor marginal or short lived.

When an event has been appraised as worthy of a response, coping processes follow. Lazarus (1966) defines coping in a restricted way, implying it only applies to situations involving threat. Such an approach seems narrow and an earlier definition by Murphy (1962) seems to be more applicable. Murphy defines coping as an attempt to master a new situation that can be potentially threatening, frustrating, challenging or gratifying. The approach of Haan (1969) was to differentiate coping mechanisms from defence mechanisms on the basis of certain properties such as, coping is more flexible and reality orientated.

However Lazarus presents one of the best known interactionist explanations of the stress phenomenon. He sees the person with all his attributes both inherited and acquired interacting with the environment. Whilst recognising environmental stimuli, and the effect upon the reacting individual he emphasises that it is the nature of the interaction that is crucial. By this he refers to the nature of the construing of the perception which is all important, Lazarus takes issue with those who see stress as simply 'out there in the environment'.

Some investigators have asked individuals to respond to lists of life events and to indicate how they cope in general, or over the past few months.

Others such as Folkman and Lazarus (1980), and Stone and Neal (1985) have asked respondents to identify the most stressful event in their recent past and to describe how they dealt with it. The major problems with such life events lists are that they are forced to rely on retrospective data which are likely to be distorted.

The current dominant view of coping is that of a transactional process between individuals and their different environments. This view is based largely on the work of Lazarus and his associates and is supported by many laboratory experiments and field studies. Basically the approach considers the anticipation of possible harm or threat by the individual and the appraisal of the stimuli which has taken them out of a state of equilibrium. A primary appraisal might be, "Am I in danger - do I need to cope?" If the answer is yes then a secondary appraisal begins. This secondary appraisal considers the available response options and asks, "How effective would this response be, and what are its possible negative effects?" Personality traits may influence secondary appraisals and coping responses by affecting how the situation will be appraised. For instance, if social approval is not important to the individual then behaviour which is not socially approved may be evoked to cope with the situation. This emphasis on cognitive processes is central to Lazarus's view of coping.

Cognitive should not be equated with consciousness however, since the coper may not always be aware of the process. These cognitions add the crucial element of transaction between individuals and their environments according to Lazarus (1975), and so give rise to individual differences in behaviour.

Other explanations of coping have been postulated by researchers such as Mechanic (1970), who is concerned that the study of coping has focused on the individual at the expense of the social context. He suggests that an individual's coping mechanisms are linked to the values and institutions of the societies in which they live.

There is considerable controversy amongst researchers on how coping may be measured. Some investigators have considered coping as a dispositional trait or a preference to approach problems in particular ways such as denial. Others question whether or not coping is similar across situations and have chosen to study how people cope with different problems (Pearlin and Schooler, 1978; Folkman and Lazarus, 1980). The question of cross situational consistency is difficult to evaluate since relatively few studies have examined the issue. Gorzynski, Holland, Kalz, Weiner and Zumoff (1980) report significant stability in dispositional coping style among women awaiting breast biopsy; similar styles were recorded 10 years later. Stone and Neale (1985) and Pearlin and Schooler (1978), have reported that people are relatively consistent in the coping strategies they adopt to deal with the same problem on different occasions. However, Folkman and Lazarus (1980), have found little consistency across life situations such as coping with work stress or marital dissatisfaction.

Another area of disagreement is centred around the extent to which people are aware of their coping efforts. Many current conceptualisations of coping are based on the assumptions that people can accurately describe the coping strategies they use. This view has however been criticised by Horowitz and Wilner (1980), Haan (1982), and Ray, Lindop and Gibson (1982). These researchers found that coping efforts are not always deliberate or conscious and that indirect assessments of coping may be necessary. Since not many attempts have been made to investigate these possibilities it is difficult to comment on empirical evidence.

Attempts have been made as mentioned earlier to relate life events to psychological distress. Scales such as the Holmes and Rahe Social Adjustment Scale (1967) combine information about events into one overall measure of stress exposure. Variations of this scale have been widely used by investigators to explain health disorders. However the relationships documented are small, Rabkin and Strueing (1976) estimated that no more than 9% of variance in health

outcomes can be explained by life events.

Current research seems to favour the measurement of stress on a daily basis using the concept of daily hassles(Lazarus and De Longis 1983), minor life events (Monroe 1983) and chronic stressors (Eckenrode 1984). The trend seems to be from the relatively few studies so far reported, that such measures can more accurately assess stressful conditions than measures of life events and are better at predicting psychological symptoms (Stone and Neal 1985).

In recent years the idea of social support has been widely used to refer to mechanisms by whicn interpersonal relationships may offer protection from the deleterious effects of stress. Attempts to identify the components of such support ahve been made by House and Kahn (1984) and Wortman and Conway (1984). Their investigations concern the structured aspects of relationships, such as living arrangements, frequency of social contact, participation in social activities or involvement in a social network. There is general consensus in the literature that attempts should be made to assess several different types or components of support. According to Cohen and McKay (1984) different components have varying effects on different outcomes. A particularly serious problem of measurement is cited by Dohrenwend, Dohrenwend, Dodson and Shrout (1984). People who are experiencing distress may also judge their social relationships more negatively and this can contaminate self-report measures of stress.

A large number of coping strategies have been identified in the literature, such as active problem solving, information seeking, distraction, tension reduction and the use of humour. Although no specific strategy can be used to solve all problems the three most acceptable approaches according to Pearlin and Schooler (1978), are as follows:-

i) Altering the problem directly.

ii) Changing one's way of viewing the problem.

iii) Managing emotional stress aroused by the problem.

With so many alternative views on dealing with stress, coping and burnout, it is with caution that the writer ventures to add to this mass of literature. Therefore in an attempt to focus on a specific group, that of senior nursing, it may be of value to examine investigations carried out on stress and coping among nurses in general.

NURSING STRESS

The General Environment - Jacobson and McGrath (1983) consider the nurses work environment as one which imposes particular stress levels. Spaces too small for the number of people or the amount of equipment they hold, generally lead to frayed tempers. On the other hand spaces too large tend to waste staff energy by making them cover larger distances. Specialised hospital units may be located away from the major traffic areas to avoid disturbance. However this probably results in physical isolation of the staff and may ahve adverse psychological effects. Conversely some nurses state that they must pass through other wards to reach a destination because of the way the building has been planned. The most commonly expressed opinion regarding the environment in this current study concerned the problem of escaping from the scrutiny of patients or visitors for a few minutes.

The effects of noise have not been adequately investigated in terms of deaths or shortened lifespan. There are however well documented reports on the effect of noise on health related to the hearing loss that occurs when noise exceeds 75 decibels. Such noise can affect communication, impair performance of tasks, disturb sleep and be a general source of

annoyance (Noise Abatement Control 1971). A study by Turner and King (1975), found the average minimum noise level of a university hospital's intensive care and coronary unit to exceed 60 decibels. This low level was obtained around 4.00am whereas the maximum levels occurred between 1.00 and 7.00pm and reached about 90 decibels. This noise would be from a myriad of sources but there seems little doubt that the reduction of such noise would benefit staff and patients by lowering stress levels. Smells have also been identified as a stressor in a study by Jacobson (1978). Hospitals do stimulate the olfactory sense, there are the smells from cleaning products, excretia, infected wounds and various chemicals, all of which to some degree may be stressful.

Shift Rotation

In the majority of cases nursing care must be provided around the clock, and the question of whether this changing of work schedule constitutes a stressor must be asked. Despite the fact that shift work represents a major variable in work performance it has received little attention from investigators. Recently Milne and Watkins (1986), found the bulk of nursing articles dealing with the issue of shiftwork to be anecdotal. The scientific studies which do exist seem largely concerned with industry. These studies point consistently to increased sickness and reduced work performance as a function of shift work. This seems to be particularly true of rotating shiftwork (Rose, 1984).

Three empirical studies which deal with shiftwork amongst nurses are as follows:- Tasto, Colligan, Skjei and Polly (1978), reported on the results of 1200 nurses in the U.S.A. They found that rotating shift work was associated significantly with more physical and psychological problems than those on constant shifts. These problems included increased pains, nervousness, fatigue and general disruption of social and family life.

However, nurses who were low on neuroticism and who were satisfied with their work and shift schedule adapted best to shiftwork. It was not possible to separate the cause from the effect but a longitudinal study may well allow such inferences to be drawn.

A second study by Colligan, Frickt, and Tasto (1979), examined the effects of shiftwork on sick leave and frequency of work site clinic visits. They reported that nurses on rotating shifts were significantly higher on both counts than nurses on permanent shifts. Conclusions were drawn to the effect that nurses assigned to rotating shifts were prone to greater health problems than those on permanent shifts. These conclusions were irrespective of whether the nurse was on day, evening, or night shift.

The third study was conducted by Jamal and Jamal (1982), in Canada. They examined the relationship between shifts and factors such as work performance and mental and physical health. Their findings concurred generally with those of Colligan, Frickt and Tasto (1979) cited above, in that rotating shifts detrimentally affected work performance and health.

In the study by Milne and Watkins (1986), nurses working on a children's ward of a large general hospital were allocated to either fixed or rotating shifts. Those assigned to rotating shifts were treated as an experimental group, and those remaining on fixed shifts became the control group. Measures of stress, coping and strain were then administered to both groups before and after rotation. The assessment of stress was based on the Nursing Stress Scale (N.S.S.)(Gray-Toft and Anderson, 1981). This 34 item questionnaire uses a 4 point rating of the frequency of stressful events from "never" to "very frequently". Items include "conflict with doctor", "death of a patient", and "disagreement concerning the treatment of a patient."

Coping with stress was measured by the Coping Responses Questionnaire (C.R.Q) (Billings and Moos, 1981). This includes 19 items referring to the principle factors of active coping, e.g. "take things one step at a time" (cognitive), "try to find out more about the situation" (behavioural), "try to reduce the tension by smoking more" (avoidance).

The measure of strain was the short General Health Questionnaire, (Banks, Clegg, Jackson, Kemp, Stafford and Wall, 1980). This contains 12 items concerned with a broad range of mental health problems. Examples of these would be worrying, poor concentration, feeling under strain, feeling unhappy or depressed.

The results indicated that both groups reported similar amounts of stress. However, the coping measure indicated that there was an increase in avoidance strategies by both groups and a significant increase in active cognitive coping for the experimental group; they had utilized a better balance of strategies to cope with the slight increase in nursing stress. The main implication of the difference between the groups is increased strain in the control group.

Generally it seems that studies such as the one cited above indicate the complexity of making observations on stress, strain and coping strategies in just one small area of nursing. The difficulty seems to lie in the problem of deciding which outcomes are the result of which predictors.

This study does not concern itself particularly with the problem of shift rotation but the issue is important to the general effect on work performance. The sample of nurses participating in the present study is drawn from a broad cross section of senior nurses. It may well be valuable then to consider some of the stressors affecting work performance in some of their specialist fields.

Stress in the Psychiatric Field of Nursing

Most stress investigations seem to have been focused on nurses in the general physical health settings such as Intensive Care Units. However, nurses who work in mental health settings are as prone to stress as any other nurse. The literature shows that psychiatric nurses run the risk of poor mental health, psychosomatic disorders, alcoholism and drug abuse when stress levels rise. This may be equally true of other nursing groups but psychiatric nurses are particularly involved in these areas with patients and may identify with certain problems.

A study by Dawkins, Depp and Selzer (1985) attempted to quantify and rank order the stressors encountered by nurses who work in a public mental hospital.

The methodology adopted by Dawkins, Depp and Selzer, was similar to that used by Holmes and Rahe (1967) to quantify the relative stressfulness of job related events. In the Holmes and Rane procedure respondents compare each event with a commonly experienced event which is used as an anchor. An example would be to use "marriage" as the anchor event given an arbitrary value of 500. Respondents are instructed to assign a proportionately higher or lower number if they think the event requires more or less readjustment. The geometric mean of the respondent's stress estimates for each event is then calculated and divided by ten. Finally each event is rank ordered from most to least stressful.

The events that psychiatric nurses defined as stressful are similar to the events on the Daily Hassles Scale developed by Lazarus and De Longis (1983). They describe the irritating, frustrating, distressing demands and troubled relationships which plague nurses day in and day out. They do not make reference to the dramatic major events such as hospital closings which are occurring across the country. Lazarus and De Longis argue that

"daily hassles" are more useful than dramatic major events in predicting outcomes such as morale, psychological symptoms and somatic illness. They see the former as proximal measures of stress and the latter as distal measures. The investigators considered various items which may evoke stress, such as scheduling issues dealing with ways in which wards are covered when staff are absent. They also examined negative patient characteristics such as threats from patients. Items which are also stressful include giving injections in seclusion to kicking, struggling patients and working with suicidal patients. Events which tend to generate low stress are, according to Dawkins, Depp and Selzer (1985), associated with caring for terminally ill patients and experiencing a patient's death. This view is not however supported by work carried out by Davidson and Jackson (1985) concerned with stress induced in nurses by the long lasting psychological burden of having to cope with death and the dying. Their study will be discussed later in this introduction. Another area which proved to be average on a stress rating scale in the study by Dawkins, Depp and Selzer (1985) was that of staff performance issues. The one high stress item involved difficulties that occur when action is taken against incompetent staff. Moderate levels of stress were generated regarding inappropriate patient readmissions and working with staff who do not encourage patient growth. There also remains the problem that society still stigmatizes the mentally ill and holds mental health therapies and therapists in low repute. Therefore psychiatric nurses find lack of public confidence and low valuation of their work stressful.

A study by McCarthy (1985) considered burnout in psychiatric nursing staff at St. John of God Hospital, Dublin. Maslach and Pines (1977) identified increasing social complexity, changing expectations and the breakdown of the family and support groups as important contributory

factors. Research has shown that without exception the work environment in which burnout can be observed is highly stressful. Therefore in psychiatric nursing, the likelihood and degree of staff burnout are directly related to the severity of patients' illnesses (eg working with acutely disturbed patients, and working long and unattractive shifts such as night duty).

According to Ryerson and Marks (1981), nurses seem particularly prone to burnout because of the lack of preparation for coping with emotional stress. They are seldom taught to identify their own needs and they receive little or no training in interpersonal skills. Therefore many are unable to maintain their initial idealism and commitment to caring. Ironically it seems that the most dedicated and committed nurses are at the greatest risk of burnout because of the pressure on them to do well. An additional problem is that health care administrators are seldom trained in management skills and often fail to motivate and give positive feedback on work performance. In the study by McCarthy, 31 subjects completed the staff burnout scale for Health Professionals developed by Jones (1980). This is a 30 item questionnaire designed to measure the burnout syndrome as defined by Maslach and Pines (1977). The scale considers adverse cognitive, emotional, psychosomatic and behavioural reactions comprising the burnout syndrome. The results obtained were not significantly different from any of the other scores obtained in a series of studies on hospital based nurses carried out by Jones (1980). Although, as mentioned above, it would seem likely that nurses working with severely disturbed patients and those working on awkward shifts are prone to burnout, this was not supported by the findings of this study.

Stress and Job Satisfaction in Intensive Care Units

This area of stress in nursing has been studied thoroughly in recent years. Nurses in intensive care units face crisis on a daily basis and are

prime candidates for stress, job dissatisfaction and burnout. Jacobson (1978) surveyed Neo-Natal Intensive Care Unit nurses to determine which aspects of the work were perceived as stressful. The nurse in her study reported that the most stressful aspect of the job centred around moral and ethical problems. Sustaining the life of a badly deformed or brain-damaged infant often prompted questions about the worth of their work. They felt it was difficult to cope with the grief of parents under such conditions.

Nurses identified difficulties in professional relationships with physicians as another stressful area. Conflicts arose when nurses felt that physicians were encroaching on the nurse's areas of expertise or when physicians shifted their responsibilities onto overburdened nursing staff. (See Table 1).

Chronic understaffing of nurses in the Neo-Natal Intensive Care Unit (N.I.C.U.) aggravates the effects of these frustrations. Jacobson (1978) reported that one supervisor felt that inadequate staffing was related to all aspects of nursing stress and increased the nurse's sensitivity to all stressors in the N.I.C.U.

Lancaster (1976) assessed the type, frequency and severity of stress on the job. Her findings were quite similar to Jacobson's in some respects. The nurses sampled reported that admission of an out born baby (ie one brought onto the unit) at a busy time, when the unit was working to its limit, occurred frequently and was disturbing to the staff. The generally heavy work load and uneven distribution of staff over the 24hr day were considered mildly disturbing, as were problems related to working with house staff. Surprisingly, these nurses reported little difficulty dealing with parents or with the death of infants. The head nurse in the N.I.C.U. is in a critical position to moderate the development of burnout and job satisfaction in staff nurses. Job satisfaction can be defined as an individual employee's

TABLE 1

Thematic Categories of 52 Stressful NICU Incidents

	Category	No. of items in Category	Category % in Set
1.	Nurse's philosophical-emotional problems	14	27
2.	Nurse - Physician problems	11	21.1
3.	Understaffing and overwork	8	15.4
4.	Nurse - nurse problems	5	9.6
5.	Sudden death or relapse of an infant	4	7.7
6.	Insecurity about knowledge and competence	3	5.8
7.	Shock and impact of sights and smells	3	5.8
8.	Transport - (bringing babies from referring hospital to N.I.C.U.)	2	3.8
9.	Family responsibility vs work demands	1	1.9
10.	Bureaucratic/Political problems	1	1.9
	TOTAL	52	100

SOURCE: Adapted from Jacobson S. Stresses and coping strategies of Neonatal Intensive Care Unit Nurses, University of Minnesota 1976

Over 220 accounts of stressful experiences were collected from 87 staff nurses from seven NICU's in three north central states of America. The investigator and a panel of five expert neonatal nurse judges then selected a set of 52 incidents considered to be representative of NICU stress - (S. Jacobson 1976).

evaluation of the work environment. Smith (1963) proposed that job satisfaction was not the result of absolute positive or negative factors. He took the view that satisfaction was perceived from an individual's frame of reference. The individual's traits, needs, and experiences interact with the work environment to produce felt satisfaction or dissatisfaction with the job. Betz (1969) used a proposition from the theory of work adjustment, suggesting that satisfaction is a function of "correspondence" between individual needs and job reinforcers. He used this to predict satisfaction of store employees.

Herzberg (1959) developed a dual factor theory of job satisfaction. He suggested that satisfaction and dissatisfaction are distinct factors arising from different characteristics of the work environment. Specifically, the intrinsic elements of work itself, responsibility and achievement promote satisfaction, whereas the extrinsic factors, eg. supervision, salary, security, are related to dissatisfaction.

This model based on motivation does not however coincide with reports of job satisfaction from nurses. Cronin-Stubbs (1977), reported that supervision was related to both satisfaction and dissatisfaction of graduate nurses, and that recognition, presumably from supervisors, was related more often to satisfaction than to dissatisfaction. Both Longest (1974) and Everly and Falcione (1976), found that the "interpersonal relationships between staff and supervisor" factor accounted for the most variance in the set of satisfaction items derived by Herzberg, Mausner, Peterson and Chapwell (1959). Longest (1974) suggested that the high ranking of this factor results from long standing perception of staff nurse maltreatment by hospital administrators. It is however, the head nurse or sister/charge nurse who is the first line representative of these administrators.

As a manager, the head nurse controls the flow of information, represents nursing administration, and interprets and implements hospital policy. Decisions are made which affect the day to day activities of staff nurses, such as staffing and patient assignments. The head nurse can be the first line source of support but is also the first in line to receive complaints from staff.

The N.I.C.U. head nurse as a leader, finds herself dealing with many different people's needs and expectations. The senior nurse is often torn between incompatible roles according to Hay and Oken (1972). As a representative of management the head nurse must necessarily carry out policies of the central administration and make decisions which enhance the effectiveness of the N.I.C.U. At the same time he or she must support and defend the staff nurses from undue stressors, some of which may be created by management.

A study by Duxbury, Armstrong, Drew and Henlys (1983) was carried out on staff nurses in the U.S.A. employed in 20 N.C.I.Us drawing a final sample of 283 registered nurses. Three instruments were used in this study. The Minnesota Satisfaction Questionnaire (Weiss 1967) The Tedium Scale (Pines, Aronson and Kafry, 1981) and the Leadership Opinion Questionnaire, (Fleishman 1969). Pearson correlations were calculated to determine the perceptions of head nurse structure and consideration and staff nurse satisfaction and burnout. "Structure" indicates the degree to which the leader takes an active role in directing activities of the work unit by planning scheduling, criticising and monitoring. The results indicated a clear relationship between head nurse consideration and staff nurse satisfaction. Structure however showed no relationship to either satisfaction or burnout.

These findings support the previous suggestion of Fleishman and Harris (1962) that leader structure and consideration interact to affect the

behaviour and attitudes of subordinates. For job satisfaction the effect is similar in that the N.I.C.U. staff nurse satisfaction scores were lower in units where head nurse leadership style was perceived as low consideration - high structure.

Stress in Community Health Nurses

The general factors relating to stress in other aspects of the health service apply also to community nurses. However, few investigators have examined the specific stressors affecting the community nurse. One related study by Godfrey (1978) compares the job satisfaction of nurses in various work settings and speciality areas. It included nurses employed in community agencies but did not consider community health as a special area. Overall the current literature has little on community nursing as a special area of stress. There is no mention of heavy caseloads being a likely source of stress in recent textbooks, apart from a study by Goeppinger (1981).

In this study 36 practising community nurses were interviewed either individually or in small groups. They identified examples of the stressors they experienced and these stressors separated into two main categories. They were the characteristics of nursing practice and characteristics of the practice environment. Data in both categories were held to reflect interactions among personal characteristics of nurses, their adaptive capacities, nursing practice, and the practice environment. Characteristics of nursing practice involved stressors largely centred around patient-related stress. The problems involved in influencing the patient and/or the patient's relatives were seen as major causes of stress. Despite the nurse's professional status and expertise, advice was often ignored and this was stressful and frustrating for many community nurses. Many examples were cited in this study by Goeppinger, usually centred around conventions in the house which conflicted with the recommendations

of the nurse, e.g. bottle feeding routines and other child rearing practices.

Occasionally it was the nurse, and not the patient, who was unable to confront or manage a problem. One nurse for example, cited the mother who failed a Child Development Test. The nurse had asked the woman's pre-school children, "if a house is big, what is a mouse?" The mother answered proudly "a rat". The nurse then had to tactfully give the correct answer of "a mouse is little". The situation was, however, stressful for the nurse.

While acknowledging stress related to their powerlessness to change patients' behaviour, some nurses cited an even more basic stressor. In public health, the stressor is often that the patients are not there. Telephone numbers are found to be fictitious and addresses frequently do not exist. Many patients do not keep clinic appointments. Another patient-related stress arises from discrepancies between the patient's and nurse's values and perceptions of service needs. The nurses often feel pressurised to provide a service to the patients, and question why they have to work to maintain the standards of others who don't work so hard. Nurses also reported that changes in health care in the community were so slow that this caused stress. There seems to be little evidence of feedback which positively reinforces the nurse's behaviour and bad habits are difficult to break. One nurse in this study claimed that instead of being able to change the community, the community changed the nurse. Various aspects of the practice environment were identified as stressors. Collaborative relationships with professional colleagues and those with peers were especially problematic. There seemed to be a constant competition between patients, doctors and nurses in the findings of this study. They all seemed to think that their needs were the most important, and this tended to induce great stress in the system.

Inadequate supervision was also mentioned frequently as a source of stress in community nursing. This does not concur entirely with the points made earlier regarding stress in N.I.C.Us since Cronin and Stubbs (1977) did indicate that supervision was related to satisfaction and dissatisfaction. However, supervision in community nurses was seen as discontinuous, uninformed and problem orientated according to the data collected by Goepinger. Supervisors thought that administrative support from their superiors was inconsistent and often support was retrospective and depended on the outcome of a decision.

Stress reactions to trauma in nursing

Whilst the discussion in this study has focused on a variety of sources of stress in different areas of nursing, it may be useful to outline an area which is common to all nurses. The problems associated with death and the dying embrace all the caring profession departments. Exposure to death and the dying is one of the major causes of anxiety in hospitals (Grey-Toft and Anderson, 1981). Nurses have been found to confess to significant death anxiety, to avoid discussing it with a patient (Davitz and Davitz, 1975). They will defend against anxiety by concentrating on routines and rituals even though these coping strategies may have nothing to do with the patients for which they are caring (Quint 1967).

High levels of death anxiety may function as a significant antecedent to maladaptive coping with trauma. It might be that the decision to enter nursing could itself represent an attempt to cope with a pre-existing death anxiety. Although there is little evidence to support the view that nurses and doctors come from similar populations, some studies indicate that becoming a physician can be interpreted as an attempt to master death (Wahl, 1958, and Feifel 1967). Perhaps the motivation

to enter a medical career has its roots in seeking to overcome the fear of illness and death. This is attempted through education, socially approved contact with dying and death, and by doing so it is hoped to lessen the degree of helplessness experienced. However, research by Livingston and Zimet (1965), Kubler-Ross (1969) and Thomas (1980) indicates that some doctors commonly avoid contact with dying patients and it is the nurse whose professional duties place her in close contact with the dying. However, Todd and Still (1984) offer a conflicting view of the way doctors communicate with dying patients at home.

While superficially, many nurses appear to cope adequately with death, there are some who are far more susceptible, and who deal with death anxiety, and death related experiences by maladaptive means. There emerges often the incongruent situation where nurses and doctors with death fears of their own, must try to understand and accept death. They have to do this to enable them to communicate with dying patients. As Rheingold (1967) noted, the principal consequence may not be so much the distortion of insight as the avoidance of insight.

General considerations of stress in nurse managers

Cooper (1978) identifies two main directions taken by researchers examining the relationship of personality and stress. The first focussed on the relationships between various psychometric measures, the MMPI and 16PF in particular, and stress related diseases such as coronary heart disease. The second direction examined stress related or coronary prone behaviour patterns and the eventual incidence of the disease.

Sources of stress for the nurse manager vary widely. These may include working additional hours, taking work home and minimum opportunity for needed breaks. The sister or nursing officer is often affected by poor nurse-patient ratios. Staff nurses and other subordinates may verbalise their anger while the nurse manager must remain outwardly calm.

Patrick (1979) found that employees in positions of leadership often feel isolated from other personnel, for example, by the necessity to make unpopular decisions. The very nature of the organisational position the supervisor assumes promotes tension. In middle nurse management there are superiors and subordinates often making reasonable and unreasonable demands. According to Clark (1980), Nurse Administrators who believe that all demands are legitimate are heading for "burnout".

Epting (1981) wrote that "The best way to deal with stress is to eliminate or minimise the stressors." This does not seem a very practical or operational approach since the demands of the job cannot simply be removed. A holistic approach to decrease the potential for burnout would mean concentrating on one's own individual needs and weaknesses.

Most studies have concentrated on specific areas of work stress in hospitals and in particular Intensive Care Units (I.C.Us.). The current study has attempted to gain information on factors affecting work performance in senior nursing staff across a broad spectrum of nursing activities.

In a study by Kelly and Cross (1985) it was found that ward nurses tended to be more stressed and used fewer problem solving strategies than I.C.U. nurses. Although it emerged that the ward nurses had received somewhat more in-service training in stress management than had the I.C.U. staff. In spite of this training it seemed that the ward nurses did not cope as well as I.C.U. nurses. Perhaps the in-service education was not effective, and if this training continues to fail then perhaps there is a case for a closer examination of selection criteria for nurses. It may be necessary to include personality variables which might affect work performance. It seems that the I.C.U. is not unique in terms of high stress levels in spite of the massive impact high technology can have.

Research by French (1974) on Person-Environment Fit considers the attributes and abilities of the individual and examines the extent to which the person matches his environment. The basic notion is concerned with what adjustment is required to match the person to the properties of his environment. The environment makes demands on the individual, these demands may consist of role requirements. To meet these demands the person must have a supply and this supply is composed of the abilities and attributes of the individual. This approach is central to the interactionist explanations of the stress phenomenon such as that suggested by Lazarus

> "Stress refers to the broad class of problems differentiated from other problem areas because it deals with any demands which tax the system, whatever it is; a physiological system, a social system or a psychological system, and the response to that system." (Lazarus, 1971).

Lazarus emphasises that it is the way the individual construes the situation in the light of his personal constructs which is all important. The main tenet of the Person-Environment Fit argument supports this interactionist approach, and as mentioned above postulates a model based on the adjustment to be made by the individual to match him to the environment. Stress is likely to occur then, when a person's attitudes and abilities do not match the requirements of the job he or she is being asked to do.

Some definitions of stress have been discussed earlier in this introduction, for example, Lazarus (1966) saw stress as a state which arises when the adaptive resources of the organism no longer suffice to cope with the demands made. However, stress cannot be viewed in a totally negative way, as Selye has said -

> "Contrary to public opinion, we must not, and indeed cannot, avoid stress. We can meet it efficiently and enjoy it by learning about its mechanisms and adjusting

our philosophy of life accordingly." (Selye, 1956, p117).

Selye is suggesting that we need the stimulus to be successful, but the degree of stress which allows one to function successfully must be largely dependent upon individual differences. This study attempts to examine some of the complexities which may affect work performance in senior nursing staff. The research has largely concentrated on stress factors and how they may be regarded as major influences on performance. The literature on stress is an ever increasing mountain of possibilities, and the possibilities suggested here add to that quantity. However the writer hopes that, through this increase, suggestions have been made which may stimulate future research into individual differences, such as those in intellect and anxiety in senior nursing staff. The home life and work-life interaction has been perceived as being both supportive and detrimental to work performance. Most research such as that conducted by Hadley (1977) has considered the negative effects where over emotional involvement with patients can result in the nurse taking these problems home. The alternative problems arising from nurses taking domestic pressures to work, resulting in negative consequences, have been cited by Laube (1973). However, little research has been conducted in this area, particularly concerning the possibilities of positive interactions between home life and work suggested by some of the nurses in the current study.

An attempt has been made here to outline some of the investigations carried out on nursing stress, and the current thinking on some of these issues. It can be seen from this overview that most studies are centred around nurses in specific areas of nursing. The current study investigates factors which may affect the work performance of a specific population of senior nursing staff, namely those studying for the Further Education Teachers Certificate. Clearly this is not a random sample from all senior nursing staff, so any generalisations from this population must be treated with caution and based on its being representative. The group comprised Sisters,

Charge Nurses and Nursing Officers drawn from a variety of hospital departments and from community nursing. The investigations were carried out over two years using different subjects. The first stage was a pilot study which commenced during the 1984/85 academic year, and the final stage was carried out during the 1985/86 academic year.

It appears that traditional models of stress and coping tend to simplify a complex process. Problems have been cited regarding objective measures and the establishment of causal relationships between variables. There is a perceived need for a broad, diverse approach to the identification of psychological factors affecting work performance.

The aim then in this project is to combine information gathered from questionnaires in an attempt to identify events and behaviour which relate to each other and may affect work performance. It is appreciated that personality, anxiety levels and intelligence may also have a bearing on the problem and standardised tests are used to measure these variables. To broaden the scope, further qualitative data derived from interviews with subjects are combined with the other measures in an attempt to bring out elements of social support and work life/homelife buffering effects. By adopting this multi-directional methodology, it is hoped to explore the impact of some factors which may affect work performance in a holistic way.

CHAPTER TWO

CHAPTER TWO

FIRST STUDY

INTRODUCTION

The literature mentioned so far has dealt with stress factors which may affect nurses in their various hospital departments. The first stage of this study attempted to identify factors across a broad spectrum of senior nurses who were brought together to study for a City and Guilds Further Education Teacher's Certificate during the 1984/85 academic year.

The course operates on a day release basis and seven groups in the Northern Region of England were held each week. Members of this course are selected from senior staff who have a teaching function as well as a hospital middle management role.

The main aim of this first study was to examine and identify some of the stressors in the work role and in the general lifestyle of the individual and to observe their relationship to work performance.

METHOD

Permission to carry out the study was first obtained from relevant Health Authorities in the Northern Region. Nurses were asked to complete a nine item questionnaire. Seven of these items (Q2-8) were expected to predict variations in the first item (Q1), which was the subject's self-assessment of work performance. They were also expected to predict variations in the final item (Q9) which was the subject's view of how a senior would assess his or her performance. At this particular stage of the study it was not possible to obtain a direct assessment of the subject's performance from their seniors.

Measures of personality were also recorded using the Cattell 16PF Test, along with the subject's attainment grade on the F.E. Teacher's course they were taking.

SUBJECTS .

The 43 subjects in the first study were all members of the nursing profession studying on a day release course leading to the City and Guilds Further Education Teacher's Certificate. Only 7 of these were male, reflecting bias towards larger numbers of female nurses in the profession. The subjects were Sisters, Charge Nurses or Nursing Officers and all had a management function as well as their duties towards patients. Individual ages were not available for these subjects but their ages ranged between 26 and 51 years. They were distributed over the hospital departments and community health shown in Table 2 below.

TABLE 2

Employment location of Subjects

AREA OF NURSING	NO. OF SUBJECTS
Health Visiting	3
Community Nursing	3
Midwifery	3
Intensive Therapy Unit	5
Cardio Thoracic	2
Operating Theatres	6
General Wards	9
Infection Control	1
Psychiatric Nursing	4
Hospice	1
Accident and Emergency	2
Geriatric Nursing	3
Renal Unit	1
TOTAL	43

Each subject had undertaken the normal student nurse training programme, and obtained registration as either a State Registered Nurse (S.R.N.) or Registered Mental Nurse (R.M.N.). All had taken some post basic qualification beyond this initial training, and had been promoted to their present positions from staff nurse duties. This sample then, referred to a specific occupational group and it was not expected to generalise on any outcomes from the project. Participation in the project was optional in that no pressure to participate was exerted and a sound rapport was established between the subjects and the investigator.

MEASURES

A nine item questionnaire was drawn up which asked the participant to respond to questions on the following, by ticking the appropriate box (See Appendix 1A).

Q1 - Self assessment of work performance

Q2 - Days absent from work over the past two years

Q3 - Problems in home life over the past two years

Q4 - Problems connected with work over the past two years

Q5 - Membership of groups or societies

Q6 - Personal behaviour patterns

Q7 - Reaction to stressful situations

Q8 - Reaction staff development courses

Q9 - Assessment of seniors assessment of subject's work performance.

Q1 was asked in an attempt to obtain a self evaluation of the subject's work performance. No standardised formal staff appraisal system existed, therefore responses must be prone to a high level of subjectivity. Q9 also attempted to obtain a measure of the subject's work performance by asking the subject to estimate how their senior might grade their performance.

Q2 required the subject to state the number of times absent through minor or major illness. This was an attempt to compare absenteeism with work performance. If a person is absent from work through a major illness for 'x' days, then the implications may be different for someone who is absent for the same number of days spread over the period, for minor reasons. Ideally, an official record of absenteeism would have been used but none was available.

Q3 was asked in an attempt to obtain information on the extent of personal stress in the subject's home life. It considered marriage breakdown, death of a relative and major problems with children. It was thought that these facets of home life may have some effect on work performance.

Q4 it was thought, may predict how problems would affect work performance. Dissatisfaction with role, major conflict with seniors, subordinates, peers, lack of promotion prospects and anxiety of one's ability to cope with the job were considered.

Q5 prompted the subject to list types of outside work activities they were involved in, e.g. societies, clubs or organisations. It was predicted that subjects may use such distractions as a means of coping (Mechanic 1970).

Q6 considered the extent to which the subject engaged in personal behaviour patterns. It attempted to obtain information regarding the ways in which people may relieve tension by individual coping strategies.

Q7 asked subjects to respond to the question of what they do when confronted with a stressful situation. A number of options were presented and it was hoped to collect information regarding the way subjects reacted under pressure. Some people may feel aggressive towards the source of the problem, some try to blame someone or something. Others tend to feel inadequate and blame themselves, whilst some simply enjoy the challenge.

Q8 required subjects to consider how they were affected by staff development courses such as the Further Education Teacher's Certificate they were currently undertaking. It was hoped to gain information regarding whether staff development courses helped the subject to cope more effectively at work, whether the increased stress caused the subject to cope less effectively or whether staff development courses have little effect on work performance.

Q9 asked the subject to assess how their senior might assess their work performance. Since Q1 asked the subjects to appraise themselves, Q9 was aimed at reducing some of this subjectivity. It is however appreciated that this response is also subject to the participants own bias on how she/he perceives her/his seniors assessment of her/him. It is in fact a meta-perspective view according to R.D. Laing (1967).

Another measure recorded was the grade the participant reached on the course they were currently studying for. This was given on an 8-point scale, 1 being high and 8 low with respect to performance. It was hoped to gain some extra indication here of performance to compare with other measures on the questionnaire outlined above.

The scores on the questionnaire were assessed to comply with this 8 point rating scale e.g. a low score refers to a questionnaire response which indicates a stress alleviating action, whereas a high score represents activity which is less effective at doing this. This direction of scoring is common to both the devised questionnaires used in this project. To obtain a more sensitive measure regarding where a particular response is placed on the scale, the responses to these short questionnaires were discussed with the subjects individually. On the basis of these discussions the response was interpreted in terms of the 8 point scale.

In order to gain an overall general personality profile of each subject the Cattell 16 Personality Factor Questionnaire was administered. This test

is objectively scorable and is based upon some 30 years research. It provides a broad coverage of personality in a short time and rests upon measurement of 16 functionally independent and psychologically meaningful dimensions, (see Appendix 2A).

PROCEDURE

The subjects attended the course they were taking over a period of 34 weeks on a day release basis. They were split into 5 groups located at Newcastle General Hospital, Sunderland District General Hospital, Earls House Hospital Durham, Queen Elizabeth Hospital Gateshead and Preston Hospital North Shields. It was explained to each group that participation was voluntary and did not constitute any part of the course they were taking. It was also stressed that all information would be treated in strictest confidence and that no person or persons would be identifiable in any subsequent report. However, it was necessary to identify individuals on the different tests for the purpose of comparing their scores. This was achieved by assigning names or numbers or any mark of identification which remained constant over the period of investigation. Care was taken to ensure that the same instructions were given to each group. All subjects were reassured that they would remain anonymous.

The questionnaires were administered and each item talked through with the group and the investigator so that all subjects interpreted the items in the same way. Questions were raised and discussed regarding the items. No time limit was given for the return of the questionnaire and 43 out of 62 were successfully completed and returned in June 1985.

Each questionnaire was then scored on an eight point scale which concurred with the City and Guilds method of course assessment e.g. 1/2 Distinction, 3/4 Credit, 5/6 Pass, 7/8 Fail. The results were recorded for each participant.

The 16 P.F. Questionnaire was explained to the groups and administered according to the test procedure specified in the test handbook (see Appendix 2A). Forms C and D of the 16 P.F. test were used to provide a profile and they were hand-scored using the test score template. The raw scores obtained were converted to STEN scores to enable the test profile to be drawn up for each subject (see Appendix 3A). thirty subjects completed the 16 PF test in their first study.

RESULTS

The raw scores of the 43 subjects who completed the questionnaire are shown in Table A (Appendix 1B). Scatter plots were drawn up for the relationships between the variables to check the suitability of the data for product-moment correlations. A clear linear regression may not be apparent in some cases, and it can be seen from Appendix 1C that some of the extreme scores may greatly affect the value of the correlation. This could be due to outliers, failure to use the full range of the scale, or bimodal use of the scale. Thus the correlations need to be treated with caution, but individual correlations seemed preferable under the circumstances to a more global multiple regression analysis. For with individual correlations it is possible to make allowance in each case for the particular departure from normality or linearity noted in the scatter plot. A multiple regression would gloss over such details to the detriment of accuracy in assessing the results. With the above cautions, product-moment correlations were chosen rather than rank correlations for, as Cohen and Cohen (1983) point out, rank correlations "are of no significance when computers are used, because whatever formula for r the computer uses will work when variables are ranked. It is obviously not worth the trouble to write special programs to produce these special-case versions of r." (Cohen and Cohen, 1983, p40).

Pearson product-moment corrrelations, applying a two tailed test of significance, were computed for all the questions and these are shown in Table 3. The second study reported later, forms a partial replication of the first, and therefore provides a check and a safeguard against any chance correlations obtained here. this is also checked by carrying out a test of the significance of the actual number of correlations obtained, using the graphs provided by Sakoda, Cohen and Beall (1954). It can be observed that the greatest correlation is between Q5 (Outside Work Involvement) and Q6 (Coping Strategies). A correlation of $r = .57$ ($P<.01$) was found for this relationship and the scatter plot is shown at Fig.1 (Appendix 1C).

A correlation of $r = .47$ ($P<.01$) was obtained between Q2 (Days Absent) and Q1 (Self Assessment of Work Performance). The scatter plot for this relationship is shown at Fig.2 (Appendix 1C) and it will be seen that a majority of subjects score 1 on Days Absent, and 4 on Work Performance.

TABLE 9

Correlation Matrix for all the Questionnaire Variables First Study

N = 43 DF = 41

For a two tailed test: r> .3008 is significant at the 5% level,
r> .3887 is significant at the 1% level.

VARIABLE	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	C&G
Q1 Self Assessment of Work Performance	1.0000									
Q2 No.of Days Absent	.4769	1.0000								
Q3 Problems in Homelife (Anxiety)	.1573	.1704	1.0000							
Q4 Problems at Work (Anxiety)	.1865	-.0093	.3090	1.0000						
Q5 Membership of Groups, Clubs etc.	.2508	.2274	.2660	.3366	1.0000					
Q6 Personal Behaviour Patterns/Coping Strategies	.0285	.0657	.4806	.3270	.5700	1.0000				
Q7 Reaction to Stressful Situations	.389	.1689	.0652	.1716	.0758	-.1859	1.0000			
Q8 Reaction to Staff Development	.0627	-.0706	.1444	.2727	-.0232	.1020	-.0289	1.0000		
Q9 Projected seniors Assessment of Work Performance	.1742	.1531	-.0687	.3521	.1095	.1244	-.0090	-.0181	1.0000	
City & Guilds Grading	-.1658	.0267	.0468	-.1482	-.2000	-.0197	-.0755	-.1202	.0095	1.0000

There were 7 out of 45 correlations significant at the 5% level and the chance of obtaining this number under the null hypothesis of no association between the statistical population studied is less than .01 (Sakoda, Cohen and Beall, 1954). However, some of these correlations are not independent, i.e. those involving the triads Q3, Q4 & Q6 and Q5, Q6 & Q4. Assuming one of the correlations from each of these triads is dependent on the other two, we are left with 5 significant correlations in all, which is still significant at the 5% level.

A correlation of r = .48 (P<.01) was found for the relationship between Q3 (Anxiety in Homelife) and Q6 (Coping Strategies). The scatter plot for this correlation is shown at Fig.3 (Appendix 1C) and here the pattern of scores is bunched towards the lower points, but otherwise reasonably spread out.

Q9 (Seniors Assessment of Work Performance) and Q4 (Work Anxiety) gave a correlation of r = .35 (P<.05) and the scatter plot is shown at Fig.4 (Appendix 1C). A high proportion of subjects scored 3 on the Work Performance question.

Q5 (Outside Work Involvement) and Q4 (Work Anxiety) gave a correlation of r = .34 (P<.05) and the scatter plot shown at Fig.5 (Appendix 1C) gives some indication of the pattern of this relationship. It can be noted that many subjects scored 1 or 2 on Q5.

A correlation of r = .33 (P<.05) was found for the relationship between Q4 (Work Anxiety) and Q6 (Coping Strategies). The scatter plot for these variables is shown at Fig.6 (Appendix 1C). A high incidence of subjects scored 1 and 2 on Q4.

Q3 (Anxiety in Homelife) correlates with Q4 (Work Anxiety) giving a value of r = .30 (P<.05). The scatter plot shown at Fig.7 (Appendix 1C) indicates a high incidence of subjects scoring 3 on Q3.

Table B (Appendix 1B) shows the STEN scores for intelligence and tension as measured by the Cattell 16 PF Test. A correlation of r = -.52 (P<.01) was found and the scatter plot for this relationship is shown at Fig.8 (Appendix 1C).

DISCUSSION AND COMMENTS

FIRST STUDY

From these results the following tentative conclusions can be drawn:-

1. Those who are members of a group or society tend to have better coping strategies than those who are not.. One might anticipate such a relationship since many coping strategies involve membership of some organisation (Pearlin and Schooler, 1978).
2. Nurses who are frequently absent from work tend to have a lower opinion of their work performance than those who regularly attend.
3. Those nurses who have anxiety in their home lives tend to have poorer coping strategies than those with more stable home lives.
4. Greater self assessed work performance is associated with better perceived ratings by a senior. There are however many uncontrolled variables which may produce such outcomes. Consider for instance, the complexity of the tasks performed by the worker. Investigations by Sarason (1960) and Spence and Spence (1966) have shown that in general, high anxious subjects learn a simple conditioned response to a task more rapidly than low anxious subjects. They found that on more complex tasks, however, high anxious subjects normally do less well than low anxious subjects. Pressure of any kind, such as interrupting the task to report that the subject is doing poorly, or giving ego-involving instruction implying that the task is an indication of intelligence, tends to depress the scores for high anxious subjects but raises the scores for low anxious subjects.

5. High work anxiety goes with a high score on coping strategies.

6. There is a positive correlation between work anxiety and anxiety in home life, a relationship which one might expect. In some situations a subject may use work as a coping strategy for problems at home. Others may use the home as a buffer against problems and stress at work.

7. A strong negative correlation was found between intelligence and tension as measured by the Cattell 16PF Test. This suggests that subjects with low intelligence scores are more likely to be tense and anxious than subjects with high intelligence ratings. This study is restricted to senior nursing staff and it may be that nurses with high intelligence scores are capable of adopting more successful coping strategies than those with lower intelligence scores.

Summarising these points the typical senior nurse is a person liable to considerable stress. Thus he/she is likely to develop anxiety at work and this is associated with the belief that they are given poor assessments by a senior. This is especially the case where the nurse is less able intellectually. A satisfactory home life reduces this anxiety and he/she copes further with it by belonging to a group or society.

This first study has attempted to identify and measure some of the factors which may affect work performance in senior nursing staff. Some suggestions have been made regarding why certain factors relate to each other. Armed with the outcomes of this investigation, it was possible to progress to the second study on a larger sample, making some modifications.

Itèms in the first study questionnaire which had not shown significant relationships with other variables were eliminated. These were:-

Q8 - Reaction to Staff Development

Q7 - Reaction to Stressful Situations

C&G - Course Grade

Consequently a 5 item questionnaire was drawn up, together with a separate assessment of work performance to be completed by the subject's immediate senior. This separate assessment was an attempt to avoid possible bias in self assessment which may have affected the first study outcome. More specific measures of intelligence and anxiety were used in the second study.

CHAPTER THREE

CHAPTER THREE

SECOND STUDY

INTRODUCTION

In the first study various predictors were tested to examine their effect on the outcome of work performance. Some of these variables correlated significantly with each other in the ways already commented upon. In the light of the findings of this first study it was decided to change the questionnaire and the way of assessing work performance. Ideally, to assess work performance it would have been useful if a standardised system of staff appraisal had been employed in hospitals. However, some Health Authorities carry out staff appraisal procedures and others do not. Difficulties also exist in obtaining access to this confidential data.

In view of the significant negative correlation obtained between intelligence and anxiety on the 16PF test (see Fig.8), the relationship between the two variables was examined further. This was done by using a standardised anxiety test and a standardised intelligence test.

METHOD

The second study was carried out on a population of senior nurses similar to those in the first study. This collection of senior nurses was again comprised of staff who were undertaking the City and Guilds Further Education Teachers Certificate, on the same basis as those tested in the first study. These studies were undertaken during the 1985/86 academic year as a direct follow up of the first study.

The aim was to refine instruments used in the first study and build upon the information gained, modifying in the light of experience.

It was hoped to pursue further the psychological factors affecting work performance in senior nursing staff. In order to examine qualitatively the aspects which may affect work performance, interviews were conducted with a random sample of the participants. This afforded an opportunity to compare and contrast findings of both a qualitative and quantitative nature.

SUBJECTS

There were 89 subjects involved in this second study. As in the first study they were all members of the nursing profession studying on a day release course leading to the City and Guilds of London Further Education Teachers Certificate.

10 of the 89 subjects were male, reflecting the strong bias towards females in the nursing profession. Basically the characteristics of the group were similar to the sample described in the first study in that all were nursing sisters, charge nurses or nursing officers. They had a teaching and a managerial role, as well as their duties towards patients, and their ages ranged between 23 yrs and 56 yrs. Individual ages were obtained for this group of subjects.

Normal training requirements for nursing sisters and charge nurses had been adhered to and all were registered either S.R.N. (State Registered Nurse) or R.M.N. (Registered Mental Nurse). Post-basic qualifications among the group were varied according to their specialism in the nursing field. Therefore the sample was as similar as possible to that in the first study. Again the investigations were carried out on a specific occupational group and it was not intended to generalise on any outcomes of the study.

Subjects were distributed over the hospital and health service departments as shown in Table 4.

TABLE 4

Employment location of Subjects

AREA OF NURSING	NO. OF SUBJECTS
Health Visiting	5
Community Nursing	9
Midwifery	7
Intensive Therapy Unit	9
Cardio Thoracic	5
Operating Theatres	7
General Wards	15
Psychiatric Nursing	11
Accident and Emergency	2
Geriatric Nursing	9
Nurse Training	1
Renal Unit	3
Gynaecology	5
Special Care Baby Unit	1
TOTAL	89

MEASURES

A questionnaire was drawn up which consisted of Question A, on a separate sheet. This was an assessment of the subject's work performance as viewed by their immediate senior. (See Appendix 4A). The subjects were assessed on a five point scale ranging from poor to excellent. The assessor was also asked to indicate whether the participant was performing at a level lower than potential, equal to potential, or beyond expectations.

The second part of the questionnaire, to be completed by the subject, contained only 5 items instead of the 8 in the first study. Items in the first questionnaire which had not shown significant trends had been eliminated. It was also thought that with the elimination of the C&G course measure,

the grading scale could be reduced from 8 to 5, since it had been the C&G measure which had determined the 8 point scale. The five questions were as follows:-

Q1 - The degree of absence from work over the past two years.

Q2 - Problems connected with home life over the past two years.

Q3 - Problems connected with work over the last two years.

Q4 - The degree of commitment to outside work activities.

Q5 - Personal behaviour patterns which may relieve tension.

Question 1 was an attempt to estimate how absences may affect work performance. It was noted that days absent correlated with the subject's self assessment of work performance in the first study (Fig.2).

Question 2 required the subject to indicate the severity of home life problems over the past two years. Fig.3 in the first study indicates a positive correlation between Anxiety in Homelife and Work Anxiety. Fig.7 shows a positive correlation between Anxiety in Homelife and Coping Strategies. It was thought advisable to pursue these effects in the second study.

Question 3 is concerned with problems connected with work and dissatisfaction with role. In the first study, Work Anxiety correlated positively with Outside Work Activities Fig.5, Seniors Assessment of Work Performance Fig.4, and Coping Strategies Fig.6. It therefore was thought important enough to pursue in the second study.

Question 4 required subjects to indicate their time commitments to Outside Work Activities. It was noted that in the first study (Q5) Outside Work Involvements correlated with Work Anxiety (Q4) - see Fig.5.

Question 5 was an attempt to investigate the degree to which personal behaviour patterns may relieve tension at work. This question correlated with Work Anxiety, Anxiety in Homelife and Outside Work Activities, Figs. 1, 3 and 6 in the first study. Therefore it was investigated further in this secondary stage.

Since the scores in the first study on the Cattell 16PF test showed tension and intelligence to be significantly negatively correlated (Fig.8) it seemed feasible to investigate this relationship further. To obtain a more specific measure of anxiety, subjects were asked to complete the Spielberger Anxiety questionnaire. This questionnaire measures Trait and State factors and is shown in Appendix 5A. Subjects also completed a standardised group test of general intelligence, the A.H.4, which may be used with a cross section of the adult population. There are two parts to this timed test, Part 1 which has a verbal and numerical bias, and Part 2 which asks questions which are centred around spatial and diagrammatic aptitudes. Test performance is expressed in terms of the total test score Part 1 + Part 2.

The Cattell 16PF test was administered to all subjects in the same manner as in the first study.

PROCEDURE

As in the first study the subjects attended the course they were taking over a period of 34 weeks on a day release basis. The five groups were again located at:-

Newcastle General Hospital

Sunderland District General Hospital

Earls House Hospital Durham

Queen Elizabeth Hospital Gateshead

Preston Hospital North Shields.

Each participant was reassured that they would not be identified in any report and that participation was voluntary. It was however necessary to identify subject's test results in some way, either by a number or name so that comparisons could be made on the various measures.

The second study questionnaires were administered and each item talked through with the group so that misinterpretation would be minimised. Part A of the questionnaire was separate and subjects were asked to approach their senior to obtain an assessment of their work performance. Seniors were requested to participate by the investigator and the purpose of the assessment was fully explained.

Questions 1, 2, 3, 4 and 5 were completed by the participants, and of the 89 participants, 66 of the questionnaires were successfully completed and returned in April 1986.

Each item on the questionnaire was rated on a five point scale which ranged from 1 being the least stressful as high score and 5 being the most stressful or low score. For example someone scoring 1 on QA and 1 on Q2 would have obtained a high work performance rating and was experiencing little stress in their home life. Whereas a subject who scored 5 on QA and 5 on Q3 would be poorly rated by his/her senior on work performance and would be experiencing severe problems in connection with their work. The scores obtained from the questionnaires were recorded. The only deviation from this 5 point rating was in the Part A of the questionnaire mentioned earlier, where the senior was asked to say whether the subject was performing lower, equal to, or beyond expectations. These ratings were also recorded.

As in the first study the 16PF questionnaire was explained to the groups of subjects and administered in accordance with the test procedure specified (see Appendix 2A). Forms C and D of the 16PF test were used

and the responses were hand scored. The raw scores thus obtained were converted into STEN scores to enable a personality profile to be drawn up for each subject. (see Appendix 3A).

The Spielberger Questionnaire was administered to each subject and this provided a measure of anxiety (STATE) and (TRAIT) (see Appendix 5A). These concepts are based on the assumption that individuals will exhibit both state and trait anxiety scores, depending upon the level of stimulation they are exposed to. The scores were obtained from the response sheets, using the scoring key, and recorded. It was hoped to arrive at a more comprehensive measure of anxiety by using this test and the 16PF measure used in the first study.

To obtain a standardised measure of General Intelligence the AH4 test was administered to all groups of subjects. Many current intelligence tests consist of problems involving only one bias and only one type of principle. The aim in the AH4 is to incorporate as many biases and principles as is consistent with a reasonably short test, and to include examples which are illustrative of all the principles found in the test proper.

The time limit for each part of this two part test is 10 minutes, exclusive of the preliminary examples and the test instructions were strictly adhered to as specified in the test procedure handbook.

A good rapport already existed between the tester and the groups being tested and subjects were neither hurried nor helped as they completed the questionnaires. The rationale of the test and its function in this particular piece of research was explained to the groups prior to testing. Instructions were given at a pace which suited the slowest members of each group and care was taken by the tester to ensure standard test conditions.

In addition to thest quantitative tests, some qualitative data was obtained through interview. Interviews were arranged and carried out with

six subjects randomly selected. These interviews were carried out in the work area of the subjects and were not narrowly structured, so that broad issues, if raised, could be recorded.

RESULTS

The raw scores of the 66 subjects who completed the questionnaire are shown in Table C (see Appendix 2B). Scores for the 89 subjects who completed the Spielberger Anxiety Test, the AH4 Test, and the Cattell 16PF Test are shown in Table D (see Appendix 2B).

From these scores Pearson product-moment correlations were computed. Table 5 shows the correlation matrix for all the variables measured, including age. Since the directions of the relationships are predicted except for age, a one-tailed test of significance was applied.

It can be seen from this matrix that Q4 (Outside Work Activities), correlates with QA (Work Performance) giving $r = .24$ ($P<.05$).

The correlation between Age of subjects and Q2 (Homelife Problems) was $r = .32$ ($P<.01$). This is shown in Table 5 and suggests that problems in home life increase with age.

A correlation of $r = -.26$ ($P<.05$) was found for Age and Q4 (Outside Work Activities), suggesting that as age increased so do outside work activities; (since a high score on the Q4 scale indicates low involvement). Q4 (Outside Work Activities) correlates at $r = .28$ ($P<.05$) with Q5 (Personal Behaviour Patterns).

Also indicated in Table 5 are the correlations obtained by the measures of anxiety and intelligence. A correlation of $r = .25$ ($P<.05$) was found for Q3 (Work Problems), and PFANX. PF1Q and Q4 (Outside Work Activities)

TABLE 5

Correlation Matrix for all Variables Second Study

N = 65 DF = 63

For a one tailed test: r> .2208 is significant at the 5% level,
r> .2960 is significant at the 1% level.

VARIABLE												
QA	Work Performance	1.0000										
Q1	Absence from work	.0838	1.0000									
Q2	Homelife problems	.0245	.1469	1.0000								
Q3	Work problems	.1077	.0764	-.0426	1.0000							
Q4	Outside work activities	.2441	-.0180	-.0127	-.0654	1.0000						
Q5	Personal behaviour patterns	.1834	.1206	.0755	-.0782	.2840	1.0000					
ANXT	Anxiety trait	.1997	-.0245	.2033	.0974	.1564	-.1241	1.0000				
ANXS	Anxiety state	.2157	.0561	.1753	-.1286	.0699	-.2143	.5782	1.0000			
AH4	Test	-.0105	-.0609	-.0759	.0795	.0103	.1041	-.1961	-.2242	1.0000		
PFIQ	16PF Test	-.0914	.1061	.1744	.0824	.2673	.2197	-.0561	-.1988	.2279	1.0000	
PFANX	16 PF Test	.1855	-.0944	.1042	.2480	.0789	.0338	.3971	.1485	-.0378	-.0711	1.0000
AGE	Age of subjects	-.0808	-.0593	.3226	.0402	-.2642	-.1105	.0449	.0647	-.1970	.0103	-.1261	1.0000
		1. QA	2. Q1	3. Q2	4. Q3	5. Q4	6. Q5	7. ANXT	8. ANXS	9. AH4	10. PFIQ	11. PFANX	12. AGE

There were 10 out of 72 correlations significant at the 5% level and the chance of obtaining this number under the null hypothesis of no association between the statistical population studied is less than .01 (Sakoda, Cohen and Beall, 1954).

produced a correlation of r = .27 (P<.05). An expected significant correlation between ANXS and ANXT, of r = .58 (P<.01) was found and PFANX and ANXT correlated with r = .40 (P<.01).

It can be observed that intelligence and anxiety measures do not produce such large correlations as they did in the first study. However, a correlation of r = -.23 (P<.05) was found between ANXS and AH4. There was a small non-significant correlation of r = -.07 between PFIQ and PFANX. In view of these trends it was decided to combine the Intelligence measures and Anxiety measures and to examine the correlation of the combined scores. These combined scores were designated ANXSUM (sum of the anxiety measures), and IQSUM (Sum of the intelligence measures).

A Pearson product-moment correlation of r = -.22 (P<.05) was obtained between these variables.

A scatter plot is shown at Fig.9 (Appendix 2C) for this relationship and a slight negative linear regression can be observed. Extreme scores have had the effect of reducing the correlation coefficient but the general trend towards intelligence being negatively correlated with anxiety is apparent.

In response to the part of QA concerning whether the participant in the view of their senior was performing at a level equal to potential, lower, or beyond expectations, the following results in Table 6 were obtained:

TABLE 6

Levels of Work Performance

31% Lower than their potential
62% Equal to their potential
7% Beyond expectations

Comments made by the subjects themselves on the questionnaires seemed to support the view that the majority of the population tested were content to function in their present capacity. One might expect those who performed lower than their potential to show some frustration or else adopt effective coping strategies to compensate. It is possible that these subjects do not know they are working at a level lower than their potential in the view of their senior. It is often difficult to recognise potential in the absence of opportunity to exercise particular areas of competence.

DISCUSSION AND COMMENTS

SECOND STUDY

The correlation betwen QA (Work Performance) and Q4 Outside Work Activities) supports some of the findings of the first study, where work anxiety and outside work activities correlate significantly (see Fig.5 Appendix 1C).

The suggestion is made that there is a connection between work performance and the extent to which one may become involved in activities which may distract from the day to day stressors in the work environment. This view is also supported in the findings of the first study where work anxiety and coping strategies were found to correlate significantly, (Fig.6 Appendix 1C).

It is not suggested that whatever coping strategies the person adopts are a conscious adaptation to stress. According to Mechanic (1970), when a person conquers a stressor or learns to live with it, his or her responses become smooth and regular and can be enacted without particular awareness. The responses become reactions rather than actual thought processes. People can describe their coping best when they are in the throes of their inability to cope and this is indicated in more detail in Chapter 4 of this study concerning interviews with subjects.

The relationship between Age and Q2 (Homelife Problems) is understandable. Bearing in mind the age range of the nurses tested (23 to 56 yrs) it seems feasible that as the age of the subject increases, their commitment to home may increase. Problems may arise in the conflict between the work role and the home role. Coping with demands of both environments may become more difficult as one gets older. This may be particularly true of nurses, who are predominantly female, and who may cope quite well as young, single persons, but find the added responsibilities of home and family, together with work, more difficult to cope with as they get older.

The negative correlation between Age and Q4 (Outside Work Activities) suggests, as stated in the results, that as age increases, so does tendency to become involved in activities outside work. On first consideration it would seem that younger people would be more likely to get involved in outside work activities. However, on reflection in the light of the comments regarding age and home life problems, made above, it may be the case that as age increases, other activities outside work become more important for the age range of nurses tested, and their commitments to home may increase.

The correlation of Q4 (Outside Work Activities) with Q5 (Personal Behaviour Patterns) concurs with the findings in the first study regarding coping strategies and outside work involvement (Fig.1 Appendix 1C). This is an expected relationship since many outside work activities could be regarded as coping strategies or personal patterns of behaviour. Q3 (Problems At Work) related significantly to PFANX. This suggests that work problems are associated with anxiety, a relationship which one might expect. It would seem reasonable to assume that a nurse having problems at work would exhibit anxiety tendencies on a personality test.

PFIQ and Q4 (Outside Work Activities) correlated significantly as shown by the results in Table 5. The measure of intelligence obtained by the 16PF test is limited in that it constitutes only one of the 16 personality factors catered for by the test. However the AH4 test is designed specifically to measure intelligence and has a high level of reliability. The results of the AH4 test do not support the suggestion that outside work activities are related to the intelligence level of the individual.

The negative correlations between intelligence and anxiety were not significant in all cases, but in both the first and second studies, there is evidence that high intelligence is associated with low anxiety.

One possible explanation is that anxious subjects are less likely to do themselves justice when they take an intelligence test. The measurement then is distorted due to anxiety.

Spielberger (1966), studied the effects of anxiety on the academic achievement of college students. A group of high anxious and a group of low anxious students were selected by means of a questionnaire. Both groups were sub-divided into five levels of scholastic ability on the basis of their college entrance examination scores. The investigator then evaluated the joint effects of anxiety and academic ability on the grades obtained by the subjects at the end of their 1st year. A problem with this design is that they were originally selected by their school grades, and when they obtained these original grades, a degree of anxiety would be present. This anxiety may have affected performance then and would tend to impair later attempts to investigate anxiety and achievement using these variables. This kind of problem may have affected the scores of the subjects used in this study as is always a possibility when anxiety is taken as a variable to predict performance.

In both the first and second stages of this investigation a variety of factors which may affect work performance have been considered, producing the outcomes discussed above.

The profile of the typical senior nurse which emerged at the end of the first study has been consolidated by the findings in this second stage of the project. Here is portrayed the professional nurse who succeeds in overcoming the pressures at work. This success is made possible by belonging to a group or society outside work and by having a stable home life. It also emerges again that the more intellectually able the nurse is the less likely he/she is to be anxious. To flesh out this picture further, detailed accounts of interviews from a random selection of six senior nurses who participated

in the second study are considered in Chapter 4.

CHAPTER FOUR

CHAPTER FOUR

INTERVIEWS WITH SUBJECTS

The following accounts were obtained during interviews in the work situation of the staff concerned. Cattell 16PF Test Profiles for these senior nurses are shown in Appendix 3A. Notes were made during the interviews to record the responses made to questions raised regarding stress at work, and in the home, and how problems were coped with. The scores obtained by each nurse interviewed are shown in Table 7 and this provides a link between the qualitative data and the quantitative measures.

Sister Q aged 31 is a ward sister in charge of a 22 patient male ward in a busy psychiatric hospital. The patients suffer from a wide range of psychiatric illnesses. Sister Q was interviewed by the writer on the ward during a normal working day. The interview was frequently interrupted by normal ward duties and patient problems but this in itself gave some indication of the kinds of stressors which may affect work performance.

Sister Q explained that the most stressful area of her work was general pressure resulting from work overload and understaffing. In her own words she said:-

> "I set myself goals which I feel I must attain and
> when these are not met I get very frustrated.
> It's not the type of work or the caring for patients
> which causes the problems, the real stress lies
> in not being able to do the best job possible because
> of lack of time and resources."

Sister explained how she spent many extra hours at work but coped well because her husband understood the problems and supported her views.

TABLE 7

Scores Obtained by Nurses Interviewed

SUBJECT	QA	Q1	Q2	Q3	Q4	Q5	ANXT	ANXS	AH4	PFIQ	PFANX	AGE
	Work Performance	Absence from Work	Homelife Problems	Work Problems	Outside Work Activities	Personal Behaviour Patterns	Anxiety Trait	Anxiety State	Test Score	16PF Test Score	16PF Test Score	
Sister Q	1	1	1	2	5	1	39	33	76	5	5	27
Sister R	2	3	5	1	5	3	50	50	81	8	3	26
Sister X	2	2	3	4	5	4	51	26	85	9	9	32
Charge Nurse M	1	2	5	2	3	1	29	24	87	6	5	35
Senior Tutor P	1	1	2	3	3	1	39	30	82	9	4	40
Nursing Officer H	2	2	2	4	4	2	47	42	83	5	5	34

The staff on the ward were well integrated. It can be seen from Table 7 that she obtained scores of (1) and (2) for Homelife Problems and Work Problems respectively, which tends to support these claims. Ward management was on a democratic basis and many outside work activities were organised to aid coping. In fact it was stressed during the interview that the staff felt they could not operate effectively at work if the outside activities such as parties and social evenings did not provide some relief. However, whilst her score of (5) for Outside Work Activities does not concur with this general view of her staff, her Personal Behaviour Patterns score of (1) does lend support.

Formalities and red tape were seen as a problem and such things as petty requests to justify orders for small necessary items of equipment increased the stress load. When in a stressful situation on the ward the senior nurse needs co-operation from her sub-ordinates and recognition of the problems from her seniors. Very often management appear remote from the real gravity of the situation, according to Sister Q, thus inducing stress by their responses rather than reducing it.

A large area of personal stress cited by this ward sister was in her caring too much and worrying about the patient's welfare more than about her own family. There was also the counselling role she was called upon to play with respect to the problems of her staff when she often has to give advice and share their problems. In her own words she said:-

> "To cope, I go home and get involved in some physical activity such as excess housework, or bake cakes and bread. Any such activity which is remote from the hospital scene seems to help. Generally my problems are not expressed verbally at home since I don't feel the ethics of nursing allow me to talk about

patients' problems, even to my husband.

The problems have to be worked out by me, often resulting in some loss of sleep."

One large area of concern in nursing expressed by Sister is the uncertainty surrounding the recent changes in re-organisation of the Health Service. The morale of the staff is lowered and the poor communication between top level management and middle management causes great anxiety. This is apparent when the ward sister is asked questions by subordinates about their future which cannot be answered because of lack of information.

Sister Q thought that studying in her spare time took her away from some of the immediate problems and by keeping up-to-date she felt better able to cope and motivation was enhanced.

Stress at home was minimised by having an understanding husband who is ignorant about nursing and hospitals but supports her in her vocation. In her own words:-

"This provides a great zone for relaxation and is a refuge in which to unwind."

In general the comments made by Sister Q support the study by Dawkins Depp and Selzer (1985), discussed earlier in this study.

Also relevant are the irritating, frustrating, distressing demands measured by the Daily Hassles Scale developed by Lazarus and De Longis (1983). However, they see the daily hassles as more important than large events such as hospital re-organisation, a point raised by Sister Q as being important to her present ward situation regarding stress.

Sister R aged 25 is a casualty ward sister in a large General Hospital situated in one of the largest catchment areas in England. During the past year, more than 70,000 new cases have been treated.

Sister R explained that it was usually the quality of the patients on the casualty ward which proved stressful, not the quantity. By quality is meant the type of patient dealt with. For example there are the potentially violent patients under the influence of drink or drugs, patients with multiple trauma such as victims of road accidents. Then there are young people and children who have been seriously injured, who are brought into the department dead. Sometimes she found the stress so great that the whole situation was numbing to the staff.

Other problems which are not directly related to patients are those arising from staff shortage. To quote Sister R:-

> "There are situations which would be unethical to relate in this study, where nurses are in conflict with decisions made by medical staff. Doctors and consultants frequently make decisions which senior nurses disagree with regarding life or death situations, especially on the casualty ward. This is extremely stressful and frustrating since the conflict involves a third party."

Apparently some medical staff appear insensitive to patients' problems and the nurse is left to repair the damage.

Aggression from bereaved relatives, especially young people, was also discussed and Sister R felt that in general young people in this situation coped less well than older people, hence causing the nurses more problems. This difference, it was felt, may be due to the lack of tolerance and inexperience of youth, resulting in an aggressive response to the situation. The length of time patients are required to wait in casualty ward waiting rooms was indicated as a definite cause of stress to the ward sister.

Priority is given to the most needy and urgent cases but the selection of these is fraught with problems. Everyone feels they are the most important and should be treated without delay. In Sister R's own words:-

> "When things get really bad I often feel like taking the person complaining to see a really bad accident case where someone is near death, just to shock them and make them realise what is important."

Stress due to shift rotation is mentioned in Chapter 1 of this study but specific problems regarding casualty department night shift are not cited. Sister R explained that between 60% and 80% of cases admitted at night are suffering from problems resulting from drinking and this is frequently a problem for the staff, especially if a genuine emergency occurs.

Staff morale and interaction was considered to be high, according to Sister R and the ward is rarely understaffed and goals are attainable. Re-organisation was not seen as a cause for great concern and the staff do not feel threatened or insecure.

Coping on the casualty ward with so many acute causes of stress, is best achieved by talking it through with colleagues, according to Sister R. Normally the matters are dealt with informally and there is no structured procedure to staff stress problems. In her own words:-

> "If I observed that a member of staff might be suffering from severe stress or potential 'burnout' then an informal investigation would be mounted and carried out. Hopefully this would result in some form of support being given to the stressed nurse, usually a counselling session to begin with."

Sister R cited large areas of stress in home life, although she emphasised that work and home problems were not allowed to overlap, she said:-

> "Over the past two years my husband has been seriously ill and I have been greatly concerned about the future. Often, work has been seen as a welcome diversion from the trauma at home. On rare occasions the problems have been so great that I could not function fully at work. During these periods of acute stress I have relied heavily upon parental support and am fortunate in this respect to have very understanding parents."

Since Sister R explained that her husband and her were in their early twenties when he was diagnosed as suffering from a serious malignant condition, the threat affected their whole approach to life and work. The fact that her husband lost his job with consequential worry over finances, increased stress to an abnormal level.

Sister explained coping with these problems had been possible however, through support from friends and colleagues, parents, and mutual confidence in the other partner. Appreciation of life itself has been enhanced and although the worry has been constant, hope has aided coping. Sister R's scores can be seen in Table 7, and high anxiety levels are indicated, especially concerning Problems in Homelife, (5), which supports her comments. Her Outside Work Activities score (5), suggests little involvement, perhaps due to restrictions on her time.

Sister X aged 34 is a ward sister on a large busy acute medical ward having 34 beds in an Infirmary; she has held this post for 8 years. Work stress

as far as Sister X was concerned centred around the fact that the responsibility of the ward was shared between herself and another sister. This meant the authority was also shared. The problem was not one of a social interactive nature, in fact outside work they were good friends. However, conflict existed on the ward regarding approach to work and the day-to-day administration of duties. There were even problems associated with sharing a desk.

To quote Sister X:-

> "If I am away from the ward for one or two days, when I return I must re-organise things my way. This does not imply my way is correct but I can't work in a muddle and confusion and she can. The other sister is more skilled at talking than I and while she discusses things, I have the urge to do them. Basically I feel it is a personality difference which causes the problem."

Sister X went on to explain that sometimes the two Sisters complement each other but these occasions are rare.

It can be derived from Sister X's account that being busy with patients and dealing with death and the dying was not seen as a problem (Grey-Toft and Anderson, 1981) and neither were emergencies on the ward. It was underachieving which caused great anxiety. Aiming to accomplish tasks with inadequate resources was identified as a major stress factor since it induced a feeling of failure which was very frustrating. The feeling that set goals are not going to be realised was seen as a great stressor. According to Sister X dealing with bereaved relatives was not a problem, since she felt able to identify with their problems without it causing her too much anxiety. However, some nurses and doctors try to avoid these areas. Sister X also cited the current re-organisation of the Health Service as an important area of concern. Staff are concerned

about their job security and she feels helpless to provide any solution. To quote Sister X:-

> "To cope with the anxiety I get involved with some work which is physically taxing and try to work it out of my system in this way. Sometimes going for long walks helps, but getting involved socially usually has little effect on reducing the anxiety."

Stress in the home environment of Sister X was quite high (See Table 7) and sometimes caused her great anxiety. Most of these problems stemmed from the fact that she lived with ageing parents. There existed an obvious generation gap which caused conflict regarding attitudes towards lifestyles. Her parents couldn't compromise their standards and saw most things in black or white with no shades of grey. Some of the behaviour patterns of Sister X regarding men friends were unacceptable in the family home and the deceit which ensued caused Sister X to be distressed. However, she usually conformed to the ground rules in the home but there were still periods of no communication which didn't allow her to unload any of the stress which had been created at work. Often work was used as a means of stress reduction in the home situation. The scores shown in Table 7 suggest a highly anxious person who has Problems at Work (4). Sister X does not use Outside Work Activities as a means of coping according to her score of (5).

Being an only child tended to cause Sister X anxiety and she worried about being along in the world when her parents eventually died. She explained why being an only child was a pressure in itself. It seemed more was expected of her since she saw herself as the only chance her parents had to feel proud. Whereas when there are more children this responsibility is shared.

Charge Nurse M aged 35 is in charge of a busy male ward with 20 beds in a large Psychiatric Hospital. The patients are acutely disturbed and suffer from all types of psychiatric disorders ranging from confused to violently aggressive. The atmosphere on the ward is one of constant tension because of the potential problems caused by such patients. 'M' explained:-

> "We get 'phone calls from the police at any time arranging for the admission of violent patients, some of whom are prisoners. The staffing levels are sometimes inadequate and I have known cases where two young male nurses have had to struggle with an 18 stone man. Control in such cases is very difficult."

According to Reizenstein and Grant (1981) and Jaco (1979) the building itself affords a stress raiser in that there are features which inhibit control and nurture the claustrophobic tendency in some patients. According to 'M':-

> "Narrow confined areas and narrow doorways don't help. Conflict may arise over the design of a particular hospital space. Location of patients' rooms and the nature of the view between rooms and the corridor are difficult issues to resolve as patients and nursing preferences often conflict. Nurses tend to prefer easy viewing and access to patients' rooms, but patients prefer not to be seen from the corridor."

Conflict between medical staff and nurses is often a problem. To quote 'M':-

> "I have gone from being very diplomatic and tolerant in my dealings with doctors, to very unyielding. I have been reported twice for my attitude towards consultants

- exposing their lack of a structured approach to patient care. For instance, the responsibility is passed from one to another and the patient often suffers as a result of this delay in medical decisions. In my role as patient advocate I cannot accept this situation, and where it occurs I get pressure from patients' relatives."

This account concurs with research carried out by Reeder and Mauksch (1979). Here the formal structure of the hospital and the status differences between physicians and nurses are cited. The structure requires nurses to offer suggestions regarding patient treatment in a "surreptitious" rather than direct manner.

'M' went on to explain that the ward was not kept locked and the patients trying to escape was always a cause of anxiety. To counteract this it was often necessary to put the patients who were liable to abscond, in night attire. The conflict here was whether or not the patient was being unnecessarily degraded by having his day clothes taken away. 'M' described an incident involving this problem:-

"Once a patient absconded in his day attire so I put him in pyjamas to keep him in. As a consequence the patient complained through his solicitor to the Mental Health Commission that he had been degraded. I was reprimanded, but I defended myself by explaining how I could sympathise with this patient. I had also been in a Psychiatric Hospital as a patient and I could identify with this man's problems since I had received similar treatment myself. No further action was taken but the problems are clearly indicated."

Another cause of tension seen by the nurse in charge, according to 'M' is the way certain patients are allocated to wards. Admission wards are usually very comfortable but acute longstay disturbed wards are not so comfortable because of the behaviour of the patients in them. It seems that once a patient is labelled as 'disturbed' he is not socially acceptable.

As 'M' explains:-

> "It's very stressful to see patients who are not disturbed but not socially acceptable upon admission, to be placed in disturbed wards for social rather than medical reasons. Doctors may spend around 3 hours on the more acceptable wards but only about ½ hour on the disturbed wards, because of the socially undesirable patients. I set high standards and expect other people to work to them. When this doesn't happen I tend to lose my temper and rage at colleagues. I often explode in meetings due to frustration."

Re-organisation was cited by 'M' as a constant worry, as it was in other interviews with subjects. The greatest problem being the uncertainty and inability to answer questions about what will happen to subordinates. Coping strategies used by 'M' towards stress at work are centred around keeping himself up-to-date with current developments in the clinical field by attending courses. 'M' explained:-

> "I worry at first about being inadequate when I attend courses, but when I compare myself with others I find I can cope as well as they can. After work I often go for a drink and this helps me relax and unwind. Sometimes letting off steam to a colleague is helpful

·and listening to music when I get home tends·to calm me down."

'M' discussed some of the factors in his home life which caused stress. (These are supported by his score of (5) on this measure in Table 7). The greatest stress recently being induced by the breakdown of his marriage. His marriage to a staff nurse 10 years his junior ended after only 9 months. Working at the same hospital was a problem after the separation, especially when his wife started a relationship and was living with a male student nurse on the same ward as 'M'. Financial problems are high on the list of stressors due to the marriage break-up. Friends are split between two camps, those on his side and those on hers.

'M' summed up the problems:-

"The feeling I have is one of things really getting the better of me and I am quite lonely. I have been passed over for promotion at work because of the stress in my home life and I have spent a short while as a patient in a psychiatric hospital because of all the pressure. To cope, I often use work as a buffer against problems at home. I regret this afterwards because I sometimes work excess overtime and I know I need the rest. I go out as often as I can and never refuse an invitation to go somewhere socially. Often I don't feel like going out but I force myself to do so. I could have ended up with a serious drink problem had I not been a psychiatric nurse and aware of the signs. Basically I don't feel I am coping, but I see what happens to people who don't; I am surrounded

by such people on the ward. In a way, their example aids my coping."

Charge Nurse 'M' does not feel he is coping, in spite of his assessed Work Performance score of (1) in Table 7.

Senior Nurse Tutor 'P' aged 45 is responsible for in-service and post basic education in a large Health Authority.

The most stressful areas of her work according to 'P' are those concerning time and resources. The post she occupies is a single appointment with no one to share the responsibility. It seems it is not the actual work which causes the problems, but the constant race against time and lack of resources are particularly stressful.

Being in a position which affords little interaction with anyone else who know the problems is very stressful. Often a dual opinion is useful in making a decision. 'P' explains:-

"When, for instance, curriculum planning is needed, discussion with someone who understands the problems of course design is highly desirable."

Another problem experienced by 'P' regarding her single post, is the threat of being ill and not coping with the requirements of the job. Therefore attending work when ill is often necessary and consequently stressful enough to affect work performance. Because of the isolated nature of the work there are no problems with interpersonal relationships with colleagues. A good deal of support is evident from her superiors in higher management posts. This tends to boost her self esteem and morale and tends to lessen the negative issues of the work.

Over the past two years, following a shock of being diagnosed as having a heart problem, 'P' has changed her attitude towards work. Fortunately the

diagnosis was not accurate but 'P' has operated on a day to day basis since the alarm and consciously makes an effort not to worry about the work load. This kind of behaviour aids coping in that problems do not become so significant that they threaten her health. Previously all work which was on loaded had priority in her life and it had to be accomplished. This situation no longer exists according to 'P', because the attitudinal change described above compensates for over involvement.

'P' explains another way of easing anxiety:-

> "I make a definite effort to contact staff during the working day, otherwise I would be very isolated. Senior posts in nursing, and probably elsewhere, put people under so much pressure that health problems seem the inevitable result. I make a very definite effort to ignore, where possible, factors which I consider potentially injurious. However, I do smoke a lot more at work than at home; it helps me cope better but I worry about the health threat."

'P' explained that being a single person, without conflict with others, allowed her home life to be somewhat anxiety free, indicated by a score of (2) in Table 7. Although she lives alone she still has the responsibility for caring for her aged parents and this creates some anxiety. In her own words she explains:-

> "Caring so much about my health and that of my parents is perhaps the result of being a single person and not having other family pressures. I am the one who is always called upon by the rest of my family, to give support in a crisis situation. This responsibility is in itself stressful."

'P' copes by adopting a positive attitude to life giving help where appropriate, but organising the situations to minimise pressure. Social activities cited by 'P' were a way of stress relief, as were other activities such as housework and gardening. Frequent holidays abroad were cited as the main social activities to be looked forward to and were a great source of stress relief. These claims are supported by her score of (3) for Outside Work Activities shown in Table 7.

During this interview, it was emphasised by 'P' that pressure was reduced by her constant analysis, and awareness, of activities which may represent a threat to health. It was however felt by the investigator that perhaps this concern may be in itself a cause of anxiety.

Nursing Officer H aged 35, is a nursing officer in a busy Maternity Hospital with approximately 80 beds. 'H' has been a Nursing Officer in charge of the delivery suite for 2½ years and was previously a Sister for 9 years. Describing the most stressful areas of her work, she explained:-

> "Most stress is associated with staffing levels and accountability. Newly qualified staff are often employed where experienced staff are vital."

It seems that the number of staff is often adequate, but numbers are not the criteria, it is care and effectiveness which are important. Problems arise with counselling staff, who are under constant pressure to care for babies.

The points made by 'H' in this current interview concurred with those made in the studies mentioned in the introduction by Lancaster (1976) and Jacobson (1978), although she did cite infant deaths as a great cause of pressure and self criticism.

At the time of the interview an unexpected infant death had occurred and stress levels were high among the staff. One nurse had had to be counselled regarding the sudden death of her brother two days earlier, and now this infant death had caused her great anxiety too. In her own words 'H' explained:-

> "Everyone blames themselves - doctors - nurses - sisters etc. The frustrating part is when no logical reason for death is apparent. However as time progresses it is likely that some explanation will be found which will ease the situation. I feel it is vital to constantly question one's practice in order to prevent complacency."

According to the account given by 'H' daily stresses on the delivery suite and special care baby unit are high. Some sisters cannot take it for prolonged periods. The problems seem to be increased by caring for two lives at risk, and the situation can change so rapidly. There are few situations in H's view, outside casualty, where the situation is so prone to rapid fluctuations. This causes frustration among the staff and it is difficult for the Nursing Officer or Sister to plan the work load. At any point in time a life threatening situation can occur. Unlike any other hospital department the patients admit themselves so this adds further to the problem of planning. 'H' explained the situation using an example:-

> "Sometimes it is a case of women screaming, doors banging and not enough midwives. At 8pm last night a young woman in her teens was admitted who screamed with pain for 3 hours; she would not allow an epidural to be adminstered. There were another 7 patients also in labour whose fears were compounded by these events; it falls to the sister to try to reduce the tension."

Generally on the labour wards there are peaks and troughs; according to 'H' the stress levels rise and then there is a remission. These low stress times are essential otherwise the system could not function. 'H' went on to describe the situation:-

> "Talking to colleagues helps to reduce the pressure - I feel it is an ongoing counselling role. There is never a proper lunch break, work goes on and time is snatched on an ad hoc basis. With the present work load the nursing officer on the opposite shift and I rarely communicate except for brief spells when the notes are exchanged. This creates a frustrating situation and tempers are frayed. I have been bad tempered lately and over the last 3 months I have had trouble sleeping. I know it can't go on at this pace for more than another few weeks."

An element cited by 'H' which aids coping is that of staff development programmes, since a great deal of job satisfaction can be derived from seeing nurses progress through the professional stages in their training. A coping strategy described by 'H' as a good therapy for her, is to ignore the administration and get involved in practical midwifery skills. Stress in home life was explained by 'H' to be quite low. Being single and living with her parents is not a very stressful lifestyle for her, since she feels she is a free agent and can do generally as she pleased. 'H' cites this freedom in itself as a great relief from tension at work. In her own words she explained:-

> "Living with my parents is not particularly stressful and a stable home life helps me to cope at work.

· I do hate to have my free time encroached upon because it is so vital to be able to unwind. When this does happen I get really frustrated with the people and the situation. The score in Table 7 regardingHomelife Problems (2) and Personal Behaviour Patterns (1) support these comments.

'H' feels she copes because of her ability to switch off and relax when away from the work environment. She does not engage in any particular activities designed to reduce stress levels and scored accordingly on the Outside Work Activities measure (4) shown in Table 7.

DISCUSSION AND COMMENTS

Summaries of Interviews

Sister Q found outside work activities affected work performance in that low outside involvement was likely to be associated with anxiety at work. Reference was also made to stability in home life being used as a 'buffer' against anxiety at work, thus concurring with the relationships indicated in the first study.

Sister R, because of unusually high stress levels in home life relied heavily on family support in order to cope and also used work as a buffer against problems at home. This suggests a reciprocal reaction between home life and work, cited by many of the subjects used in this research. It supports the trend suggested in the second study where outside work activities are related to work performance.

Sister X also cited outside work activities as being necessary to cope with pressure of work. Since her home life stress was quite high, she also used work as a means of relief and vice versa.

Of the subjects interviewed, Charge Nurse M was the only one who displayed signs of not being able to cope. He had experienced stress in home life and work to the extent where he was at breaking point. Having been admitted as a patient to a psychiatric hospital for a short period indicated he had demonstrated behaviour leading to burnout discussed earlier in this study. The trends shown in the first study regarding work anxiety and anxiety in home life, and work anxiety and outside work activities together with work performance and outside work activities in the second study were all demonstrated in how he viewed his work and home environment.

'P' cited elements of work anxiety connected with time factors and isolation from colleagues, as well as fears about her personal health.

Again coping was aided by outside work activities concurring with the data of the first study. An important factor affecting her attitude towards work was the personal approach she had adopted since being diagnosed as having a heart problem. This type of behaviour can be supported by the findings in the second study regarding work performance and personal behaviour patterns.

Nursing Officer 'H' described many Daily Hassles (Lazarus and De Longis 1982) on the ward. As a nursing officer she experienced organisational problems at times brought on by the ever changing work load and staffing problems. Staff development was seen as an area which promoted job satisfaction but this was not supported in the primary investigations of this study.

Stress in home life was low for H and used to offset the anxiety at work. This trend being supported by the quantitative data of this study, again employing a stable home life as a buffer against work pressure. However, work was not seen as counteracting home life problems as it had been with other subjects interviewed, this being probably due to the low level of anxiety in her home life.

The general trends which emerge from these interviews and questionnaire measures are those concerning stability in home life and activities which may be used to relieve some of the work tensions which arise. The findings also suggest that coping strategies often centre around using work as a major aid to the reduction of stress in one's home life.

One vital aspect seen by all subjects interviewed as an important factor affecting work performance was the problems of management and organisation pressures. The problems of re-organisation in the Health Service produced role uncertainty and nurse managers found it difficult to answer the questions of subordinates. This problem was emphasised in a study by Hingley, Cooper and Harris (1985). They found that change, particularly the problems of keeping abreast of professional developments and the frustrations of conflicting

procedures is perceived as stressful. They cite the problems as possibly being caused by the continuing re-organisation within the Health Service. It is interesting to note the similarities in the accounts given by nurses in this study and the findings of Hingley, Cooper and Harris (1985). In particular they found that nurses are less likely to feel stress from factors intrinsic to the primary nursing task than by formal structures within the organisation, and factors external to their job. The only area of concern they found related to patient care was that connected with death and the dying. This was not however indicated as a major problem on any of the questionnaires or in interviews with the participants in this current study. The findings did however concur with those of Hingley, Cooper and Harris (1985) regarding the nurse being more likely to experience difficulties in coping with inter-personal relationships, conflicts and ambiguities in her role. Problems of balancing the demands of home and work arise but in the majority of cases one was seen as an aid in coping with the other.

CHAPTER 5

GENERAL DISCUSSION

It can be observed from the findings of the two studies and the subject interviews that a number of factors may affect the work performance of the senior nurse. It has not been possible to isolate work performance from the other variables and use it is a conventional dependent variable because of its fusion with other variables used to predict it. The correlations are small and since ambiguity exists regarding causal factors, caution must be exercised in making predictions.

Considering the relationship between outside work activies and work performance, some outside work activities may be detrimental to work performance and some may be supportive. Taking a similar line of argument, outside work activities such as membership of societies or groups may be considered as supportive and an aid to coping. Under some circumstances they might produce stressful situations in themselves which would have to be coped with. These observations can be considered as supportive to the views of those researchers who suggest that stress is best considered as a transaction between the person and his environment, referred to in Chapter 1. (Lazarus 1975, and Cox 1978).

Problems at work tended to increase with homelife problems and homelife problems showed a tendency to increase with age. As discussed in Chapter 3 problems may arise due to the conflict between the home role and the work role and, as age increases, coping with the demands of both may become more difficult. However, the qualitative data discussed in Chapter 4 considered the situations where work life and home life may overlap. Whereas Sister 'R' reported a great deal of social support from home and friends, in coping with work and great home life trauma, Sister 'X' derived little support from home to cope with work problems but used work as a buffer against home life conflicts. The research carried out by House and Kahn (1984) and Wortman and Conway (1984) is particularly relevant here in that their focus was on identifying the components of social support.

To some extent this current study cites the importance of relationships at home and work interacting with Life Events (Holmes and Rahe 1967), and Daily Hassles (Lazarus and De Longis 1983, Monroe 1983, Eckenrode 1984, and Stone and Neal 1985). The problems of causality are not addressed in this study but they are recognised as creating ambiguities which future research must strive to resolve.

Caring for patients, general ward management and teaching are all part of the broad function of the senior nurse. From comments made by the senior nurses participating in this study the main causes of anxiety and stress do not stem from these areas of work. The major causes of anxiety and pressure resulting in potential burnout (Maslach 1976), is brought about by organisational changes and the uncertainty associated with such changes. Perhaps the solution lies within the profession itself, and that a greater clarification of roles and how change may affect such roles would reduce the problem.

The negative correlation found between intelligence and anxiety measures at both study stages was small and useful predictions could not be made on the basis of such a relationship. However, the suggestion is that senior nurses who demonstrate a high score on an intelligence measure are less likely to be anxious than those who achieve a lower score. This would imply that nurses at the lower end of the intelligence distribution, who qualify and take up senior positions are more likely to be tense and anxious in their work and home life than their colleagues at the higher end of the distribution. It may be that the more intellectually able senior nurses are better equipped to cope with the tensions of their work because they can evolve more successful coping strategies.

The problems which emerge regarding identifying these coping strategies or even being aware that some coping behaviour has occurred are immense. Researchers such as Pearlin and Schooler (1978), Folkman and Lazarus (1980) referred to in Chapter 1 have reported consistency in the types of behaviour

employed but modes of coping may not be regarded as mutually exclusive. To this end, this particular study has not focused on one aspect of behaviour or characteristic. A global view of these senior nurses interacting with their work environment and transacting across the wide spectrum of home life and work life problems has been aimed at. This study supports the concept that stress is a transaction between the person and the environment and as Folkman and Lazarus (1985) describe it - "a dynamic unfolding event, not a static unitary event".

It is a complex process, a process which operates between and across the individual and the environment, a process which changes over time. Future research based on a holistic model as has been attempted in this study may be useful in providing an overall assessment of the individual in his environment. The approaches to the understanding of stress which rely on explanations concluded only in terms of environmental pressures or behavioural outcomes cannot satisfactorily explain the individual factors within a relationship. A comprehensive model of stress must be able to account for these individual differences both in the perception of, and the response to, stressful situations. Longitudinal studies are becoming increasingly common as researchers recognise that stress is an ongoing phenomenon, yet causal interpretation is clouded due to what appears to be a natural fusion of the variables.

This current study further emphasises this fusion in the relationships, indicated by the quantitative measures. However the interviews discussed in Chapter 4 place the senior nurse firmly in the centre of the stress equation in which the individual is seen as continuously reacting to, and acting upon, his/her environment.

Given the resources, access to the personnel and data, future research investigating factors affecting performance could be mounted to cater for other occupational groups, allowing comparisons to be made. The methodology

could be refined to combine measures of life events and daily hassles using tested scales and inventories. In depth studies of the personalities of participants could be made with a view to considering the Person Environment Fit (French 1974), approach where a measure is obtained regarding how the person matches his/her environment. This kind of data could be matched to qualitative data obtained through interviews with subjects. As in this current study the main objective of such interviews would be to identify areas of concern at home and work and assess the degree to which social support offers a buffer against stress. A clearer understanding of this influence will require research advances on how social support can be measured. Personality dispositions, coping responses and personal or social competence have been cited by Wortman and Conway (1984), as being causes of measurement problems. Perhaps a longitudinal study on the populations tested would offer some reduction to the problem.

With reference to the approach to stress adopted by those researchers concerned with psychoendocrine mechanisms discussed in Chapter 1 (Mason 1968, and Frankenhaeuser and Johannson 1986), perhaps some measures could be included. There seems to be little doubt that the findings in this field suggest that systematic study of a wide variety of common tasks or activities and methods of relaxation reveal a range of diverse ongoing psychoendocrine adjustments in everyday life. It may be of value to combine information gained by testing urine samples of subjects under different stressful or relaxed conditions, with the other measures. Individual differences in levels of catecholamine and cortisol secretion could be compared to personality differences, interview data and questionnaire and test data.

A promising approach has been suggested by Karasek (1981) where emphasis is placed on high job demands and low job discretion as being particularly harmful. Investigations along these lines have repeatedly identified job autonomy as an important modulating factor for acute strain and also long term

consequences, as indicated by somatic disturbances. A future investigation could consider recent organisational changes and problems in the subject's work role and perhaps link these with endocrine changes together with the other measures suggested. One such area which could be investigated is that of the effect of staff appraisal schemes on work performance. Follow up studies may yield information regarding the value of such schemes.

Such investigations present problems regarding precise methodological control. However the complexities of the problems are such that the methods used to explore them must be equally diverse and sensitive to change. By examining how people perceive and cope with a variety of different problems measured in diverse ways, it may be possible to address a number of important issues such as cross situational consistency in dealing with problems. It may also aid clarification as to whether coping with one problem imparts certain skills which are transferable.

Finally, this current study has attempted to examine some of the factors which may affect work performance in a specific population of senior nurses. If the need to place such research in the broad conceptual framework of the individuals interacting within and transacting across their environment is clear, together with the complexities of measuring such transactions, then the study has achieved its aim.

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APPENDIX 1A

PSYCHOLOGICAL FACTORS AFFECTING WORK PERFORMANCE IN SENIOR NURSING STAFF

The purpose of this questionnaire is to provide data on psychological factors which may affect work performance in senior nursing staff. All information given will be treated with strictest confidence and it is hoped to provide participants with a short report on the findings of the project upon its completion.

Please answer all questions. Tick or insert a number where appropriate.

NAME SEX POSITION

M ☐ F ☐

1. Do you consider that over the past two years your performance at work has been:

☐ Excellent

☐ Satisfactory

☐ Less than potential

2. No. of days absent from work over the past two years due to:

☐ Major illness

☐ Minor illness

3. Over the past two years have you experienced any of the following problems in your homelife.

(Please estimate number of occurrences where appropriate).

Marriage breakdown ☐

Death of close relative ☐

Major Problems with children ☐

Please list any other causes of anxiety.

4. Over the past two years have you experienced any of the following problems in connection with your work.

(Please estimate number of occurrences where appropriate).

Dissatisfaction with your role ☐

Major conflict with seniors ☐

Major conflict with subordinates ☐

Lack of promotion prospects ☐

Persistent anxiety over your ability to cope ☐

Excessive emotional involvement with patient's illness and suffering ☐

Please list any other causes of anxiety.

5. Are you a member of any group, society, club or organisation.

Please list.

6. Do you have any personal behaviour patterns or strategies which help to relieve the tensions of work.

Please give brief details.

7. When faced with a stressful situation do you

- ☐ Feel aggressive towards the source of the problem
- ☐ Look for someone to blame
- ☐ Feel inadequate
- ☐ Enjoy the challenge

8. Do you find staff development courses

- ☐ Help you to cope more efficiently at work
- ☐ Increase your stress so that you cope less effectively
- ☐ Have little effect on work performance

9. Do you think a senior appraising your work performance over the past two years would consider it

- ☐ Excellent
- ☐ Satisfactory
- ☐ Less than your potential

TABLE 'A'

FIRST STUDY QUESTIONNAIRE SCORES AND CITY & GUILDS GRADING

APPENDIX 1B

Subject	Sex	Q1 Self Ass. of Work Performance	Q2 No.of Days Absent	Q3 Problems in Homelife	Q4 Problems at Work	Q5 Membership of Groups, Clubs etc.	Q6 Personal Behaviour/ Coping Strategies	Q7 Reaction to Stressful Situations	Q8 Reaction to Staff Develop-ment	Q9 Projected Seniors Assessment of Work Performance	C&G GRADE
1	F	4	3	6	7	8	7	3	2	8	3
2	F	4	3	1	1	1	1	1	1	4	2
3	F	4	1	1	1	8	4	1	1	4	3
4	F	4	1	3	3	4	3	6	1	1	2
5	F	8	1	8	8	8	7	1	3	3	1
6	F	8	2	1	2	7	1	1	1	3	4
7	F	4	1	2	3	1	2	1	1	3	2
8	M	8	4	8	4	7	6	1	1	3	4
9	F	4	1	2	4	2	5	1	1	3	4
10	F	4	1	3	6	2	3	1	4	3	
11	F	4	1	3	4	1	1	2	7	3	2
12	F	8	8	5	6	8	3	5	1	3	4
13	F	4	1	6	8	5	5	1	4	3	4
14	F	4	1	1	3	2	1	5	1	3	3
15	F	4	1	2	5	1	1	1	1	3	3

/cont'd...

T A B L E ' A ' contd. FIRST STUDY QUESTIONNAIRE SCORES AND CITY & GUILDS GRADING APPENDIX 1B

16	F	5	1	3	3	2	2	1	4	3	4
17	F	4	1	6	5	1	2	1	1	3	4
18	F	1	1	8	4	8	8	1	3	1	1
19	M	5	2	1	5	1	2	3	2	8	3
20	M	4	1	7	7	2	1	8	1	3	4
21	F	4	1	7	2	1	2	1	1	3	4
22	F	4	1	6	4	1	1	1	1	3	3
23	F	8	3	2	1	1	1	2	3	1	1
24	F	5	2	1	8	5	4	1	1	6	1
25	M	1	1	3	4	5	5	1	1	1	5
26	F	1	1	1	2	2	1	3	1	1	2
27	F	4	1	4	3	1	1	1	1	3	3
28	F	1	1	1	1	2	1	1	1	3	6
29	F	4	1	3	1	2	2	3	1	3	5
30	F	4	1	3	2	6	1	1	1	3	3
31	F	4	2	3	3	6	1	1	1	3	3
32	F	5	1	3	6	6	1	1	1	3	1
33	F	4	1	3	5	2	4	1	2	3	4
34	F	4	5	4	1	1	2	1	1	3	3

T A B L E ' A ' contd. FIRST STUDY QUESTIONNAIRE SCORES AND CITY & GUILDS GRADING APPENDIX 1B

35	M	4	3	3	3	1	2	1	3	3	4
36	F	4	1	1	1	1	2	1	1	1	3
37	F	4	1	3	2	1	2	1	1	3	3
38	F	4	1	3	5	2	3	1	1	3	4
39	F	4	2	4	2	6	4	3	1	3	4
40	F	4	1	3	1	2	1	3	1	3	3
41	M	4	1	3	1	5	6	1	1	3	3
42	F	4	3	6	1	3	2	4	3	2	3
43	M	4	1	1	8	7	1	5	3	3	1

T A B L E ' B '

APPENDIX 1B

CATTELL 16PF IQ STEN SCORES (FACTOR B) AND TENSION STEN SCORES (FACTOR Q4) (FIRST STUDY)

SUBJECT	IQ STEN SCORE	TENSION STEN SCORE
1	4	6
2	3	7
3	5	7
4	7	8
5	8	7
6	7	4
7	8	4
8	7	2
9	5	8
10	6	8
11	7	3
12	6	7
13	6	5
14	6	5
15	7	5
16	6	3
17	7	6
18	5	9
19	8	3
20	6	7
21	3	7

T A B L E 'B' contd. APPENDIX 1B

(FIRST STUDY)

SUBJECT	IQ STEN SCORE	TENSION STEN SCORE
22	4	7
23	5	8
24	8	6
25	9	4
26	4	6
27	9	4
28	4	7
29	6	8
30	9	5

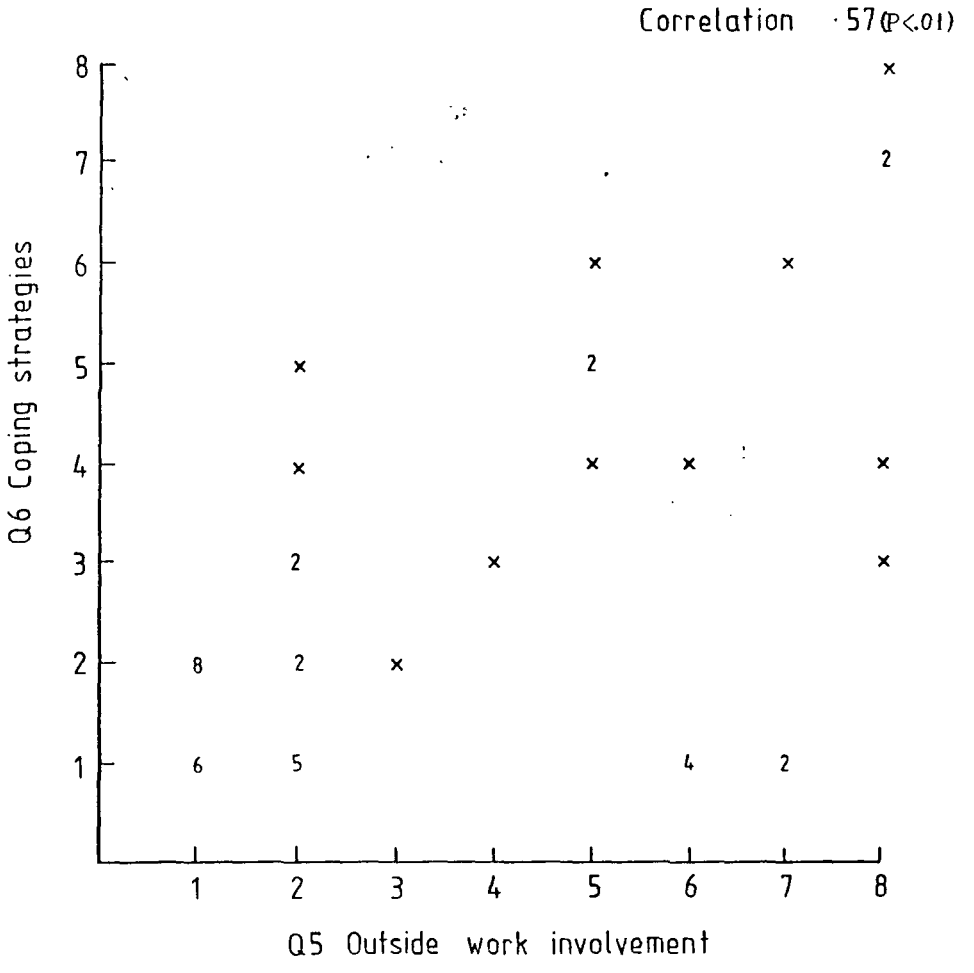


FIG.1

Outside Work Involvement and Coping Strategies

Numbers on the graph indicate the number of subjects whose scores coincide at that point

x = 1

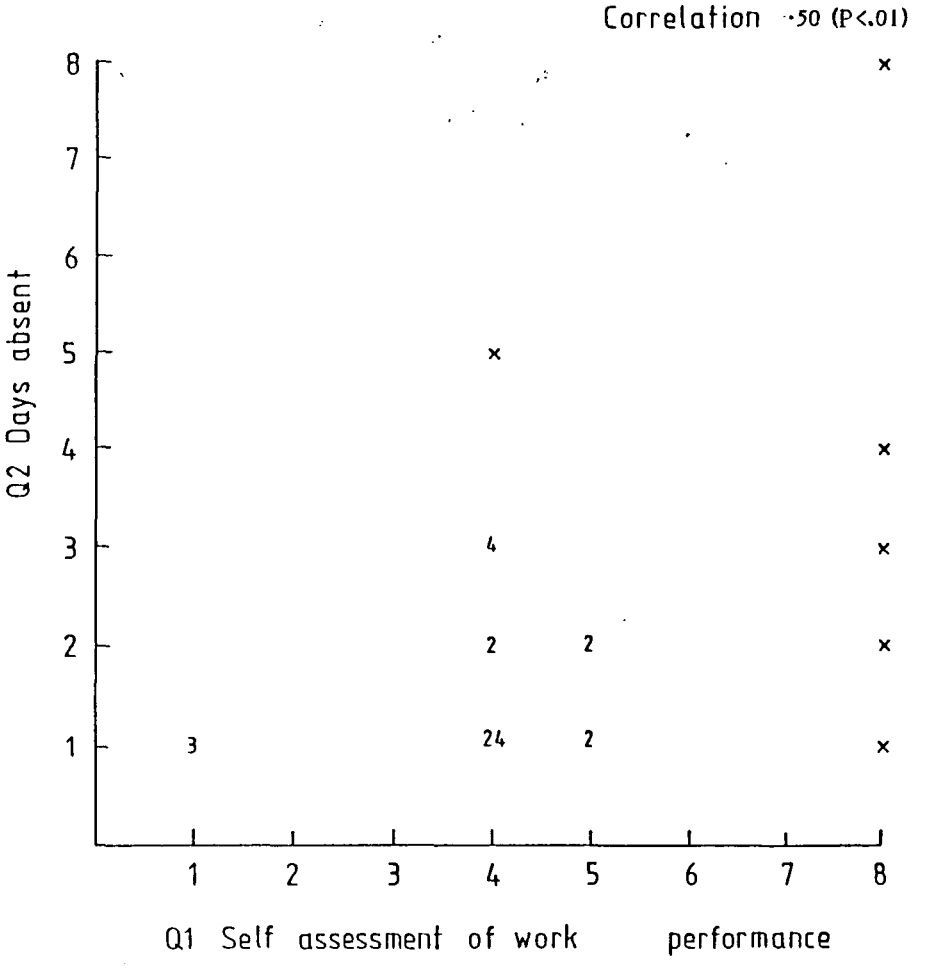


FIG.2

Days Absent and Self Assessment of Work Performance

Numbers on the graph indicate the number of subjects whose scores coincide at that point
x = 1

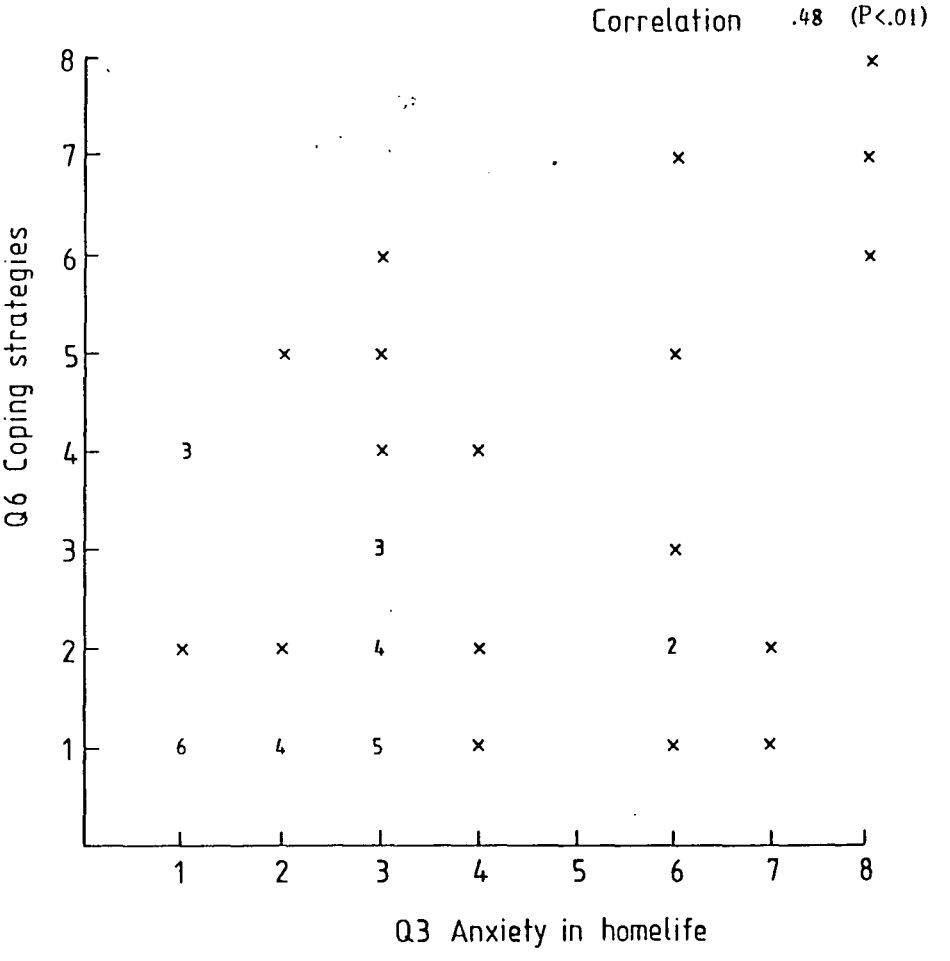


FIG.3

Coping Strategies and Anxiety in Home Life

Numbers on the graph indicate the number of subjects whose scores coincide at that point
x = 1

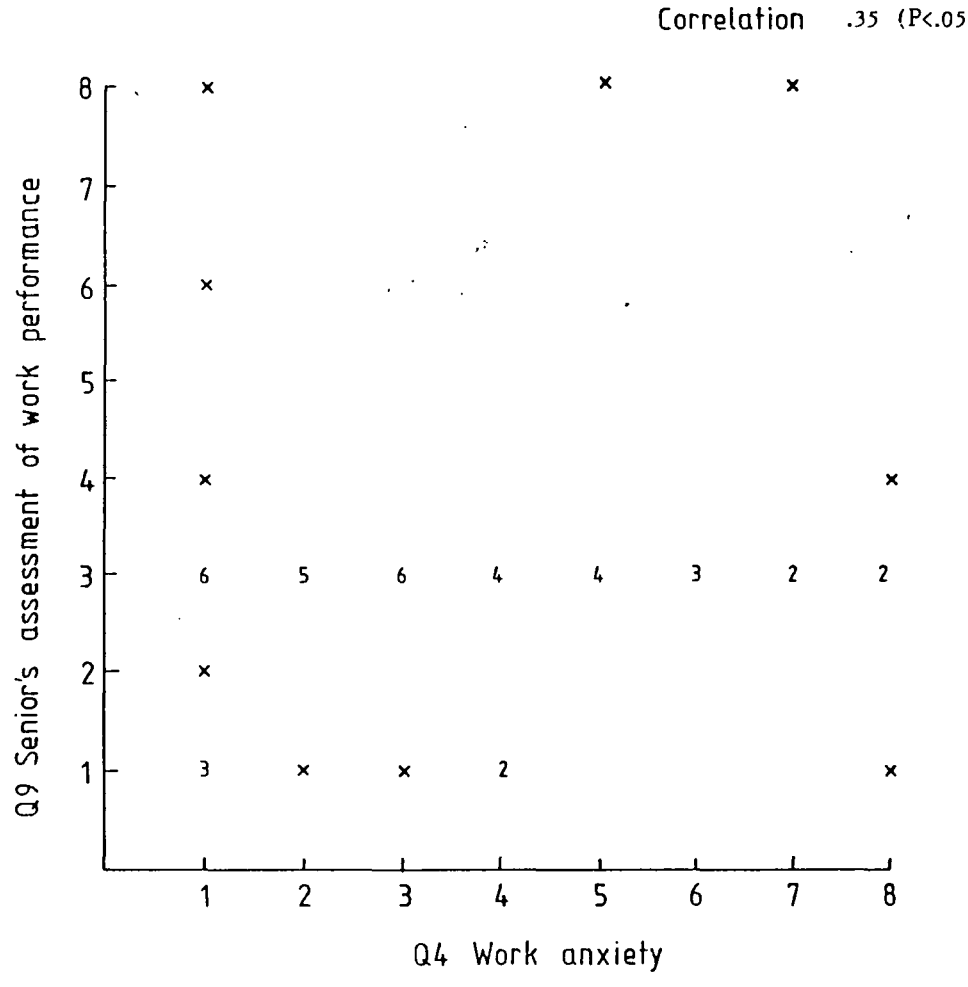


FIG.4

Work Anxiety and Senior's Assessment of Work Performance

Numbers on the graph indicate the number of subjects whose scores coincide at that point
x = 1

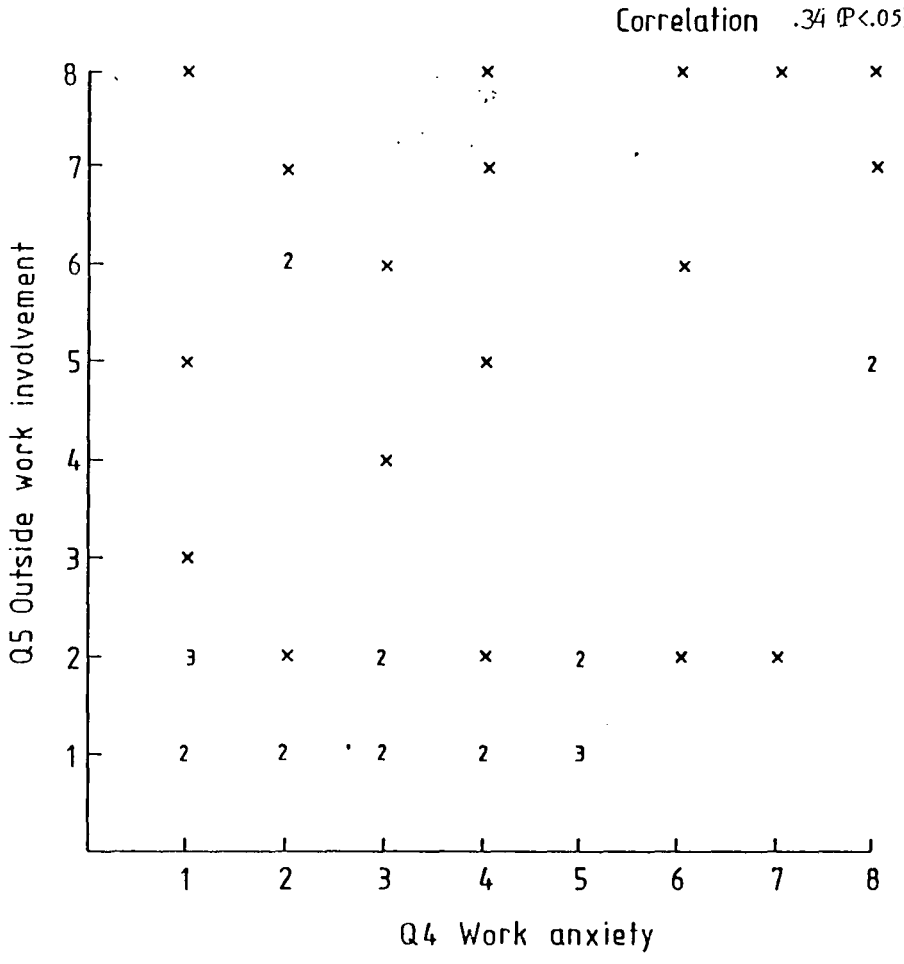


FIG.5

Outside Work Involvement and Work Anxiety

Numbers on the graph indicate the number of subjects whose scores coincide at that point
x = 1

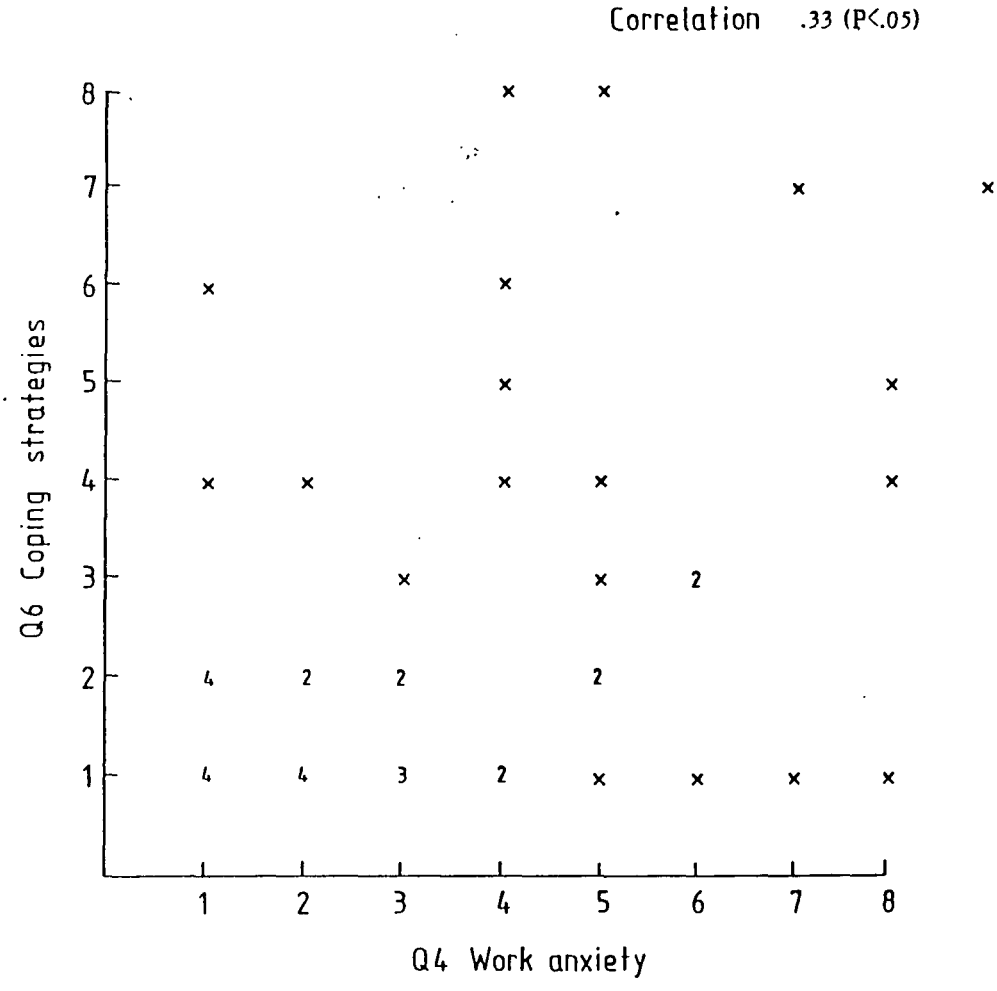


FIG.6

Coping Strategies and Work Anxiety

Numbers on the graph indicate the number of subjects whose scores coincide at that point
x = 1

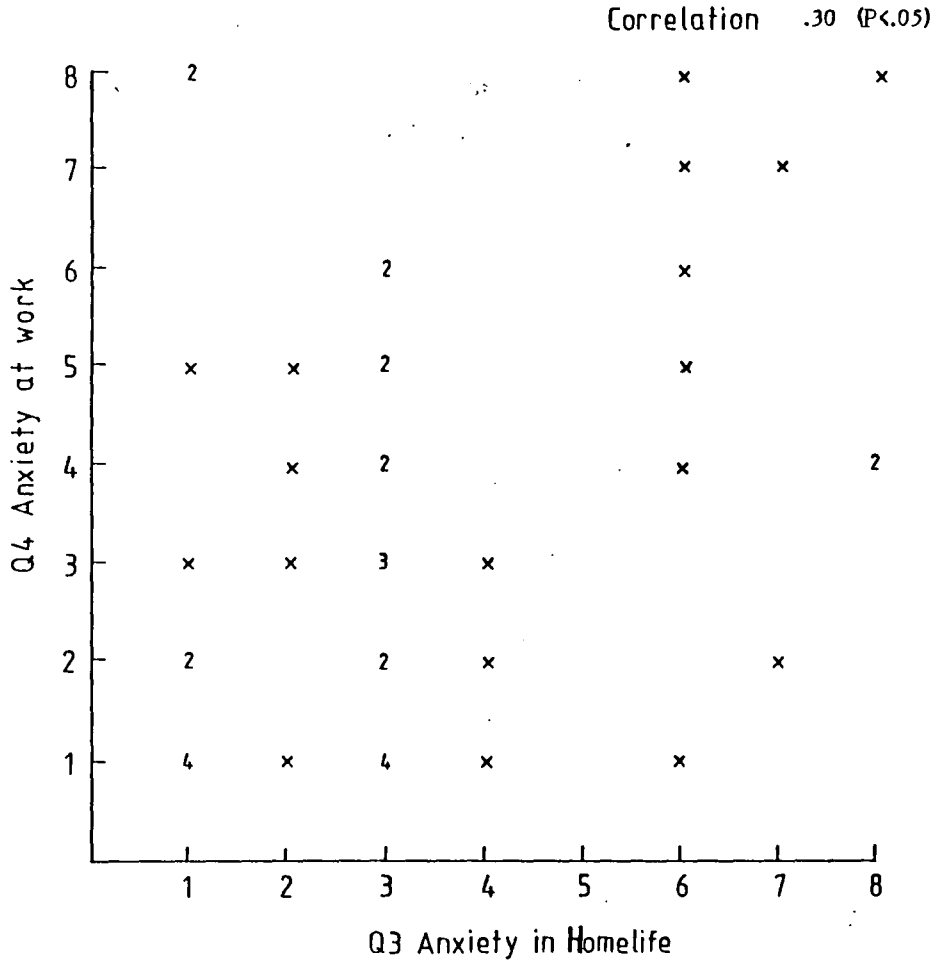


FIG.7

Anxiety in Home Life and Anxiety at Work

Numbers on the graph indicate the number of subjects whose scores coincide at that point
x = 1

APPENDIX IC (First Study)

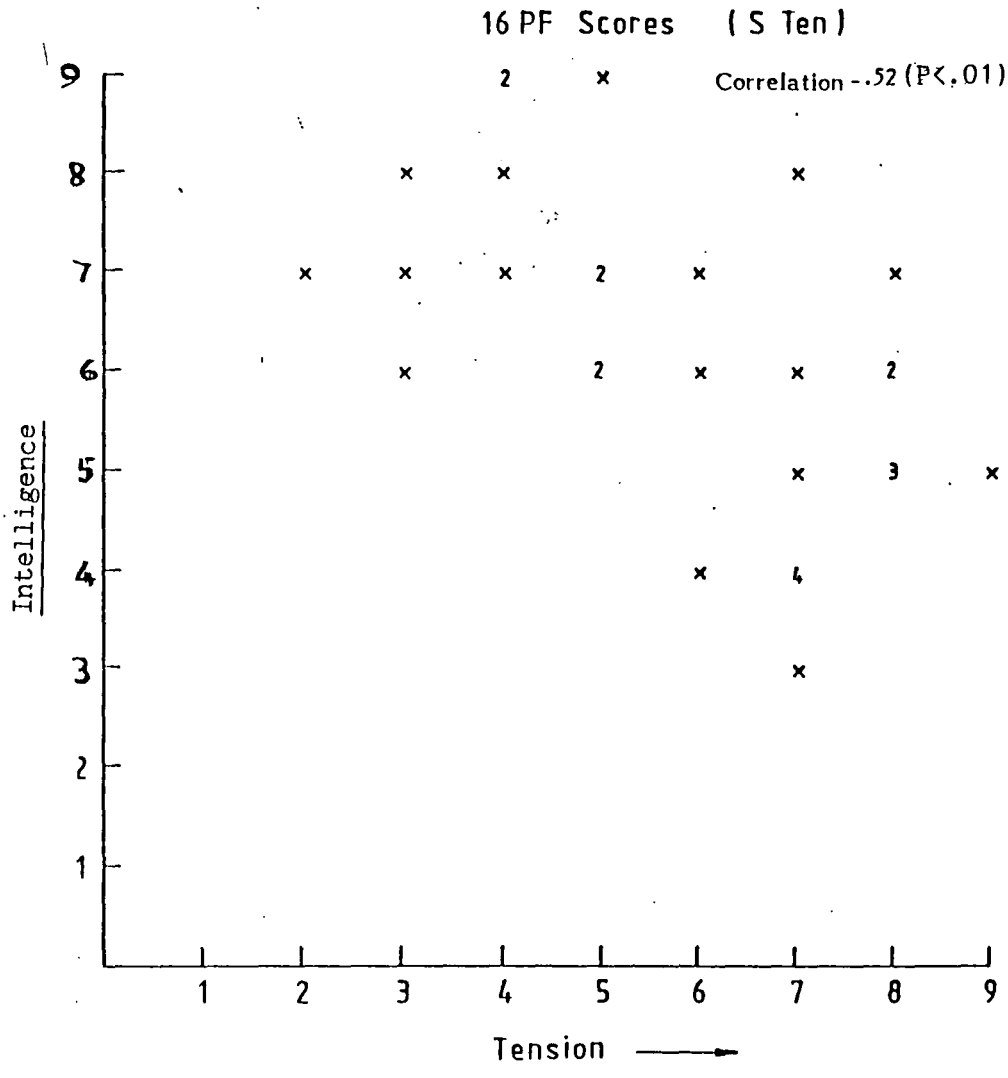


FIG.8

Intelligence and Tension

Numbers on the graph indicate the number of subjects whose scores coincide at that point
x = 1

APPENDIX 2A

A BRIEF ORIENTATION TO THE 16PF TEST

The Sixteen Personality Factor Questionnaire (16PF) is an objective scorable test devised by basic research in psychology to give the most complete coverage of personality possible in a brief time. The test was designed for use with individuals aged 16 and above. Forms A, B, C, and D, which are the subject of this Manual, are most appropriate for individuals whose educational level is roughly equivalent to that of the normal high school student. Form E is designed for individuals with marked educational and/or reading deficits. A separate manual for the 16PF, Form E, is available through IPAT.

The 16PF can be scored by hand or by machine and various types of answer sheets are available for this reason. Additionally, extensive computer interpretation services described in Section 4 of this manual are available through IPAT. (Institute for Personality and Ability Testing).

A more intensive description of the scientific and statistical properties of the test is given in the Handbook for the 16PF. The Manual is a brief, practical guide, handy for those actually giving and scoring the test.

Comprehensive coverage of personality rests upon measurement of 16 functionally independent and psychologically meaningful dimensions isolated and replicated in more than 30 years of factor-analytic research on normal and clinical groups. Test users may need a little practice to get used to handling as many as 16 traits, but the expanded possibilities for understanding and predicting behaviour will more than compensate for the effort involved.

The personality factors measured by the 16PF are not just unique to the test, but, instead, rest within the context of a general theory of personality. Nearly 10 years of empirical, factor-analytic research preceded the first commercial publication of the test in 1949. Since this time, five major revisions of items and many additional improvements, such as supplementary validity scales, have been incorporated into the 16PF.

TABLE 'C'

SECOND STUDY QUESTIONNAIRE SCORES

SUBJECT	Age	Assessment of Work Performance by Senior QA	Days Absent Q1	Severity of Problems in Homelife Q2	Severity of Problems connected with work Q3	Outside Work Activities Q4	Personal Behaviour Patterns Q5
1	40	2	3	2	4	3	2
2	37	4	4	4	3	4	2
3	28	1	1	2	2	3	3
4	28	2	3	2	3	3	3
5	23	2	2	2	2	3	3
6	31	2	2	2	2	4	1
7	44	1	1	2	2	4	2
8	44	2	1	2	2	3	2
9	30	3	1	2	2	2	3
10	39	2	4	2	2	4	2
11	49	1	1	5	2	2	2
* 12	34	2	2	2	4	4	2
13	25	1	2	2	2	3	2
14	33	2	2	4	3	5	2
15	33	2	2	3	2	4	3
16	27	2	2	2	1	4	3
17	29	2	1	3	2	3	2
18	29	2	1	1	2	1	1
19	48	2	5	3	2	4	3

* Indicates subjects interviewed

TABLE 'C' contd.

Age						
45 41	1	2	1	2	3	1
* 46 27	1	1	1	2	5	1
47 25	2	1	2	2	2	2
48 34	2	5	2	3	1	2
49 32	2	3	2	2	4	2
50 30	3	2	2	3	4	3
51 28	3	1	1	2	5	3
52 32	2	1	1	3	2	2
53 43	2	3	2	2	4	2
54 31	2	2	2	2	4	4
55 25	2	1	1	1	5	3
56 49	3	1	2	2	2	2
57 38	3	1	2	3	4	3
58 46	1	1	2	3	2	1
59 33	1	2	2	3	2	1
60 27	2	2	2	3	3	2
61 41	2	5	3	2	1	2
62 29	2	3	2	2	4	3
63 27	3	2	2	2	5	3
64 48	2	2	2	2	1	1
65 29	2	2	2	3	4	3
66 34	2	1	2	2	3	2

* Indicates subjects interviewed

TABLE 'D'

SECOND STUDY - SPIELBERGER ANXIETY SCORES, AH4 IQ SCORES and CATTELL 16PF IQ AND TENSION STENSCORES

SUBJECT	Spielberger Anxiety Trait Score	Spielberger Anxiety State Score	AH4 Score	Cattell 16 PF Intelligence Sten Score	Cattell 16 PF Tension Sten Score
1	45	33	80	5	6
2	47	50	79	6	8
3	43	29	69	6	6
4	48	41	67	3	5
5	39	36	88	3	6
6	52	39	68	5	5
7	43	38	104	9	6
8	29	26	88	6	4
9	38	46	77	6	8
10	26	31	88	7	4
11	41	49	40	3	4
* 12	47	42	83	5	5
13	39	27	63	6	7
14	36	33	104	8	3
15	37	32	101	7	4
16	42	42	100	2	5
17	35	33	81	4	5
18	36	39	110	5	4
19	46	47	69	8	5
20	29	33	104		
* 21	39	30	82	9	4

* Indicates subjects interviewed

TABLE 'D' contd.

22	36	30	94	5	4
23	36	28	83	8	5
24	43	44	83	8	4
* 25	50	50	81	8	3
26	33	22	93	5	5
27	30	27	88	5	4
28	32	20	61	7	4
29	40	42	76	6	4
30	29	28	72	4	6
31	30	21	80	6	6
32	44	31	88	3	8
33	24	22	90	6	1
34	46	45	72	6	8
35	20	25	91	9	3
36	39	34	108	6	5
* 37	29	24	87	6	5
38	25	31	87	3	3
39	41	25	73	8	5
40	42	39	71	6	1
41	33	38	76	6	2
* 42	51	26	85	9	9
43	27	28	94	6	2
44	27	32	63	4	4
45	37	37	66	3	5
* 46	39	33	76	5	5

* Indicates subjects interviewed

TABLE 'D' contd.

47	36	31	81	6	2
48	34	23	71	7	2
49	47	36	66	6	4
50	30	31	72	6	4
51	36	20	69	4	4
52	31	30	91	5	9
53	31	32	74	6	4
54	29	22	100	8	2
55	38	40	63	5	6
56	44	38	71	2	4
57	44	27	95	6	5
58	42	30	89	1	5
59	30	28	72	6	3
60	30	30	97	8	2
61	35	34	86	2	5
62	35	33	76	8	4
63	36	41	68	2	5
64	37	40	69	2	2
65	36	29	84	8	8
66	36	31	75	6	2
67	36	23	63	1	5
68	29	35	78	9	7
69	40	36	67	5	7
70	54	51	58	2	6
71	52	44	77	4	6

TABLE 'D' contd.

72	28	26	79	6	3
73	22	20	91	7	3
74	44	39	100	6	2
75	51	45	85	6	3
76	44	44	67	4	9
77	47	36	89	3	2
78	53	44	75	3	4
79	42	41	99	5	5
80	57	67	84	3	9
81	37	52	83	5	4
82	38	41	79	6	2
83	26	22	78	2	7
84	30	25	71	2	5
85	29	32	112	9	3
86	42	31	75	5	5
87	33	30	71	4	2
88	32	30	82	5	5
89	37	40	93	6	5

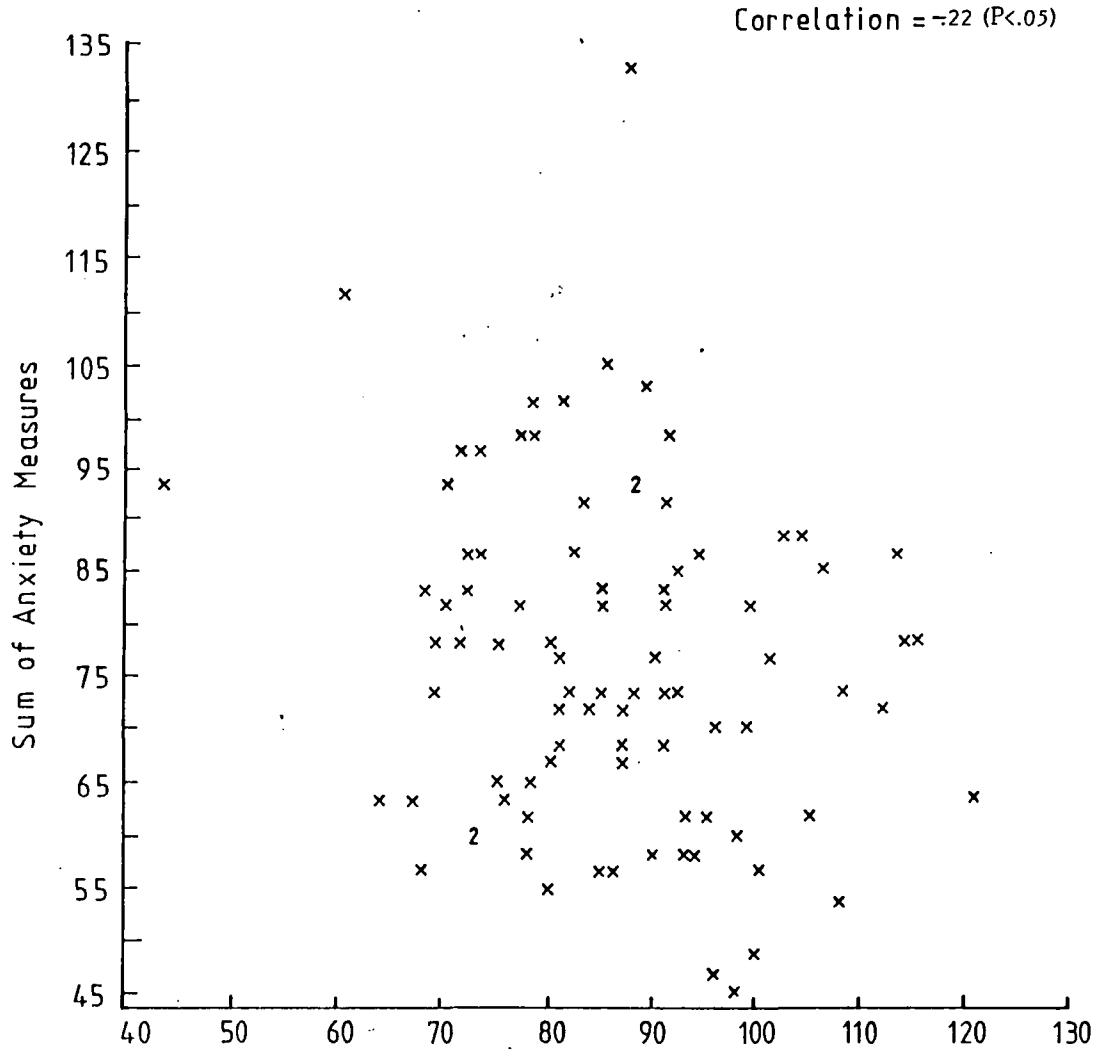


FIG.9

Sum of Intelligence Measures and Sum of Anxiety Measures

Numbers on the graph indicate the number of subjects whose scores coincide at that point

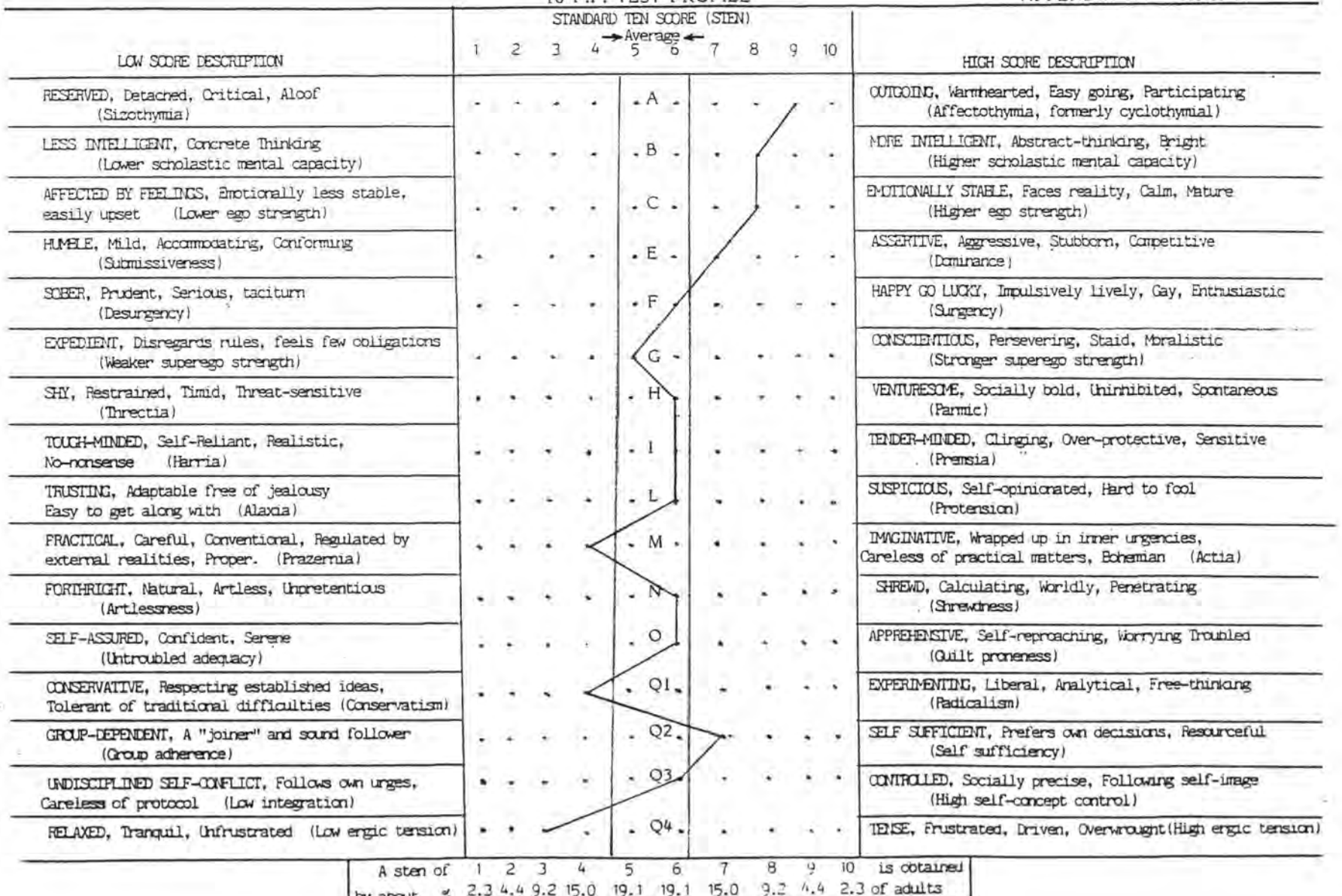
TABLE 'E'

MEANS AND STANDARD DEVIATIONS FOR ANXIETY AND INTELLIGENCE MEASURES

VARIABLE	MEAN	STANDARD DEVIATION
FIRST STUDY	POPULATION = 30	
PFIQ Cattell 16PF	6.167	1.724
PFANX " "	5.867	1.852
SECOND STUDY	POPULATION = 89	
PFIQ Cattell 16PF	5.375	2.053
PFANX " "	4.614	1.908
ANXT Spielberger	37.528	7.921
ANXS "	34.135	8.732
AH4 Score	80.989	13.051

16 P.F. TEST PROFILE

APPENDIX 3A Sister R



16 P.F. TEST PROFILE

APPENDIX 3A Sister Q

LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) 1 2 3 4 → Average ← 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
RESERVED, Detached, Critical, Aloof (Sizothymia)	A	OUTGOING, Warmhearted, Easy going, Participating (Affectothymia, formerly cyclothymial)
LESS INTELLIGENT, Concrete Thinking (Lower scholastic mental capacity)	B	MORE INTELLIGENT, Abstract-thinking, Bright (Higher scholastic mental capacity)
AFFECTED BY FEELINGS, Emotionally less stable, easily upset (Lower ego strength)	C	EMOTIONALLY STABLE, Faces reality, Calm, Mature (Higher ego strength)
HUMBLE, Mild, Accommodating, Conforming (Submissiveness)	E	ASSERTIVE, Aggressive, Stubborn, Competitive (Dominance)
SOBER, Prudent, Serious, taciturn (Desurgency)	F	HAPPY GO LUCKY, Impulsively lively, Gay, Enthusiastic (Surgency)
EXPEDIENT, Disregards rules, feels few obligations (Weaker superego strength)	G	CONSCIENTIOUS, Persevering, Staid, Moralistic (Stronger superego strength)
SHY, Restrained, Timid, Threat-sensitive (Threctia)	H	VENTURESOME, Socially bold, Uninnibited, Spontaneous (Parmic)
TOUGH-MINDED, Self-Reliant, Realistic, No-nonsense (Harria)	I	TENDER-MINDED, Clinging, Over-protective, Sensitive (Premsia)
TRUSTING, Adaptable free of jealousy Easy to get along with (Alaxia)	L	SUSPICIOUS, Self-opinionated, Hard to fool (Protension)
PRACTICAL, Careful, Conventional, Regulated by external realities, Proper. (Prazernia)	M	IMAGINATIVE, Wrapped up in inner urgencies, Careless of practical matters, Bohemian (Actia)
FORTHRIGHT, Natural, Artless, Unpretentious (Artlessness)	N	SHREWD, Calculating, Worldly, Penetrating (Shrewdness)
SELF-ASSURED, Confident, Serene (Untroubled adequacy)	O	APPREHENSIVE, Self-reproaching, Worrying Troubled (Guilt proneness)
CONSERVATIVE, Respecting established ideas, Tolerant of traditional difficulties (Conservatism)	Q1	EXPERIMENTING, Liberal, Analytical, Free-thinking (Radicalism)
GROUP-DEPENDENT, A "joiner" and sound follower (Group adherence)	Q2	SELF SUFFICIENT, Prefers own decisions, Resourceful (Self sufficiency)
UNDISCIPLINED SELF-CONFLICT, Follows own urges, Careless of protocol (Low integration)	Q3	CONTROLLED, Socially precise, Following self-image (High self-concept control)
RELAXED, Tranquil, Unfrustrated (Low ergic tension)	Q4	TENSE, Frustrated, Driven, Overwrought (High ergic tension)

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about %	2.3	4.4	9.2	15.0	19.1	19.1	15.0	9.2	4.4	2.3	of adults

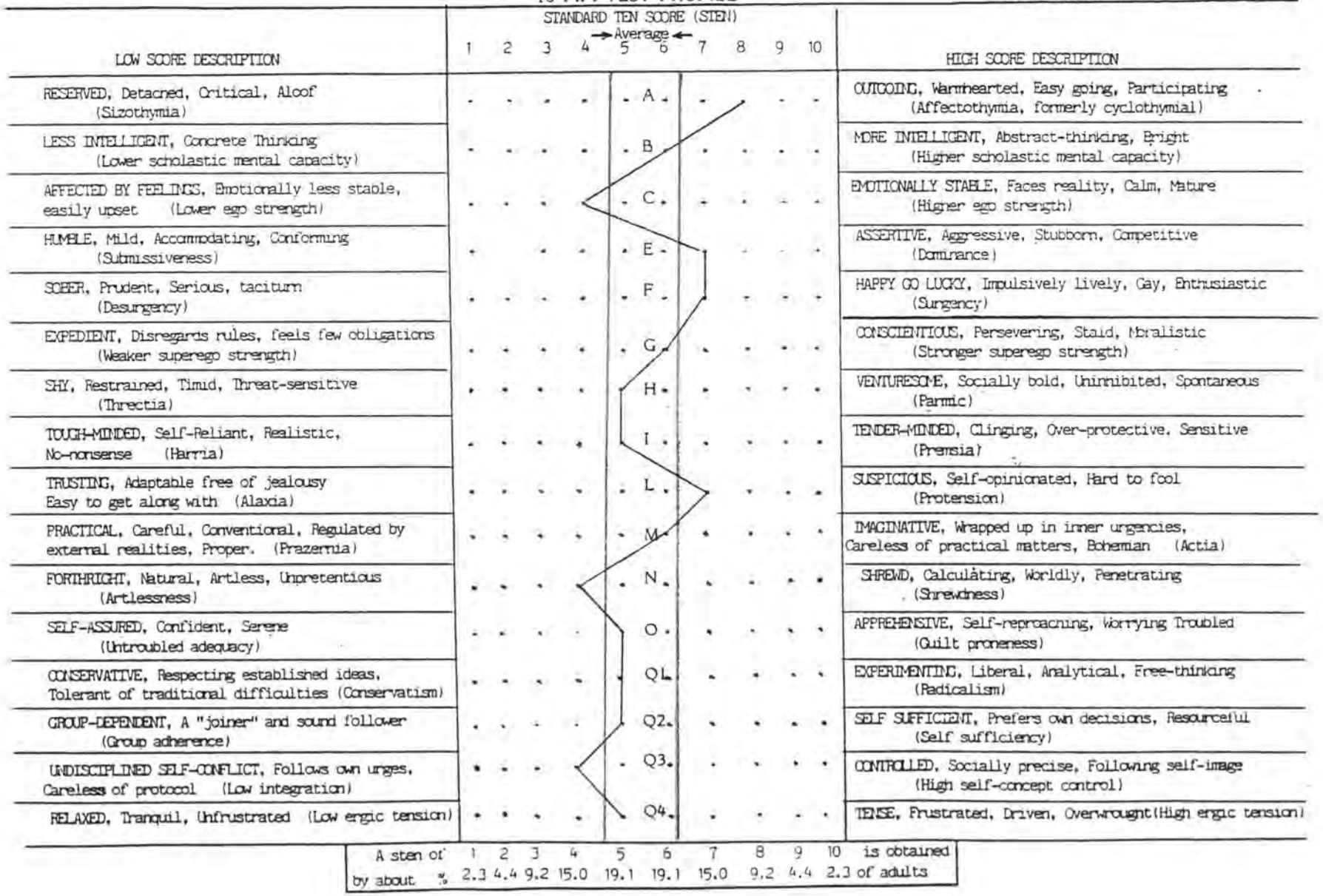
16 P.F. TEST PROFILE

APPENDIX 3A Sister X

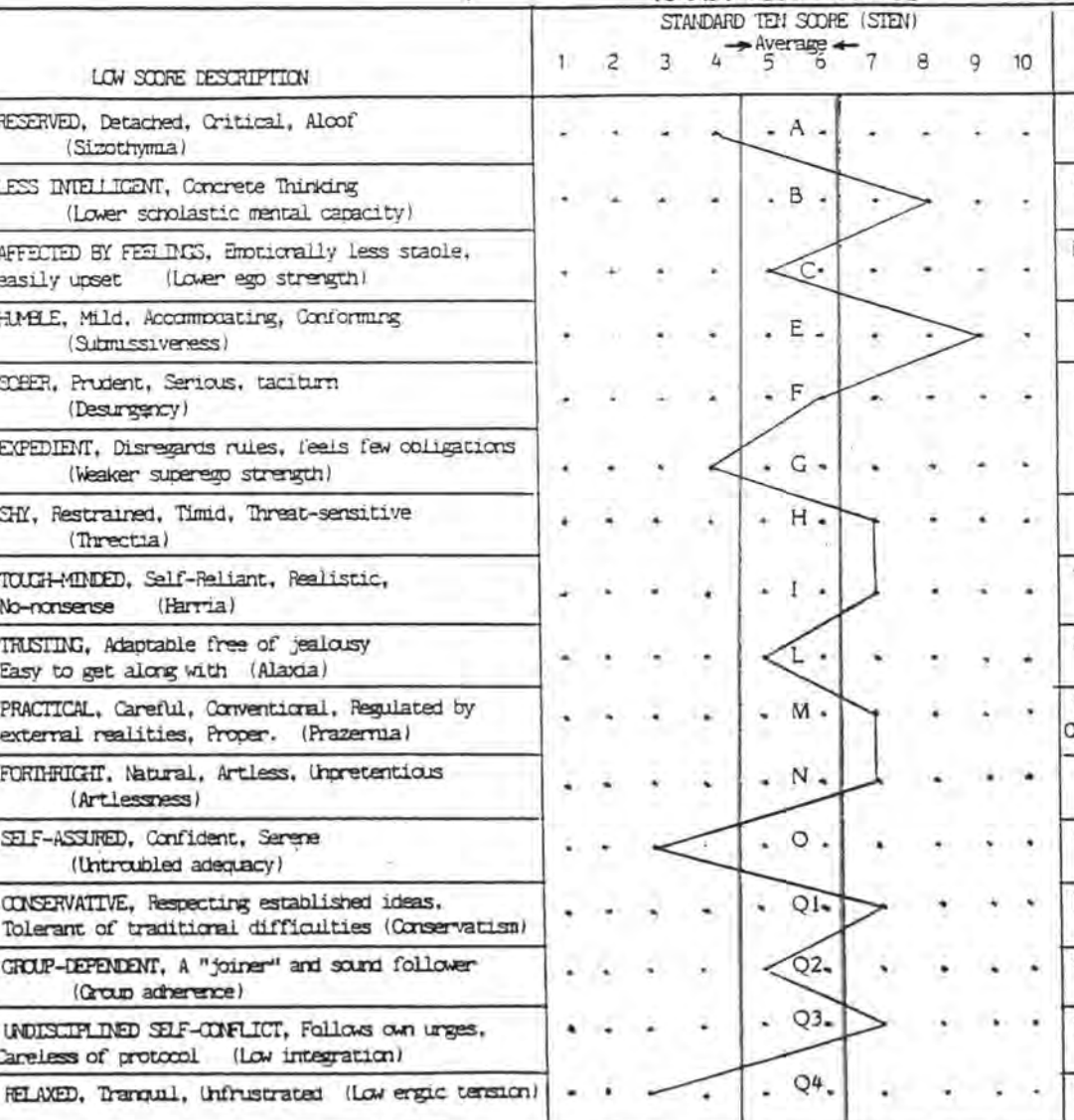
LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
RESERVED, Detached, Critical, Aloof (Sizothymia)	A	OUTGOING, Warmhearted, Easy going, Participating (Affectothymia, formerly cyclothymial)
LESS INTELLIGENT, Concrete Thinking (Lower scholastic mental capacity)	B	MORE INTELLIGENT, Abstract-thinking, Bright (Higher scholastic mental capacity)
AFFECTED BY FEELINGS, Emotionally less stable, easily upset (Lower ego strength)	C	EMOTIONALLY STABLE, Faces reality, Calm, Mature (Higher ego strength)
HUMBLE, Mild, Accommodating, Conforming (Submissiveness)	E	ASSERTIVE, Aggressive, Stubborn, Competitive (Dominance)
SOBER, Prudent, Serious, taciturn (Desurgency)	F	HAPPY GO LUCKY, Impulsively lively, Gay, Enthusiastic (Surgency)
EXPEDIENT, Disregards rules, feels few obligations (Weaker superego strength)	G	CONSCIENTIOUS, Persevering, Staid, Moralistic (Stronger superego strength)
SHY, Restrained, Timid, Threat-sensitive (Threctia)	H	VENTURESOME, Socially bold, Uninhibited, Spontaneous (Parmic)
TOUGH-MINDED, Self-Reliant, Realistic, No-nonsense (Harria)	I	TENDER-MINDED, Clinging, Over-protective, Sensitive (Premsia)
TRUSTING, Adaptable free of jealousy Easy to get along with (Alaxia)	L	SUSPICIOUS, Self-opinionated, Hard to fool (Protension)
PRACTICAL, Careful, Conventional, Regulated by external realities, Proper. (Prazernia)	M	IMAGINATIVE, Wrapped up in inner urgencies, Careless of practical matters, Bohemian (Actia)
FORTHRIGHT, Natural, Artless, Unpretentious (Artlessness)	N	SHREWD, Calculating, Worldly, Penetrating (Shrewdness)
SELF-ASSURED, Confident, Serene (Untroubled adequacy)	O	APPREHENSIVE, Self-reproaching, Worrying Troubled (Guilt proneness)
CONSERVATIVE, Respecting established ideas, Tolerant of traditional difficulties (Conservatism)	Q1	EXPERIMENTING, Liberal, Analytical, Free-thinking (Radicalism)
GROUP-DEPENDENT, A "joiner" and sound follower (Group adherence)	Q2	SELF SUFFICIENT, Prefers own decisions, Resourceful (Self sufficiency)
UNDISCIPLINED SELF-CONFLICT, Follows own urges, Careless of protocol (Low integration)	Q3	CONTROLLED, Socially precise, Following self-image (High self-concept control)
RELAXED, Tranquil, Unfrustrated (Low ergic tension)	Q4	TENSE, Frustrated, Driven, Overwrought (High ergic tension)

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about %	2.3	4.4	9.2	15.0	19.1	19.1	15.0	9.2	4.4	2.3	of adults

16 P.F. TEST PROFILE



16 P.F. TEST PROFILE



LOW SCORE DESCRIPTION	HIGH SCORE DESCRIPTION
RESERVED, Detached, Critical, Aloof (Sizothymia)	OUTGOING, Warmhearted, Easy going, Participating (Affectothymia, formerly cyclothymia)
LESS INTELLIGENT, Concrete Thinking (Lower scholastic mental capacity)	MORE INTELLIGENT, Abstract-thinking, Bright (Higher scholastic mental capacity)
AFFECTED BY FEELINGS, Emotionally less staole, easily upset (Lower ego strength)	EMOTIONALLY STABLE, Faces reality, Calm, Mature (Higher ego strength)
HUMBLE, Mild, Accommodating, Conforming (Submissiveness)	ASSERTIVE, Aggressive, Stubborn, Competitive (Dominance)
SOBER, Prudent, Serious, taciturn (Desurgency)	HAPPY GO LUCKY, Impulsively lively, Gay, Enthusiastic (Surgency)
EXPEDIENT, Disregards rules, feels few obligations (Weaker superego strength)	CONSCIENTIOUS, Persevering, Staid, Moralistic (Stronger superego strength)
SHY, Restrained, Timid, Threat-sensitive (Threctia)	VENTURESOME, Socially bold, Uninhibited, Spontaneous (Parmic)
TOUGH-MINDED, Self-Reliant, Realistic, No-nonsense (Harria)	TENDER-MINDED, Clinging, Over-protective, Sensitive (Premsia)
TRUSTING, Adaptable free of jealousy Easy to get along with (Alaxia)	SUSPICIOUS, Self-opinionated, Hard to fool (Protension)
PRACTICAL, Careful, Conventional, Regulated by external realities, Proper. (Prazernia)	IMAGINATIVE, Wrapped up in inner urgencies, Careless of practical matters, Bohemian (Actia)
FORTHRIGHT, Natural, Artless, Unpretentious (Artlessness)	SHREWD, Calculating, Worldly, Penetrating (Shrewdness)
SELF-ASSURED, Confident, Serene (Untroubled adequacy)	APPREHENSIVE, Self-reproaching, Worrying Troubled (Guilt proneness)
CONSERVATIVE, Respecting established ideas, Tolerant of traditional difficulties (Conservatism)	EXPERIMENTING, Liberal, Analytical, Free-thinking (Radicalism)
GROUP-DEPENDENT, A "joiner" and sound follower (Group adherence)	SELF SUFFICIENT, Prefers own decisions, Resourceful (Self sufficiency)
UNDISCIPLINED SELF-CONFLICT, Follows own urges, Careless of protocol (Low integration)	CONTROLLED, Socially precise, Following self-image (High self-concept control)
RELAXED, Tranquil, Unfrustrated (Low ergic tension)	TENSE, Frustrated, Driven, Overwrought (High ergic tension)

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
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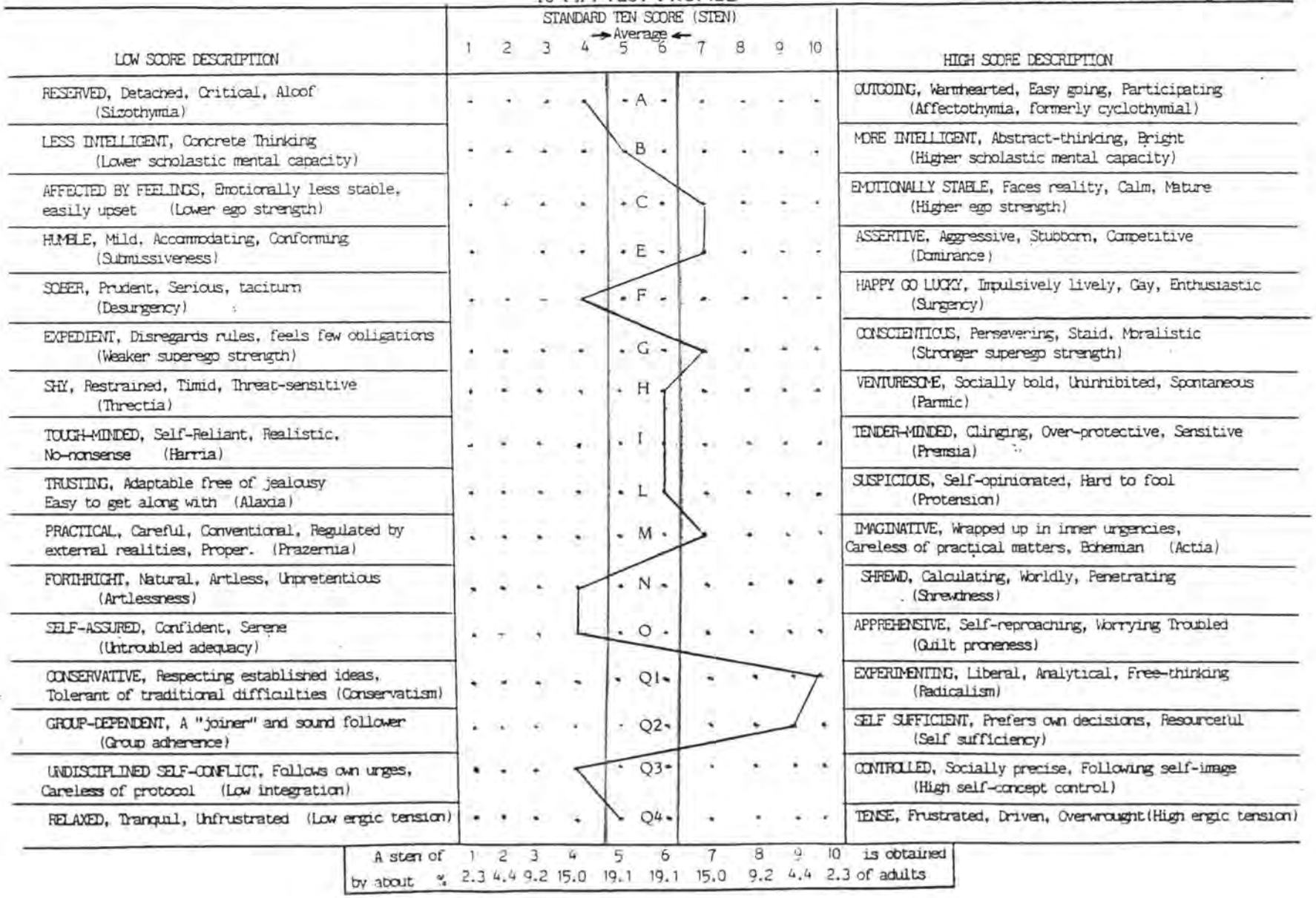

APPENDIX 4A

PSYCHOLOGICAL FACTORS AFFECTING WORK PERFORMANCE IN SENIOR NURSING STAFF

The purpose of this questionnaire is to provide data on psychological factors which may affect work performance in senior nursing staff. All information will be treated with strictest confidence and it is hoped to provide participants with a short report on the findings of the project upon its completion.

Sex

Participant: M ☐ F ☐

QUESTION 'A'

Please answer all questions by ticking the appropriate box

Obtain from your immediate senior a general assessment of your work performance on the scale below:

1	☐	Excellent
2	☐	V. Good
3	☐	Good
4	☐	Satisfactory
5	☐	Poor

Do you feel the participant is performing:-

1	☐	At a level lower than his/her potential
2	☐	At a level equal to his/her potential
3	☐	At a level beyond expectations.

Please make any additional comments on the back of this sheet.

APPENDIX 4A

PSYCHOLOGICAL FACTORS AFFECTING WORK PERFORMANCE IN SENIOR NURSING STAFF

Please tick appropriate box

Participant: Sex M ☐ F ☐

Q1. Please indicate the degree of absence from work over the past two years.

1. ☐ Less than 3 days
2. ☐ Between 3 and 10 days
3. ☐ Between 10 and 20 days
4. ☐ Between 20 and 40 days
5. ☐ More than 40 days

Further comments:

Q2. Please indicate the severity of problems in your homelife over the past two years such as marital problems or major problems with children.

1. ☐ Very satisfactory
2. ☐ Quite satisfactory with minor problems
3. ☐ Quite problematic
4. ☐ Very problematic
5. ☐ Extremely problematic

Further comments:

Q3. Please indicate the severity of problems in connection with your work over the past two years. Consider dissatisfaction with your role, conflicts with seniors, peers and subordinates, inability to cope.

1. ☐ Not problematic
2. ☐ Minor problems
3. ☐ Quite problematic
4. ☐ Very problematic
5. ☐ Extremely problematic

Further comments:

Q4. Please indicate your time commitments to outside work activities such as clubs, organisations and societies.

1. ☐ More than 12 hrs/week
2. ☐ Between 8 and 12 hrs/week
3. ☐ Between 4 and 8 hrs/week
4. ☐ Between 2 and 4 hrs/week
5. ☐ Less than 2 hrs/week

Further comments:

Q5. Please indicate the degree to which you consider personal behaviour patterns which you adopt are vital in the relief of work tension e.g. meditation, sport etc.

1. ☐ Extremely important
2. ☐ Very important
3. ☐ Quite important
4. ☐ Not very important
5. ☐ Play no part

Further comments:

General Information

Please describe briefly any events in your life over the past two years which have made you feel very happy or very miserable. For example: Good fortune, success in some area or some misfortune with children, marriage or death of someone close.

APPENDIX 5A

SPIELBERGER ANXIETY

SELF-EVALUATION QUESTIONNAIRE

Name _____ Date _____ T_____

Age _____ Sex: M____ F____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

21.	I feel pleasant	1	2	3	4
22.	I feel nervous and restless	1	2	3	4
23.	I feel satisfied with myself	1	2	3	4
24.	I wish I could be as happy as others seem to be	1	2	3	4
25.	I feel like a failure	1	2	3	4
26.	I feel rested	1	2	3	4
27.	I am "calm, cool and collected"	1	2	3	4
28.	I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
29.	I worry too much over something that really doesn't matter	1	2	3	4
30.	I am happy	1	2	3	4
31.	I have disturbing thoughts	1	2	3	4
32.	I lack self-confidence	1	2	3	4
33.	I feel secure	1	2	3	4
34.	I make decisions easily	1	2	3	4
35.	I feel inadequate	1	2	3	4
36.	I am content	1	2	3	4
37.	Some unimportant thought runs through my mind and bothers me	1	2	3	4
38.	I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
39.	I am a steady person	1	2	3	4
40.	I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

APPENDIX 5A

SPIELBERGER ANXIETY

SELF-EVALUATION QUESTIONNAIRE

Name _____ Date _____ S _____

Age _____ Sex: M____ F____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong 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	Somewhat	Moderately so	Very much so
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I feel strained	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible misfortunes	1	2	3	4
8. I feel satisfied	1	2	3	4
9. I feel frightened	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel indecisive	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel confused	1	2	3	4
19. I feel steady	1	2	3	4
20. I feel pleasant	1	2	3	4