

ORGANIZATIONAL ROLE STRESS AMONG MEDICAL DOCTORS

*A Study of the Effect of Personal and Organizational Factors on
Organizational Role Stress in the Public Healthcare Sector*

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CERTIFICATE

I certify that the PhD thesis entitled “Organizational Role Stress Among Medical Doctors - A Study of the effect of Personal and Organizational Factors on Organizational Role Stress in the Public Healthcare Sector ” submitted by Pia Muriel Cardoso is an original piece of work done by her under my guidance and this work has not been submitted to any other University for the award of Doctor of Philosophy.

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A Study of the effect of Personal and Organizational Factors on Organizational Role Stress in the Public Healthcare Sector

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Abstract

This research focuses on testing the relationship between Personal and Job/Organizational factors on Organizational Role Stress in Medical Doctors. Data was collected from 454 doctors working in the Public Healthcare Sector in Goa. While Role Stress was measured using the ORS scale, ANOVA and t-test was used for testing differences between categories of Age, Gender, Marital Status, Dual Doctor Marriages, Organizational Citizenship, Social Responsibility, Job Engagement, Length of Service and Work Climate.

The study revealed the following:

1. Higher Age, and Longer Length of Service surfaced as factors reducing Organizational Role Stress.
2. Male and Married doctors had lower Role Stress, Unmarried and Female doctors experienced higher Role Stress. Dual-Doctor Marriages were associated with more Role Stress.
3. Organizational Factors such as Organizational Citizenship, Social Responsibility as well as Job Engagement and a better Work Climate had a lowering effect on Role Stress.

The content of the thesis could be summarized as follows:

- a) Study of the Impact of Personal and Job/ Organizational Factors on Organizational Role Stress is an empirical study on the Doctors working in the Public Healthcare Sector in Goa.
- b) Some Demographic and some Organizational factors emerged as contributory factors to Role Stress.
- c) Implication of the study: it offers direction for future research to formulate coping strategies at personal as well as organizational levels.

Key words: Organizational Role Stress, Medical Doctors, Job Engagement, Social Responsibility, Organizational Citizenship.

PREFACE

Stress is a feature of society as a whole, and the ability of doctors to deal with their own stress generally influences their ability to help others to do the same. Stress is an ambiguous word that is used on different occasions to denote positive or negative outcomes, in a physical or emotional context, characterized by high levels of arousal and distress. Stress is most likely to occur in situations where: demands are high; the amount of control an individual has is low; and, there is limited support or help available for the individual. A rapidly changing work situation can also be a major cause of occupational stress.

Role Stress in doctors is a dynamic process that changes in quantity and quality in response to internal and external factors. It has been suggested that the nature of the medical doctors profession leads to stress due to the culture of personal responsibility rather than delegation, and also, the need to provide best care for each patient rather than making trade-offs in a resource constrained environment.

The First Chapter offers an overview of the concept of stress, organizational role stress, and the independent variables chosen for this study.

The Second Chapter presents a literature overview of organizational role stress in relation to doctors in the medical profession, as well as the statement of the problem and the rationale for the present research. In this chapter we derive our hypothesis for the study.

The Third Chapter deals with the research methodology adopted in this study, including the level of significance and validity of various tools used.

Chapter Four presents the analysis and discussion of Personal and Demographic factors in the study, such as Age, Gender, Marital Status and Dual-Doctor marriages.

Chapter Five presents the analysis of the new variables studied namely Organizational Citizenship, Social Responsibility, Job Engagement as well as Length of Service and Work Climate, and their influence on role stress in doctors.

Chapter Six offers the detailed conclusion to the above study including limitations and directions for future research.

Chapter Seven is the complete summary of the thesis.

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CHAPTER ONE

THE PHENOMENON OF STRESS

1.1 Introduction

“The Modern World, undoubtedly a world of achievement, is also a world of stress” (Pestonjee, 1992). Stress is made up of many things; it is a conglomeration of related experiences, pathways, responses and outcomes caused by a range of different events or circumstances. It is a term which although commonly used today, is difficult to define. Further, it is intriguing to note that every individual needs a moderate amount of stress to be alert and capable of functioning effectively in an organization. The presence of stress is, in fact, an asset, as long as it is tolerable and helps in creating healthy competition (Kets de Vries, 1979; Pestonjee, 1987; Mathew, 1985).

1.2 Stress: The Concept

The concept of stress was first introduced by the renowned endocrinologist Hans Selye in 1936. His inspiration came from an experiment in which he injected mice with extracts of various organs. He at first believed he had discovered a new hormone, but was proved wrong when every irritating substance he injected produced the same symptoms; mainly swelling of the adrenal cortex, atrophy of the thymus, gastric and duodenal ulcers. This, paired with his observation that people with different diseases exhibit similar symptoms, led to his description of the effects of "noxious agents" as he at first called it. He later coined the term "stress", which has been accepted into the lexicon of various other languages.

Hans Selye conceptualized the physiology of stress as having two components: a set of responses which he called the "General Adaptation Syndrome", and the development of a pathological state from ongoing, unrelieved stress. (Selye, 1955, 1956,1964). He discovered and documented that stress differs from other physical responses in that stress is stressful whether one receives good or bad news, whether the impulse is positive or negative. He called negative stress "distress" and positive stress "eustress".

The system whereby the body copes with stress, the hypothalamic-pituitary-adrenal axis system, was also first described by Selye. He also pointed to an "alarm state", a "resistance state", and an "exhaustion state", largely referring to glandular states.

1.3 The Evolution of Stress as a Phenomenon

The word 'stress' derives from the Latin language 'stringere' (strictus) that means to tightly bind. It was also used in Old French 'estrecier', which means to tighten and in Middle English where it appeared as 'destresse', 'strisse', or with other similar spelling. This term was used popularly in the seventeenth century to mean 'hardship', 'straits', 'adversity', or 'affliction'. During the eighteenth and nineteenth centuries, the meaning of the word evolved to denote 'force', 'pressure', 'strain', or strong 'effort' (Hinkle, 1973).

Lazarus (1966) described stress as a broad class of problems or demands that exert pressure on the system, and the response to that system. The response however is dependent on the interpretation (consciously or unconsciously) and the significance of a harmful, threatening or challenging event. Kahn and Quinn (1970) went on to define stress as an outcome of designated work that causes harm to the individual.

Mason (1975) reviewed the available literature and concluded that stress could be approached in at least four ways. First, as the stimulus or external force acting on the organism; second, as the response or changes in the physiological functions; third, as the interaction between an external force and the resistance opposed to it, and finally, as a comprehensive phenomenon encompassing all three. In physics, stress is the internal restoration force generated within a solid body when an external force is applied to distort the body. This concept of stress was transferred from physicists to social scientists (Cooper & Marshall, 1978). Lazarus, Cohen, Folkman, Kanner and Schaefer (1980) clarified that stress is not only a response, but also a function of individual appraisal of the situation.

According to the Person-Environment Fit Model, Caplan (1983) explains stress in terms of matching needs and values of a person with the environmental supplies and opportunities to meet these needs and values. Stress is essentially internal, caused by ways in which we relate to the world, events and people around us (Eccles, 1987).

Psychologists have held various approaches to stress including (a) stimulus oriented, (b) response-oriented and the (c) psychodynamic approach (Asthana, 1983). In the stimulus-oriented approach stress is a perceived threat in the form of an external force. Further, the response-oriented approach describes four phases in the reaction to stress - the initial phase of anticipatory threat, the impact of stress, the recoil phase and the post-traumatic phase. The response-oriented approach describes how people react to, and function, under stress. In the psychodynamic approach, threats to the organism, both external and internal, lead to disorganization of personality in the form of stress.

Stress may be induced by interpersonal (external) or intrapsychic (between own impulses and ego) factors resulting in anxiety. The intrapsychic needs call into play mechanisms of perceptual selection, defence and vigilance (Pestonjee, 1992). Beehr and Bhagat (1985) proposed that stress is a function of perceived demands on the individual and the perceived resources and coping strength of the individual, multiplied by the perceived importance of meeting the demands and duration of the situation. National Institute of Occupational Safety and Health (1999) defined stress as an injurious physical and emotional response that arises when workers' abilities and resources do not match the job demands and requirements.

Robbins (2001) defines stress as a dynamic condition in which the individual is confronted with an opportunity, constraint, or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important. Stress can be caused by environmental, organizational, and individual variables (Matteson and Ivancevich, 1999; Cook and Hunsaker, 2001). Experts still do not agree on a common definition of the simple yet controversial concept of stress (Rees and Redfern, 2000). One of the newer definitions states that stress is a feeling of physical and emotional tension, and a feeling of being unable to cope with anxiety and discomfort, particularly in response to change (Vijayashree and Mund, 2011). It is now proposed that the term 'stress' should be restricted to conditions where an environmental demand exceeds the natural regulatory capacity of an organism, in particular situations that include unpredictability and uncontrollability (Koolhas et al., 2011).

1.3.1 Stress as a Response.

Hans Selye's General Adaptation Syndrome (GAS) has been widely held as a comprehensive model to explain the stress phenomenon. This three-stage model

states that when an organism is confronted with a threat, the general physiological response occurs in three stages.

An **alarm reaction** is the first stage and includes an “initial-shock phase” in which resistance is lowered, and a “counter-shock phase” in which defensive mechanisms become active. It is characterized by autonomous excitability; adrenaline discharge, increased heart rate, muscle tone and blood content; and gastrointestinal ulceration. Depending on the nature and intensity of the threat and the condition of the organism, the periods of resistance vary and the severity of symptoms may differ from ‘mild invigoration’ to ‘disease of adaptation’. Maximum adaptation occurs during the second stage, which is the **stage of resistance**. The bodily signs characteristic of the alarm reaction disappear. Resistance increases to levels above normal. In the last stage, however, the **stage of exhaustion**, adaptation energy is exhausted. Signs of the alarm reaction reappear and the resistance level begins to decline irreversibly thus leading to complete collapse of the organism.

Although, the non-specific concept of stress-related illnesses and the General Adaptation Syndrome have had far-reaching influence and significant impact on the conceptualization and understanding of stress, they have been challenged.

A problem that emerged following Selye’s work was that stress was considered as a generic term that subsumed as a large variety of manifestations (Peartin, Lieberman, Menaghan, and Mullan, 1981). This led to disagreement about the actual manifestation of stress, as well as about where in the organism or system, stress is manifest. Pestonjee, notably pointed out a few shortcomings of Selye’s work in his book on the Indian experience of Stress and Coping. (1992).

The first point he made was that Selye had based his research on infra-human subjects where stressors are usually either physical or environmental only.

Secondly Selye's work depended on the existence of a non-specific physiological response. But he noted that certain stimuli, like exercise and fasting, do not produce non-specific responses, hence the General Adaptation Syndrome cannot hold true in such cases.

Thirdly, intrapsychic or social (interpersonal/interactional) factors emerge as major stressors in human beings. These have not been given their due place in this approach. Finally, the reactions of infra-human subjects are more direct, perceptible and easily measurable. This is not true of human subjects as their responses are always mediated through several layers of cultural and social filters.

1.3.2 Stress as an Interaction

This approach focuses on the statistical interaction between **the stimulus and the response**. It is defined as a 'structural' (Stahl, Grim, Donald, and Neikirk, 1975) and a 'quantitative' approach (Straus, 1973). According to Lazarus and Launier (1978), a definition like this which focuses only on the interaction between two variables extends the attempt to only explain a relationship limited to 'structural manipulations'. Hence the interactional approach is limited to causal interaction and outcomes. By contrast, however, this 'transactional model of stress' works to explore the essential nature of stressor-response along with the dynamic stress process contained in it.

1.3.3 Stress as a Relationship between People and the Environment

The third approach defines stress as a relationship between **the individual and the environment** (Lazarus, 1966). Stress can be viewed both as an intrinsic factor as

well as an extrinsic factor depending on the causative factors leading to stress. Stress is experienced due to the factors inherent within an individual's personality or due to factors existing in the environment. From this perspective, therefore, a person has certain abilities, needs and values and there are certain opportunities available in the environment to match the requirement of the person. A mismatch of the same leads to stress.

Woolfolk and Richardson's (1979) model of stress aligns itself to that of Lazarus. It proposes that stress responses are not the direct result of environmental factors, which are neutral in nature and therefore incapable of creating stress reactions. Stress here is seen as a perception of one's mind. Environmental demands exist only in so far as they are perceived. In the opinion of McGrath (1976), there is potential for stress when an environmental situation is perceived as presenting a demand which threatens to exceed the person's capabilities and resources for meeting it, under conditions where he expects a substantial differential in the rewards and the cost from meeting the demand, versus not meeting it.

Edwards, Caplan and Harrison (1998) offer a detailed conceptualization of the relationship between the person and the environment in the 'person-environment (P-E) fit theory'. This has been earlier elaborated on by various researchers (French and Kahn, 1962; French, Rogers & Cobb, 1974; Caplan, Cobb, French, Harrison & Pinneau, 1975; French, Caplan, & Harrison, 1982; Caplan, 1983, Harrison 1978, 1985 and Edwards & Cooper, 1990). In the Person-Environment theory, two types of dimensions are identified; the first dimension reflects the fit between the individuals motives, and the supplies which the organization provides; and the second dimension reflects the fit between the organization's demands from the individual, and the individual's ability to meet the demands. Just as meeting needs and values is fundamental to the continued functioning and existence of the individual, meeting role

demands is fundamental to the continued functioning and existence of the organization (Edwards, Caplan & Harrison 1998).

People do not respond directly to a stimulus as such; they respond to meaning of the stimulus in relation to their perception of the environment. Events can be stressful, only when they are perceived to be threatening. Stress is dependent on the individual appraisal of what is at stake and what resources are available for meeting the demands posed. What is stressful for one person may be normal for others and vice versa. Further, what is stressful for an individual in some situations may not be stressful for the same individual in other situations (Srivastav, 2010).

1.4 Stress and Disease

A number of concepts developed by ancient Indian scholars relate to or appear similar to the phenomenon of stress. These include *dukha* (pain, misery or suffering), *klesa* or *trisna* (desires), *atman* and *ahamkara* (self and ego), *adhi* (mental aberrations) and *prajnaparadha* (failure or lapse of consciousness). The mind-body relationship, characteristic of modern stress, is emphasized in the Ayurvedic system of medicine.

Modern western psychological literature focusing on ideas related to the strength of motives and frustration and their behavioral consequences, the frustration-aggression hypothesis, ego involvement, mind-body interactions and locus of control have their parallels in ancient Indian thought (Pulsane, Bhavasar, Goswami and Evans, 1993).

The ancient Sanskrit words 'klesa' and 'dukha' approximate stress. The 'Samkhya-Yoga' system explains that the fundamental non-cognition which leads to stress is

avidya. *Avidya* leads to *asmita* (self-appraisal), and *abhinivesa* (coping orientation). Faults in either or all of these three appraisals lead to stress and torment. Stresses have been categorized into three types: personal (*adhyatmik*), situational (*adhibhotik*), and environmental (*adhidevik*).

Klesa, as stress has been defined, operates through four different modes. The first is *prosupta* or dormant. The second is *tonu* or tenuous denoting comparatively weak stressors which are held in check by more powerful stressors. They are present but without sufficient intensity. The third is *vichchinna* or intercepted; these lack continuity due to conflict with competing responses. The fourth mode is *udara* or operative stressors. These are potent stress responses which have found full expression (Rao, 1983).

1.4.1 Phases of Stress

Stress has been called 'the most debilitating medical and social problem of the present century' (Nuernberger, 1990). Stress is the result of how our mind and body function and interact. It is psychosomatic-psyche meaning 'mind' and soma meaning 'body'. It is this "dis-ease" created by the abuse of our minds and bodies which manifests through many phases.

Psychic phase: There is a mild, persistent psychological and behavioral symptom of stress such as irritability, disturbed sleep, loss of appetite, etc.

Psychosomatic phase: Symptoms are more pronounced with beginnings of generalized physiological symptoms such as occasional rises in blood pressure and tremors.

Somatic phase: This phase is marked by increased dysfunction of the organs. This marks the beginning of a disease state.

Organic phase: There is a full blown disease state such as stomach ulcers or hypertension.

1.4.2 The Effects of Stress

The effects of work stress occur in three main areas: physiological, emotional and behavioral. Physiological effects of stress include increased blood pressure, increased heart rate, sweating, hot and cold spells, heavy breathing, muscular tension and increased gastrointestinal disorders. Emotional effects of stress include anger, anxiety, depression, low self-esteem, poor intellectual functioning (including an inability to concentrate and make decisions), nervousness, irritability, resentment of supervision and job dissatisfaction. Behavioral effects include poor performance, absenteeism, high accident rates, high turnover rates, high alcohol and drug abuse rates, impulsive behavior and difficulties in communication.

Stress and coronary heart disease are strongly linked. Other serious health problems commonly associated with stress include backaches, headaches, stomach and intestinal problems, upper respiratory problems and various mental disorders.

1.5 The Development of Organizational Role Stress

There are three important sectors of life in which stress originates: (a) job and the organization, (b) the social sector, (c) the intra-psychic sector. The first, namely, job and organization, refers to the totality of the work environment (task, atmosphere, colleagues, compensations, policies, etc). The social sector refers to the social/cultural context of one's life including religion, language, dress and other such factors. The intra-psychic sector encompasses those things which are intimate and personal like temperament, values, abilities and health.

Pestonjee put forth a theory wherein in the initial stage; the magnitude of stress emanating from the three sectors of life is in consonance with the concept of Stress Tolerance Limit (STL) of the individual to handle these stresses. This indicates a balanced state (Pestonjee, 1983). Next, in stage two, job and organizational loads increase and make an impact on the personality. In this stage, we find minor surface changes taking place which are quite manageable. In stage three, job and organizational loads become unmanageable and interact with intrapsychic loads. This is the stage at which the negative consequences of stress become apparent and stress related diseases emerge. Further to this stage, several breakdowns and cracks are visible. If unchecked this culminates in the last and most intense phase, where there is complete disintegration of personality and proper psychological and medical help is necessary.

The behavioral decompensation taking place due to stress tends to get reflected in interpersonal and other reactions. The reactions are received and analyzed by the environment which, in turn, bounces back signals to the individual to bring about a change either at the organismic level or at the response level.

Thus the Stress Tolerance Limit is made up of four vital components: (a) Depression proneness, (b) Anxiety proneness, (c) Anger, and (d) Type A Behavior pattern (Pestonjee, 1983). Depression is an emotional state of dejection, feeling of worthlessness and guilt accompanied by apprehension. Anxiety is a state of emotional tension characterized by apprehension, fearfulness and psychic pain. Mild anger, on a situation specific basis may increase energy and performance levels through the increased release of adrenaline. However substantial chronic anger may wear down the body by overtaking its systemic resources. Type A behavior is a personality profile characterized by speed, impatience, desire for achievement and

perfectionism. These individuals are likely to create stress for themselves in situations that others may find relatively stress free.

1.6 The Concept of Organizational Role Stress.

Pareek (1983a) has defined Role as “any position a person holds in a system (organization) as defined by the expectations of various significant persons, including himself/herself, from that position.”

- **Role Space:** It can be defined as the dynamic interrelationship both between the self and the various roles an individual occupies, and amongst these roles.
- **Role Set:** The individuals’ role in the organization is defined by the expectations of other significant roles, and those of the individual himself/herself. The role set is the pattern of relationships between the role being considered and other roles.

Role Space Conflicts

Role space has three main variables: self, the role under question, and the other roles which the individual occupies. Any conflicts amongst these are referred to as Role Space Conflicts or Role Space Stressors.

- (a) **Inter-role distance (IRD):** It is experienced when there is a conflict between organizational and non-organizational roles.
- (b) **Role Stagnation (RS):** It is the feeling of being stuck in the same role. Such a type of stress results in perception that there is no opportunity for the furthering or progress of one’s career.
- (c) **Self-Role distance (SRD):** When the role a person occupies goes against his/her self-concept, then he/she feels self-role distance type of stress. This is

essentially a conflict arising out of a mismatch between the person and his/her job.

Role Set Conflicts

The conflicts which arise as a result of incompatibility amongst the expectations of the 'significant' others (and of the individual himself/herself) are referred to as role set conflicts or stress. These take the form of:

- (a) **Role ambiguity (RA):** It refers to the lack of clarity about the expectations regarding the role which may arise out of lack of information or understanding. It may exist in relation to activities, responsibilities, personal styles and norms and may operate at three stages: when the role sender holds his/her expectations about the role, when he/she sends it, and when the occupant receives those expectations.
- (b) **Role expectation conflict (REC):** This type of stress is generated by different expectations by different significant persons such as superiors, subordinates and peers, about the same role; and the role occupant's ambivalence as to whom to please.
- (c) **Role overload (RO):** When the role occupant feels that there are too many expectations from the significant others in his/her role set, he/she experiences role overload. There are two aspects of this stress: quantitative and qualitative. The former refers to having too much to do, while the latter refers to things being too difficult and the accountability in the role.
- (d) **Role erosion (RE):** This type of role stress is the function of the role occupant's feeling that some functions which should properly belong to his/her role are transferred to/or performed by some other role. This can also happen when the functions are performed by the role occupant but the

credit for them goes to someone else. Another manifestation is in the form of underutilization in the role.

- (e) **Resource Inadequacy (RI_n):** This type of stress is evident when the role occupant feels that he/she is not provided with adequate resources for performing the functions expected for his/her role.
- (f) **Personal Inadequacy (PI):** It arises when the role occupant feels that he/she does not have the necessary skills and training for effectively performing the functions expected from his/her role.
- (g) **Role Isolation (RI):** This type of role stress refers to the psychological distance between the occupant's role and other roles in the same role set. It is also defined as role distance which is different from inter-role distance (IRD), in the sense that while IRD refers to the distance among various roles occupied by the same individual, role isolation (RI) is characterized by the feelings that others do not reach out easily, indicative of the absence of strong linkages of one's role with other roles.

1.7 The Organizational Role Stress Scale

Several frameworks have been developed for the measurement of role stress. The concept of role stress was introduced by Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964) who identified three role stressors (i.e., role conflict, role ambiguity and role overload). In this framework, role conflict included inter sender conflict, intra sender conflict; inter role conflict, and person role conflict. Based on the framework of Kahn, et al. (1964), a role conflict scale comprising of eight items, and a role ambiguity scale comprising of six items was developed by Rizzo, House and Lirtzman (1970). These two scales were extensively used for role stress research for a long time in spite of controversies about their validity. McGee, Ferguson and Seers (1989) called

for a moratorium on the use of these scales. According to Kelloway and Barling (1990), however, the call for moratorium on the use of these scales was premature.

Only two role stressors were measurable until Beehr, Walsh and Taber (1976) developed a role overload scale comprising three items; role conflict, role ambiguity and role overload, however these three role stressors ill represented the complexities of performance in organizational roles. Pareek (1981) significantly expanded the framework of role stress by identifying eight role stressors which closely represented problems encountered in organizational roles. He developed the Your Feelings About Your Role (YFAYR) Scale, which comprises 40 items to measure inter role distance, role stagnation, role ambiguity, role erosion, role overload, role isolation, role inadequacy and self role distance. The YFAYR scale was improved by Pareek through factor analysis, which led to splitting role ambiguity into a new version of role ambiguity and role expectation conflict; and role inadequacy into resource inadequacy and personal inadequacy. A comprehensive role stress measurement scale comprising 50 items for the measurement of ten role stressors was thus, realized. The new instrument was called the Organizational Role Stress Scale (ORSS) (Pareek 1983b).

A new role stressor called Role Underload has been identified by Srinivasan and Anantharaman (1988) through factor analysis of the YFAYR scale and by Srivastav and Pareek (2008) through factor analysis of the ORS scale. Srivastav (2009) developed the New Organizational Role Stress (NORS) scale comprising 71 items for measuring 11 role stressors, which included Role Underload. Studies on the use of the NORS scale for role stress research are yet to be reported.

The Organizational Role Stress Scale (ORSS) developed by Pareek (1983 a and b) has been selected for this study. The scale has been extensively used for research

on role stress (Pestonjee 1999). The ORSS is certainly one of the best instruments available today for measuring a variety of role stresses (Pareek 1983 a & b). The test-retest reliability of this instrument has been studied in detail and validated by Sen (1981). The scale has been extensively used for research on role stress (Pestonjee, 1999; Tankha, 2006; Ahmady, Changiz, Masiello, & Brommels, 2007; Bhattacharya & Basu, 2007; Lu, 2008; Dasgupta & Kumar, 2009). Gordon (2004) has branded the ORS scale as a classic inventory for the measurement of role stress in organizations.

The ORSS is a 5 point scale indicating how true a particular statement is for the role. The respondent is asked to assign '0' to a statement if he never or rarely feels this way; '1' to a statement if he occasionally feels this way; '2' if he sometimes feels this way; '3' if he frequently feels this way and '4' if he very frequently or always feels this way. Hence the score of each role stress may vary between 0 and 20, and the total ORS score between 0 and 200. The ratings of the respondents can be added row-wise to give the scores on the 10 role dimensions.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

Stress has been defined in medical literature as “Physical, emotional and mental strain resulting from the mismatch between an individual and his or her environment” (Richards 1989). It was described way back in 1994 by Bynoe, as a “three way relationship between demands on a person, that persons feeling about those demands, and their ability to cope with those demands.”

Stress, further has been described as a process which causes or precipitates individuals to believe that they are unable to cope with the situation facing them, and leads them to cultivate feelings of anxiety, tension, frustration and anger which result from the recognition that they are failing in some way and the situation is getting out of their control (Payne and Firth-Cozens, 1987).

2.2 The Magnitude of the Problem

What is it that makes the doctors’ profession so stressful?

This can be attributed to the responsibility for “people” rather than “objects”, and the fact that their actions or omissions have a profound impact on human life (Rees, 1995; Antoniou, 2001). It has always been an accepted fact that stress among physicians, nurses and other health professionals is high (Caplan, 1994; Graham, Ramirez, and Cull, 1996; Al-Aameri and Al-Fawzan, 1998). A study of stress, anxiety and depression in hospital consultants, general practitioners and senior health service managers revealed that 48% of general practitioners scored as “stressed”. In

another study, 27% of men and 28% of women in the general population scored as being stressed (Edwards, Kornacki and Silversin, 2002).

In Weinberg and Creek's study done in 2000, 25 percent to 50 percent of the British National Health Service's staff, including doctors reported distress. The British Medical Association in United Kingdom (2001) conducted a national survey of general practitioners to which 23,521 doctors responded. 21% experienced "excessive and unmanageable" levels of stress while 61% found it "excessive but manageable".

Subsequently, it was shown that the proportion of doctors with an 'above threshold' level of stress is around 28% compared to 18% in the general working population (Firth-Cozens, 2003).

2.3 The Effects of Role Stress on Medical Doctors

Early research has shown high levels of stress, anxiety, and depression in medical practitioners (Firth-Cozens 1995; Chambers & Campbell, 1996). The Working Party Report (1997) of the Association of Anaesthetists of Great Britain and Ireland stated that "a stressed doctor was not necessarily a bad doctor but difficulties could occur when the stress got out of control".

Occupational stress in doctors has long been recognized as being detrimental to their emotional and physical well-being (Kushnir, Rabin, and Azulai, 1997). A study conducted in 1998 in general practitioners, showed that 52% of responders were placed above the cut-off for psychiatric morbidity, roughly twice that in the general population (Appleton, House and Dowell, 1998).

Many subsequent studies have shown high levels of stress in doctors, with psychological morbidity ranging from 19% to 47% (Wall et al., 1997; Hsu and Marshall, 1987; Kapur, Borrill, and Stride, 1998; Firth-Cozens, 1987) compared with a rate of around 18% for the general employed population (Firth-Cozens, 2000). In a study of 300 Lithuanian general practitioners, one half of respondents were found to be suffering from work related psychosocial effects of stress (Vanagas and Bihari-Axelsson, 2005). Such mental problems make health staff in general and doctors in particular susceptible to more physical and emotional morbidity which in turn could have detrimental consequences on their lives (Gautam, 2001). It is now accepted that symptoms like fatigue, emotional burnout, marital and family discord, and even clinical depression regularly afflict more than half of practising medical doctors.

The important fallout related to stress in the medical profession is that the quality of health care administered can be extremely influenced by the stress levels of health staff (Firth-Cozens and Moss, 1998). A study of over 2000 Canadian physicians showed that doctors under stress had more problems with patients, obtained less satisfaction from medical practice, and rated their quality of care lower (Burke and Richardsen, 1990). Perry, Wears, Morey, and Simon (2000) purported that there was a positive association between work stress and the number of errors committed by doctors. A subsequent survey done showed that one third of doctors reported recent incidents in which the symptoms of stress had a negative impact on their patient care, even leading to patients death (Firth-Cozens and Greenhalgh, 1997). It was noticed that such problems were so pervasive that 60% of doctors reported having considered leaving the medical profession (Grenmy, 2006).

Stress may pose such a risk to the doctors own mental and physical wellbeing as to result in burnout (Burke and Descza, 1986; Kirwan and Armstrong, 1995). In a study of stress and job burnout in junior doctors, Schweitzer (1994) showed that 77.8% of

doctors had experienced symptoms consistent with burnout since graduating. Similar results were also reflected in subsequent studies on medical doctors, particularly junior doctors (Antoniou, 1999; Caballero, Bermejo, Nieto and Caballero, 2001; Mc Manus, Winder and Gordon, 2002).

Burnout may lead health professionals to leave the profession completely. Other consequences of burnout on doctors include lowered productivity, increased absenteeism, increased healthcare costs, role and professional conflicts, and difficulty making decisions in a changing health system (Felton, 1998; Johnson et al., 1995). It is pertinent to note that in a state of burnout; caring and job satisfaction are replaced by anger and frustration (Maslach, Jackson and Leiter 1996 ; Williams et al., 2001; Sweet, 2003).

In a study of doctors and dentists in North India, Bhugra, Bhui and Gupta (2008) showed that in comparison with previous studies in the West, when assessed on all three subscales of the Maslach Inventory the burnout rates were very low, particularly in doctors engaged in private practice, which was attributed to a greater degree of autonomy.

It is sad to note that deaths among doctors as a result of suicide, external injury, and poisoning have been found to be high (Office of Population Censuses & Surveys, 1986; Rimpelae, 1989; Sonneck and Wagner, 1996; Juel, Mosbech and Hansen, 1999; Hawton, Clements, Sakarovitch, Simkin, and Deeks, 2001). A systematic review of suicides in European and North American doctors described the relative risk of suicide among doctors as being between 1.1 to 3.4 times for male doctors and 2.5 to 5.7 times for female doctors (Lindeman, Laara, Hakko and Lonnqvist 1996).

A more recent study, however, has reported a heartening low suicide rate among male doctors, as compared to the general population; unfortunately, female doctors still continue to have a higher rate of suicide (Hawton et al., 2001).

2.4 The Stressors in Medical Practice

It is known that work can be an exciting source of challenge, where potentials and capabilities of the self are discovered and utilized. This positive stress perspective has been termed as “eustress”. Yet work is more commonly indicated as one of the most universal and intense kinds of “distress” (Selye, 1956).

Stress at work has been linked to various stressors in differing medical work situations. One of the earlier studies revealed that the major sources of stress for doctors were found to be work overload, the stress of responsibility for people’s welfare, and the omnipresence of illness and death (Bates, 1982).

Work overload has consistently been the main stressor in doctors. A study conducted on 1133 medical consultants working in the UK, reported that work overload; poor administration and resources; administrative responsibilities assumed; and dealing with patients’ pain were perceived as the main sources of stress (Murphy and Hurrell, 1987).

One of the first studies to look at the causes of stress in general practice undertaken by Branthwaite and Ross (1988) found that insecurity about work, role isolation, poor relationship with other doctors, and changing demands of patients were all sources of perceived stress. This was further aggravated by night calls, emergencies during consultation hours, and interruption of family life (Howie, Porter, Heaney & Hopton, 1991; Sutherland and Cooper, 1992; French, McKinley and Hastings, 2001).

Among general practitioners 90% of the respondents felt that inadequate time was the most important problem. Other problem areas included confrontational situations, the stress of uncertainty, and being “on call” (Myerson, 1991; Howie, Hopton, Porter and Heaney, 1991, 1992).

Rout (1999), in a later study, reported that time pressure/interruption, working environment/communication, and career and goal achievement were identified as three main stressors. He observed that general practitioners were reporting less stress than in 1990 caused by disturbance of home life, by emergency calls and night visits. However there was an increase in work pressure due to the stressful work environment, dealing with problem patients and their high expectations, worrying about complaints; adverse publicity by the media, as well as difficulty in finding a locum for leave situations (Sibbald, Enzer, Cooper, Rout and Sutherland, 2000).

Important sources of stress in General Medical Practitioners which have been enumerated are excessive job demands and constraints (Norman, Fitter, and Wall, 1991; Peters, 1995; Schattner and Coman, 1998; Wilhemsson, Faresjo ,Foldevi, and Akerlind, 1998; Charles-Jones and Houker,1999; Scott and Wordsworth, 1999; Sturmberg, 1999; Schieman, Van Gundy, and Taylor, 2001; Shanley, Schulte, Chant, Jasper and Wellard, 2002; Simoens, Scott and Sibbald, 2002; Vanagas,and Bihari-Axelsson, 2004; Irfana, 2012).

Also stressed were the number of working hours (Deary, Blenkin, Raymond, Endler, Zealley, and Wood, 1996; Fielden and Peckar, 1999; Tattersall, Bennett and Pugh,1999; Trimpop, Kirkcaldy, Athanasou, and Cooper, 2000; Kirkcaldy, Trimpop and Cooper, 1997; and Kirkcaldy, Trimpop and Levine, 2002).

Further factors included lack of decision latitude (Vanagas & Bihari-Axelsson 2004), workplace location (Sexton 2003) and lack of organizational support (Branthwaite & Ross 1988; Rout, 1996; Young and Spencer 1996; de Jonge, Mulder, and Nijhuis 1999).

These were compounded by excessive paperwork, health reforms, bureaucratic interference (Simoens , Scott , Sibbald, 2002); dealing with difficult patients(Calnan, Wainwright ,Forsythe ,Wall, and Almond 2001; McGlone and Chenoweth, 2001); and loss of autonomy and greater accountability (Edwards, Kornacki,and Silversin, 2002).

Doctors' competence is under continual evaluation by both clients/patients and colleagues. Their mistakes are highly visible with potentially devastating results for patients as well as the doctors themselves (Payne & Firth-Cozens, 1987). It was noted that there appeared to be a changing trend in the rise of "inappropriate patient demands" coupled with "increasing expectations of what doctors could provide" as a cause of stress, rather than simply an increase in numbers of patient demands (Hayter, Peckam and Robinson, 1996).

Worrying about patients' complaints, criticism, expectations and demands was an important stressor as was a feeling that the media was becoming more hostile and creating a blame culture (Sonneck and Wagner, 1996). Patients are increasingly active consumers and they demand, and have been encouraged to expect enhanced services, including extended hours and rapid access while showing less respect and deference to health professionals (Edwards et al., 2002). At times, politicians too make commitments that health services sometimes cannot deliver (Smith, 2001).

Stress is further exacerbated by the pressure placed on doctors to appear calm and controlled but at the same time remain emotionally involved and concerned with their patients' problems (Sutherland and Cooper, 1990; Kash et al., 2000; Botseas, 2001).

Patients and physicians live and interact in a culture characterized by anger, blame, guilt, fear, frustration, and distrust regarding healthcare errors. The public has responded to this culture by escalating the punishment for error. Clinicians and some healthcare organisations, on the other hand, generally have responded by suppression, stonewalling, and cover-up (Leape et al.1998).

Cooper, Rout and Farragher (1989) had identified four important predictors of job stress in general practitioners: work-home interface, demands of the job, patients' expectations and practice administration. For young physicians, the sources of stress were patient relationships, business/financial issues, time pressure, and competence concerns (Simpson and Grant, 1991).

Studies have associated stress with work overload, keeping up to date, being responsible for the quality of work of other staff, dealing with resource inadequacy, and having to deal with patients' suffering and a lack of autonomy (Caplan, 1994; Ramirez, Graham, Richards, Cull, and Gregory, 1996; Falkum, Gjerberg ,Hofoss & Aaslands,1997; Allen, Hale, Herzberg and Paice,1999; Bonn D and Bonn J, 2000; French, McKinley and Hastings, 2001).

Doctors practicing emergency medicine in the Northern Governorates of Jordan experienced maximum stress due to lack of career development, role overload, responsibility towards patients, role conflict, and role ambiguity (Nusair and Deibageh, 1997).

On the other hand, the Association of Anaesthetists of Great Britain and Ireland in their Working Party Report (1997), listed factors including frustration, conflict and “hassle”, disruption of the circadian rhythms, lack of control and unpredictability at work, or a feeling of being “over-extended”, compounded by the fear of litigation, as also the pressure to pass examinations. Role ambiguity and role conflict were found to be of significant relationship with work stress among 433 employees of seven Kuwaiti governmental sectors (Al-Fadli, 1999).

In the study done in Greece by Antoniou, Davidson and Cooper (2003), the five most important stressors experienced by junior doctors referred to the fear of consequences of their mistakes, the long working hours, the non-supportive supervisors, the lack of sufficient finance and resources, role conflict compounded by role ambiguity. Yet another study found that the most stressful factors in the workplace were coping with the workload, diagnostic uncertainty, working alone and during unsociable hours (Williams, Dale, Glucksman and Wellesley, 1997).

Workload continues to be the most important source of perceived stress in a study done on American doctors. It showed that they put in an average of 58.03 hours a week. This average was not any higher than that of other professionals such as business executives, public accountants, technology professionals and attorneys. However, being “on-call” may have been contributing to the feeling of being overloaded. Not being able to schedule any non-work activity during on call days may have been frustrating (Aziz 2004).

The Physician Morale Survey by the American College of Physician Executives (2006) reported that three fourths of doctors reported stress caused by patient overload, loss of autonomy, loss of respect, lower reimbursements, and bureaucratic red tape.

Ahmady, Changiz, Masiello and Brommels (2007), in an interesting study done in Iran, using the Organizational Role Stress Scale, concluded that role stress was experienced by the faculty at all three medical schools studied by them. High levels of role overload were found among faculty members, followed by role-expectation conflict and resource inadequacy. Stress was mainly attributed to working in a broader and more complex clinical field, more responsibilities for a low "reward", a bureaucratic system with insufficient autonomy, and dealing with the many challenges of the process of reform in medical education.

2.5 Review of Personal and Demographic Factors

2.5.1 Age

Srilatha and Harigopal (1985) reported a significantly negative relationship between role expectation conflict and age. In another study carried out in Saudi Arabia, among healthcare workers, including doctors, both age and experience showed significant negative relationship with work-stress levels (Al-Omar, 2003). Further research by Vanagas & Bihari-Axelsson (2005) highlighted the lower prevalence of stress among older general practitioners.

Spurgeon, Barwell and Maxwell (1995) found, contrastingly, that older general practitioners were more stressed by new contract demands compared to younger doctors, but younger doctors were more stressed by unrealistic patient demands. Griffith, Steptoe and Cropley (1999), showed that younger age group doctors had more role stress. In Saudi Arabia, it was found that among primary health care doctors, stress increased with age, specifically for those more than 50 years of age (Aziz, 2004).

2.5.2 Gender

The majority of research has failed to differentiate between the stressors of men and women, assuming that occupational stress for each is synonymous. When gender is addressed it tends to be as an afterthought rather than as a critical variable which is built into the research design. This omission in research must be seen against a backdrop in which women in medicine can be found in rapidly increasing numbers. Today, women make up over 50 per cent of those entering medical school (Audit Commission, 1995).

It is interesting to note that in most research, little variance has been accounted for by gender (Deaux 1984). Martocchio and O'Leary (1989) conducted a meta-analysis of fifteen studies that had examined gender differences in work stress, and they concluded that there are no gender differences in occupational stress. Further studies by Dua (1994), and Gmelch and Burns (1994) also reflected lack of significant difference between role stress experienced by both genders.

The Bristol Stress and Health at Work Study was a survey of 17,000 randomly selected people from the Bristol electoral register. There were no significant differences in role stress between men and women overall. (Smith A, Johal, Wadsworth, Smith G.D and Peters, 2000). In their study done on junior doctors, Antoniou, Davidson and Cooper (2003) revealed that there were significant differences between male and female junior doctors in certain aspects of pressure, namely, career and achievement pressures and the home/work interface. Overall, however, they too did not find a significant difference between the genders. Kalyani, Panchanata and Parimala (2009) also reported no difference between role stress among males and females.

Following a review of literature, Firth-Cozens (1990) reported that studies which have focused specifically on female doctors have revealed increased stress arising from prejudice, lack of role models and career conflict. Whitley et al. (1991) also revealed higher role stress in female doctors than in male doctors.

Hayes (1986); Blix, Cruise, Mitchell and Blix (1994); and Hendrix, Spencer and Gibson (1994) all found that working women are affected by stressors which are common to both sexes, but, in addition, by others which are unique to women. Conflict between their work and personal lives seems to have been particularly stressful for female doctors (Chambers & Campbell 1996; Bynoe 1994; and Rout 1996).

Roxburgh (1996) posed two possible explanations for the apparent higher levels of psychological distress among women in relation to work:

- a) There are no gender differences in the degree of exposure to workplace stressors, but women are more vulnerable to the effects of stress, or
- b) Women are exposed to a greater magnitude of work stress than men. Females experienced more stress than males in situations of making home visits during adverse weather conditions, fear of assault on night visits, finding a locum, the working environment, lack of emotional support at home, and dealing with friends or relatives as patients (Swanson, Power and Simpson, 1996).

Griffith et al.(1999) showed that women experienced more role stress than men, this was also the case in the study by Barkhuizen and Rothmann (2008). In a study done in Germany, 2500 medical practitioners and auxiliary personnel were interviewed. It was reported that female doctors perceived higher levels of work stress compared to their male counterparts (Kirkcaldy, Brown, Furnham and Trimpop, 2002).

Nelson and Burke (2002) concluded that women are particularly likely to suffer from role overload and inter-role conflict. Parker and Griffin (2002) note the correlation of an environment with high levels of gender harassment with over-performance demands upon the harassed individual. Such over-performance demands ultimately lead to psychological distress. In their study, they reported that 48% of the women reported feeling role overload, whereas only 9% of men responded this way.

Further research such as Vanagas & Bihari-Axelsson (2005) highlighted the highest prevalence of stress among widowed, single, and female general practitioners. Another study showed that overall there was no significance in stress levels between male and female doctors, except in case of inter-role distance and role inadequacy, where male doctors were significantly more stressed than female doctors (Dasgupta and Kumar, 2009).

In Scotland, male general practitioners perceived their work as more stressful and less satisfying than females (Swanson & Power, 1999). Yet female hospital consultants were found to experience more work-related stress than their male colleagues. This finding was attributed to the fact that women were still experiencing difficulties with career advancement in hospital medicine.

World over, a dual-career woman faces work-family conflict. Rani and Muzhumathi (2012) revealed that female doctors had significantly higher inter-role distance, role stagnation, role erosion, role overload and resource inadequacy.

However, Abbas, Roger and Asadullah (2012), in their study showed that very few significant differences were found between men and women for the different organizational role stressors. Only three organizational role stress dimensions, namely inter-role distance, role stagnation and role erosion showed significant

results. Women have significantly higher means than men on inter-role distance and role stagnation. On the other hand men have a significantly higher mean on role erosion.

2.5.3 Marital Status

Earlier studies of Sen (1981) and Kumar (1989) have revealed more stress among unmarried officers, which has been attributed to their comparative lack of security, coupled with higher self esteem, autonomy, and self actualization needs. This may often lead to clashes and interpersonal conflicts (Sen, 1981). Whitley et al. (1991), Griffith (1999) and Vanagas & Bihari-Axelsson (2005) also reported a higher level of role stress among single individuals.

In a study of doctors occupying differing social roles i.e. unmarried, married, or married and mothers; these groups did not differ significantly from each other in terms of experiencing role conflict (Malhotra and Sachdeva, 2005).

Single people were four times more likely to have significant burnout compared to married people, which suggests low levels of emotional support from lack of a confiding partner. It may also indicate social isolation. Single status in the Indian context, especially among professionals, may influence the quality of the doctor-patient relationship where marriage and family are so highly valued (Bhugra, Bhui & Gupta, 2008).

Abbas et al. showed in their study that marital status had no significant impact on role stress (2012).

2.5.4 Dual Doctor Marriages.

Dual-career relationships, where both partners are working in occupations requiring a high degree of involvement and commitment may be seen as sources of compounded or reduced stress in the interface between work and home. On the one hand, similar experiences at work may lead to greater empathy and mutual support between partners (Marshall & Barnett, 1993). Alternatively, involvement in multiple roles may lead to excessive role stress (Sekaran, 1983; Steffy & Ashbaugh, 1986; Lewis & Cooper, 1988; Barnett, 1993), and ultimately affect mental and physical health (Cleary & Mechanic, 1983; Lewis & Cooper, 1987). Hall and Hall (1980) suggested that stress may be lessened where couples phased career stages, did not have children, or worked in related fields.

'Spillover' or transmission of stress between couples also prevails (Fletcher, 1988; Bolger, DeLongis, Kessler & Wethington, 1989; Jones & Fletcher, 1993; Morrison & Clements, 1997) although it has proved difficult to separate the effects of occupational variables from individual personalities which might affect stress or well-being within relationships.

In the workplace, males have traditionally been required to give work precedence over family demands, and it is likely to be the female partner who adapts her career pattern to fit in with family demands (Nadelson, Notman & Lowenstein, 1979; Hiller & Philliber, 1982; Yandoli, 1989). In a study of 39 dual-career partnerships with young children, Karambayya and Reilly (1992) found that most couples divided domestic work on traditional gender lines even where both partners worked full-time.

Studying dual-career doctors specifically, Izraeli (1994) divided partnerships based on the ratio of the husband's to wife's income, into 'conventionals', where men contributed more income and women invested more time in family, 'moderns' where both partners contributed equally, and 'innovatives', where the women contributed more income than her partner. The 'innovatives' made up the smallest proportion (less than 10%) of the sample. Similarly, Tesch, Osborne, Simpson, Murray and Spiro (1992) found that women physicians married to other physicians were more "traditional" in adapting their own career progress to accommodate their partner's careers than women physicians who were not married to doctors. This trend was less marked in younger physicians, suggesting a more egalitarian division of labour.

Studies have suggested that role demands of work and home are additive, with occupation of multiple roles leading to conflicts, stress and strain owing to 'overload' (Sekaran, 1983; Greenhaus & Parasuraman, 1986) and reduced physical and mental well-being. On the positive side, multiple role occupancy may lead to increased satisfaction and well-being (Thoits, 1983; Cooke & Rousseau, 1984; Verbrugge, 1986). However, since most studies have been cross-sectional it has often been difficult to determine the direction of causality, i.e. whether multiple roles lead to increased wellbeing, or whether individuals with more well-being are likely to successfully adopt more social roles. Alternatively, it may be the degree of complexity of roles, in terms of an individual's investment and involvement in that role, which is important, rather than purely the quantity of roles an individual occupies (Cooke & Rousseau, 1984).

Perceived equity of domestic and occupational roles may be a more important factor in home/work conflict than the actual workload contribution of each partner (Lewis & Cooper, 1987). Based on the premise that females have primary responsibility for home life, and males perceive work as primary because of their 'breadwinner' role,

Pleck (1977) also suggested that work to home conflict would be greater for males, whereas the demands of home life were more likely to conflict with work demands for females. Studies of gender differences in the symmetry of the home/work relationship have generally failed to find such differences (Frone et al, 1992, 1997; Swanson, Power and Simpson, 1998), perhaps owing to recent changes in traditional male and female roles within the family and workplace, although one study found that 'overloads' and 'conflicts' at home had a greater impact on work for males than for females (Bolger et al., 1989), and it may be that male managers married to managerial or professional spouses were likely to experience greater role conflict related to the female partner's expectations of egalitarian relationships (Lewis & Cooper, 1988).

Characteristics of medical work may make doctors especially vulnerable to stress between work and home, particularly since a high proportion of doctors are married to other health professionals, or to other doctors. In Allen's (1988) medical school cohort study, 47% of the sample were in dual-doctor marriages. An earlier cohort study of female medical school graduates also identified over half (55%) as being married to doctors or dentists (Ward, 1982). Availability of partners, likelihood of mutual support, empathy and compatibility of areas of interest are offered as reasons for the high number of between-doctor marriages.

However, the advantages of such compatibility may be balanced by negative aspects of careers in medicine. Factors such as heavy workloads, long working hours, emotional commitment and 'burnout', and the need for geographical mobility in pursuit of career goals may be compounded in dual-career partners (Rout, 1996). Partners and families may be affected by stress in the home/work interface.

Conflict and unhappiness in medical marriages is a source for concern, although previous studies have tended to discuss problems faced by partners of male doctors without reference to the female partner's own occupational status (Bates, 1982). Female doctors may fare less well than their male colleagues in establishing and maintaining a successful marriage, with approximately one-third of women doctors remaining single (Allen, 1988) and higher divorce rates being noted for female than male doctors (Myers, 1984). Although the most commonly cited cause of marital conflict for doctors relates to 'time-based' difficulties or long working hours, evidence that this is a causal factor in dysfunctional marital relationships is not conclusive (Gabbard, Menninger & Coyne, 1987; Rout, 1996). Marital or family problems may also affect doctors' work performance (Gabbard et al, 1987; Kirwan & Armstrong, 1995) and increased occupational stress and reduced job satisfaction in doctors in general practice, in particular, have been shown to be related to quality of work performance, especially poor prescribing (Melville, 1980; Grol et al, 1985) and to doctors' and patients' satisfaction with consultations (Howie, Hopton, Heaney & Porter, 1992; Winefield, Murrell, Clifford & Farmer, 1995).

One aspect of medical work, out of hours time spent on call, has been identified as a major stressor for general practitioners (Hallam, 1994; Myerson, 1991). Since time on call is often spent at home, this has important implications for the stressfulness of the 'home work interface'.

Dual-doctor partnerships may be open to as many potential hazards as compensations for both male and female partners. Most previous studies have found home/work role conflicts to be a greater source of stress for female than for male doctors (Izraeli, 1998; Cooper et al, 1989; Sutherland & Cooper, 1993), although few have considered the issue of asymmetric permeability of work to home and home to work stress. Studies have also suggested that division of gender roles may be

predominantly 'traditional' in medical professionals, since the majority of females generally work fewer hours, and have lower earnings than their male counterparts (Weisman & Teitelbaum, 1987; Grant, Simpson, Rong & Peters-Golden, 1990; Izraeli, 1994; Swanson, Power & Simpson, 1996), although female doctors have fewer career breaks and less time out for child rearing relative to women in other professions (Ward, 1982). In a study on dual doctor careers, by Swanson and Power (1999), male doctors perceived their work as more stressful and less satisfying than females. Work stress had a greater impact on home life than home stress had on the workplace, but there were no gender differences in levels of stress from work to home (WH) or home to work (HW). However, more males than females, particularly younger males, reported that work was a source of conflict with their partner. Work to home stress predicted marital conflict for both male and female doctors, whereas home to work stress predicted marital conflict only for females. Time on call out of hours, the ethical commitment to medicine, and work encroaching into family time were identified as major sources of conflict (Swanson and Power, 1999).

2.6 Review on Organizational Factors

The following section of the study presents a detailed overview of the research studies which have been done in the area of organizational functioning. While earlier literature offered a detailed account of demographic factors, it is now imperative that organizational variables be explored in detail. Further, despite a wide range of organizational factors prevailing, the current study focuses on organizational citizenship behavior, social responsibility, job engagement, length of service and work climate.

2.6.1 Organizational Citizenship

Originally defined by Organ (1988), organizational citizenship behavior represents “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization” (Organ, 1988). Research suggests that organizational citizenship behavior is consistently related to organizational effectiveness (Podsakoff and MacKenzie, 1997), while other research has categorized individuals’ behavior in an organization into two dimensions: in-role behavior and extra-role behavior. In-role behavior involves those who do the least possible to maintain membership while extra-role behavior involves those who go beyond the general expectations to promote the effective operation of the organization or to benefit others in the organization. Such extra-role behavior is considered as organizational citizenship behavior. Examples include cooperating with others, orienting new staff, volunteering for extra work, and helping others in their job.

The global village has increasingly welcomed corporate citizenship as a set of business practices desirable not only for society in general, but also for business organizations (Maignan and Ferrell, 2000). Corporate citizenship – also known as corporate responsibility, or responsible business – is a form of corporate self regulation integrated into a business model (Grit, 2004; Kell, 2005; Lam, 2009; Maxfield, 2008; Okoye, 2009; Torres-Baumgarten and Yucetepe, 2009; Wood, 1991). Corporate citizenship is defined as a company’s engagement in activity that appears to advance a social agenda beyond that required by law (Siegel and Vitaliano, 2007).

In contrast to corporate citizenship, individual citizenship in the organization – in which his or her behavior is regarded as organizational citizenship behavior (OCB) – is also considered important for the organizations' sustainability. Note that organizational citizenship behavior is a unique aspect of individual activity at work.

Previous studies have initially proposed two primary dimensions of citizenship behavior: conscientiousness and altruism. Later research added sportsmanship, courtesy, and civic virtue to citizenship behavior. Conscientiousness is discretionary behavior beyond the minimum role requirements expected by an organization. Altruism is characterized as helping behavior that comprises all discretionary behavior that helps a specific person in performing an organizationally relevant task. Sportsmanship encompasses behavior that focuses on what is right rather than wrong in an organization. Courtesy encompasses behaviors such as being mindful of how one's behavior affects others and attempting to avoid creating problems for co-workers. Finally, civic virtue is being constructively involved in an organizations processes and going beyond the minimum required by an individual's immediate job (Organ, 1988).

2.6.2 Social Responsibility

Individual social responsibility may appear to be a new concept in relation to corporate social responsibility, but it is a concept as old as the golden rule — Do unto others as you would have them do unto you. Individual social responsibility expands on this by promoting a proactive stance towards positively influencing and affecting the people and environment outside ones immediate circle. Individual social responsibility is at the root of corporate social responsibility, because a corporate comprises of individuals and hence determines the social responsibility culture it creates. The Workshop for Civic Initiatives Foundation (WCIF), Bulgaria, describes individual social responsibility in its position statement as, "Individual social

responsibility includes the engagement of each person towards the community where he lives, which can be expressed as an interest towards what's happening in the community, as well as in the active participation in the solving of some of the local problems". Everyone of us could take part in our community development in different ways, for example by taking part in cleaning of the clinic or hospital premises, by taking part in the organization of an event, connected with the profession, or by rendering social services to children without parents or elderly people. Social responsibility can be "negative," in that it is a responsibility to refrain from acting (resistance stance) or it can be "positive," meaning there is a responsibility to act (proactive stance).

All social responsibility, both individual and corporate, is voluntary; it is about going above and beyond what is called for by the law (legal responsibility). It involves an idea that it is better to be proactive toward solving a problem rather than just being reactive to a problem. Social responsibility means eliminating corrupt, irresponsible or unethical behavior that might bring harm to the community, its people, or the environment before the behavior happens.

Many people give to charities, invest in socially responsible medical funds, consume green products, dispose of waste in an eco-friendly manner, supply their blood, or give their time and sometimes even their lives for good causes. Such prosocial behaviors obey a complex mix of interdependent motivations. First, they are driven by genuine, intrinsic altruism: to varying degrees, we all aspire to do good and help. Second, material incentives may come into play, for example, we are more likely to give to charities if contributions are tax-deductible. Third, we are also driven by social and self-esteem concerns. Our conduct defines what kind of person we are, in the eyes of others and, no less importantly, in our own eyes (Benabou and Tirole, 2010).

2.6.3 Job Engagement

Job Engagement, also known as employee engagement is a complex, broad construct that subsumes many well researched ideas such as commitment, satisfaction and loyalty. An engaged employee extends himself/herself to meet the organization's needs, takes the initiative, reinforces and supports the organization's culture and values, stays focused and vigilant, and believes he/she can make a difference (Macey, 2006).

Kahn (1990) defined employee engagement as 'the harnessing of organization members' selves to their work roles. In engagement, people employ and express themselves physically, cognitively, and emotionally during role performances. The physical aspect of employee engagement concerns the physical energies exerted by individuals to accomplish their roles. The cognitive aspect of employee engagement concerns employees' beliefs about the organization, its leaders and working conditions. The emotional aspect concerns how employees feel about each of those three factors and whether they have positive or negative attitudes toward the organization and its leaders.. Thus, according to Kahn (1990), engagement means to be psychologically as well as physically present when occupying and performing an organizational role. Engaged employees work with passion and feel a profound connection to their company. They drive innovation and move the organization forward (Gallup, 2004).

In contrast to this, non-engaged employees are sleepwalking through their workday, putting time—but not energy or passion—into their work. They don't have productive relationships with their managers or with their coworkers. Actively disengaged employees aren't just unhappy at work; they are busy acting out their unhappiness. Every day, these workers undermine what their engaged coworkers accomplish.

Most often employee engagement has been defined as emotional and intellectual commitment to the organization (Baumruk, 2004; Richman, 2006; and Shaw, 2005) or the amount of discretionary effort exhibited by employees in their job (Frank, Finnegan and Taylor, 2004).

According to Maslach, Schaufelli and Leiter (2001), six areas of work-life lead to either burnout or job engagement: workload, control, rewards and recognition, community and social support, perceived fairness and values. They argue that job engagement is associated with a sustainable workload, feelings of choice and control, appropriate recognition and reward, a supportive work community, fairness and justice, and meaningful and valued work. Like burnout, engagement is expected to mediate the link between these six work-life factors and various work outcomes. Harter, Schmidt and Hayes (2002) define job engagement as “the individual’s involvement and satisfaction with as well as enthusiasm for work”. Another definition states that employee engagement is the force that motivates and makes the employees put in their best effort to achieve higher performance (Wellins and Concelman, 2005).

Schaufeli, Salanova, Gonzalez-Roma and Bakker (2002) define employee engagement as a positive, fulfilling, work related state of mind that is characterized by three important aspects; vigor, dedication and absorption. Further research has shown that this “three aspect measurement” of employee engagement is stable, reliable and valid (Schaufeli, Bakker and Salanova, 2006; Schaufeli and Salanova, 2007; Burke and El-Kot, 2010).

Vigor is characterized by having a high level of energy and the willingness to exert it in performing work (Burke & El-Kot, 2010). It is the mental presence and attention of the employee while working and the ability and willingness to face challenges and hindrances with full devotion (Coetzee & de Villiers, 2010). **Dedication** is all about being fully involved in one's work and taking pride in one's work (Burke & El-Kot, 2010). It is considered to be the emotional aspect of employee engagement and it includes the time and effort which is exerted by the employee in doing some meaningful work (Coetzee & de Villiers, 2010). **Absorption** refers to profound concentration while working, it is a sense of being fully absorbed in one's work, such that one does not bother about the time and one wishes he had more time to spend on work (Burke & El-Kot, 2010; Coetzee & Rothmann, 2007). Employees' focus on their work makes absorption a cognitive aspect of employee engagement (Coetzee & Villiers, 2010).

Corporate Leadership Council (2004) defined employee engagement as "the extent to which employees commit to something or someone in their organization, how hard they work and how long they stay as a result of that commitment". It is a desirable condition, where an organization connotes involvement, commitment, passion, enthusiasm, focused effort, and energy among employees. So it has both attitudinal and behavioral components (Erickson, 2005). Engagement is the measure of an employee's emotional and intellectual commitment to their organization and its success. It is an outcome of employees' organizational experiences that are characterized by behaviors that are grouped into three categories: say, stay and strive (Hewitt, 2005). Development Dimensions International (DDI, 2005) defined engagement as the extent to which people value, enjoy, and believe in what they do. A leader, according to DDI, must do five things to create a highly engaged workforce. They are: align efforts with strategy; empower people; promote and encourage teamwork and collaboration; help people grow and develop; and provide support and

recognition where appropriate. Robinson, Perryman and Hayday (2004) defined engagement as a “positive attitude held by the employee towards the organization and its values”.

For Seijts and Crim (2006), employee engagement means a person who is fully involved in, and enthusiastic about his or her work. Brown (2006) viewed engagement as a progressive combination of satisfaction, motivation, commitment and advocacy resulting from employees’ movement up the engagement pyramid.

Employee engagement can be considered as cognitive, emotional and behavioral. Cognitive engagement refers to employees' beliefs about the company, its leaders and the workplace culture. The emotional aspect is how employees feel about the company, the leaders and their colleagues. The behavioral factor is the value added component reflected in the amount of effort employees put into their work (Lockwood, 2007).

The word “engagement” has become the focus of considerable interest in the present field of research days. According to Welbourne (2007), engagement is one of the “hottest topics in management”. Frank et al. (2004) recommended that getting the employees engaged is “one of the greatest challenges being faced by the organizations in this decade and beyond”. Indeed in the present age it has been considered as the key contributor in gaining a competitive edge (Saks and Gruman, 2010, 2011).

Mone and London (2010) defined employee engagement as “a condition of an employee who feels involved, committed, passionate, and empowered and demonstrates those feelings in work behavior”. It is thus the level of commitment and involvement an employee has towards their organization and its values. The

organization must work to develop and nurture engagement, which requires a two-way relationship between employer and employee. Thus, employee engagement is a barometer that determines the association of a person with the organization. Employee engagement has also been measured as satisfaction, commitment and discretionary effort (Fine, Horowitz, Weigler, and Basis, 2010). Engaged employees love their work and they maintain an energetic and enthusiastic connection with their work (Schaufeli & Salanova, 2007).

Many researchers studied the effect of job stress on the above mentioned related constructs (Jamal, 1984; Rose, 2003; Coetzee & de Villiers, 2010). Employee engagement is highly affected by job resources (Schaufeli & Bakker, 2004). Job resources provide employees with psychological autonomy and more concentration. Inadequacies of these resources cause stress which affects the employee's work in terms of satisfaction and involvement (Baumeister & Leary, 1995). Coetzee & Rothmann (2007) found that job demands that failed to be fulfilled by the employee cause stress and these job demands like work load are negatively related to work engagement.

The employee's level of energy decreases and his mental attention also gets diverted because of job demands such as work load (Maslach, 1993). When employees cannot concentrate fully, their engagement level decreases (Coetzee & De Villiers, 2010). Job stress and stressors result in burnout that ultimately affects the employee's level of engagement (Schaufeli & Bakker, 2004). Coetzee & de Villiers (2010) found that job stressors such as role ambiguity and lack of job autonomy relate significantly negatively to all the work engagement variables – vigor, dedication and absorption. Their study further reveals that higher the level of job stressors, lower the level of employee engagement. The content and vitality of work culture also

influences engagement of its members (Victor & Cullen 1988; Trevino, 1990; Dickson, Smith, Grojean and Ehrhart, 2001; Dufresne, 2004).

Research findings show that there is a significant and negative relationship between employee engagement and job stress (Iqbal, Khan and Iqbal, 2012).

2.6.4 Length of Service

Junior doctors are considered the most vulnerable group, since they have to adapt to a totally new and demanding environment. Firth-Cozens (1987) in a study which compared junior house officers to other occupational groups indicated that they experienced higher levels of emotional distress and depression. Moreover adverse changes in mood and cognitive performance of juniors after night duties due to sleep deprivation have been reported (Orton and Gruzelier, 1989; Spurgeon & Harrington, 1989). Another study by Houston and Alit in 1997 concluded that British junior doctors experienced significant increases in stress leading to medical errors.

Maladaptive coping behavior, such as high levels of alcohol consumption, smoking, substance abuse and even suicide has been reported in junior doctors as a result of high levels of stress (McKevitt, Morgan, Simpson and Holland, 1995; Kumar and Basu, 2000; Pickard, Bates, Dorian, Greig and Saint, 2000; Newbury- Birch, Walshaw and Kamali, 2001).

In a study done on doctors at junior level and senior level, it was found that in juniors, role erosion and resource inadequacy were dominant stressors while role expectation conflict and personal inadequacy were remote contributors to role stress. On the other hand inter-role distance and role erosion emerged as dominant, whereas role ambiguity and personal inadequacy as remote contributors in the senior

group of doctors. However there was no overall significant difference between the two groups except in the case of inter-role distance which was significantly higher in senior doctors (Pestonjee and Mishra, 1999).

Guthrie, Tattan, Williams, Black, and Bacliocotti (1999) investigated the degree of psychological distress and burnout among three levels of trainees for psychiatrists in three England teaching hospitals. They did not find any significant difference in psychological morbidity across three levels of training, but senior house officers and registrars reported significantly higher levels of burnout than senior registrars and consultants. Dealing with violent patients was the most commonly reported stressor. Griffith et al. (1999) reported a higher level of stress in inexperienced and lower rank individuals.

In contrast Dua (1994); Lease, (1999); Winter, Taylor and Sarros (2000) showed that employees at a senior level experienced more workload and more role overload. Job insecurity (British Medical Association, 1992), the very real fear of unemployment, along with the vague job descriptions and the lack of general facilities, are also common sources of stress in junior doctors (Antoniou et al., 2003). More experienced doctors seem to handle stress better (Aziz, 2004). Regarding the relationship between role stress dimensions and academic ranks, it is quite understandable that professors have low scores in all dimensions compared to the other ranks as they have already reached the apex of their academic careers (Ahmady et al., 2007).

Significant differences were noticed between permanent and probationary faculty with inter-role distance, in which probationary faculty had a higher level of stress. The reason for this was attributed to probationary faculty being less experienced in their role and less aware about the nature of their organizational role, while permanent

faculty are well aware of organizations' demands and therefore are better adjusted to the same. Abbas et al., (2012) on the other hand, found no significant difference in role stress experienced by faculty having varied years of experience.

2.6.5 Work Climate

Organizational work climate and its impact on stress levels of employees have also been greatly studied. Organizational climate refers to how the work environment is perceived by employees who are working in it, and how it influences their behavior. Wendell et al. (2004) describe organizational climate as employees' perception and attitude about the workplace – of its value as a place to work, welcoming or otherwise. An organization's climate also covers employees' perceptions of whether there is autonomy, satisfying interpersonal relations with peers and seniors, satisfaction in their work, and many other work settings (James, 1982). These conditions can also significantly impact their motivation levels, stress level and behavior. Two most important factors that can create employee stress are ineffective supervision and poor teamwork. Kang & Singh (2004) and Gladies & Kennedy (2011) identified stressors at work in which poor organizational climate and structure, lack of inter-personal relations, insensitive supervisors, lack of role clarity and work inhibitors emerged as the main stress factors.

Pestonjee and Mishra (1999) undertook a study with the intention of examining the nature of role stress and job satisfaction among doctors working in different work climates. A group of 35 junior doctors working at primary health centers and another group of 35 senior doctors attached to various district level hospitals, with better staffing and facilities, served as the sample for the study. The results of the study revealed no significant differences between the two groups, except in the management area of job satisfaction and the inter-role distance dimension of role

stress. Further, job satisfaction variables correlated negatively with all the dimensions of role stress in the case of both groups.

Olkinuora et al. (1990) showed that doctors who worked in hospital set ups experienced higher levels of professional burnout than those working in other settings like private practice and research institutions. Wu, Zhu, Li, Wang Z and Wang M (2008) in China found that the main significant predictor of exhaustion in doctors besides role overload was physical environment. The benefit of a good organizational climate on reducing levels of role stress was further stressed upon by Pathak (2012).

Studies have suggested that social support can have a direct effect on the experience of both stressors, and stress outcomes or strains (Fenlason, and Beehr, 1994; La Rocco, House, and French, 1980). Many researchers have also considered the 'buffering' or moderating impact of social support on the relationship between stressors and strains.

In occupational settings, support can be from an employee's immediate senior, and from co-workers. It is also important to acknowledge the interface between work and home life, recognizing that individuals can gain support regarding occupational issues from family and friends external to the work setting. The content of support is generally categorized as 'emotional', offering caring, listening or advice, or 'instrumental' offering practical help in solving problems. Whether support is perceived as emotional or instrumental may also depend on the characteristics of both provider and receiver of support, and many supportive interactions may fulfill both functions.

Social support is widely researched in the field of stress as a coping mechanism. There are various research studies across professions that point to the fact that people spend most of their time working and coordinating with other members within their organization (Eccles and Crane, 1988, Wong, 2004; Kellogg, Orlikowski and Yates, 2006). Support received from one's peers, colleagues and friends has been recognized as an effective mechanism for dealing with the negative impact of stress (Semmer, 2003; Spielberger, Vagg and Wasala, 2003; Haslam and Reicher, 2006 and Narayanan, 2012). Inadequate support from senior staff was an important source of stress in a study done in junior doctors (Dudley, 1990). Firth-Cozens and Morrison (1989) found that the second largest source of stress, after role overload, was poor support of senior doctors.

2.7 Review on the Types of Role Stress

Ten dimensions of role stress developed by Prof. Udai Pareek (1981) have been extensively researched as documented in Chapter One of this study.

2.7.1 Inter-Role Distance (IRD)

An individual occupies more than one role at a time. His organizational role may often come into conflict with his family role or with other organizations or groups. The distance or conflict amongst these various roles represents inter-role distance. Life inside an organization and outside the organization might put pressure on the role player in the form of family problems (Paul & Paul, 1971). Beattie, Darlington and Cripps (1974) have highlighted the difficult situation of the young officer who in order to build up his career must devote a great deal of time and energy to his job just when his young house-bound wife with small children are also making pressing demands. They pointed out that the officer fights to maintain the distance between his wife and the organization (Nelson and Quick, 1985). Srivastav (1997) examined

the dynamics of role stress and found that inter-role distance was associated negatively and significantly with intro-persistent and extra-persistent coping styles. Pestonjee and Mishra (1999) found that inter-role distance was the dominant factor in senior doctors at work.

Inter-role distance is a significant stressor in doctors as was reported by French, McKinley and Hastings (2001) in a study conducted on a Medical Audit Advisory Group in 1993. This was contributed to by work leading to interruption of family life, as well as the lack of emotional support at home. (Bynoe, 1994; Caplan, 1994; Chambers, 1996; Rout, 1996; Falkum et al., 1997; Allen et al., 1999, Bonn D. & Bonn J, 2000).

Further Ahmady (2007) showed that inter-role distance was negatively and significantly related with age, and was higher in doctors dealing with basic sciences. In a study by Dasgupta & Kumar (2009), inter-role distance was significantly more in male as compared to female doctors.

Studies have suggested that the career-family conflict is one of the main sources of stress in working women (Bhatnagar and Bose, 1985; Nelson and Quick 1985; Chambers 1996). Cooper, Rout and Farragher (1989) found that in doctors, the work-home interface was one of the four most important predictors of job stress, and, in the case of women, the most important one.

One third of doctors working in the world are women. Studies done in various countries have consistently highlighted the high significance of inter-role distance in working doctors who are mothers (Germany: Abele and Nitzsche, 2002; Holland: Vroom, 1999; Canada: Bryant, Jennett and Kishimevsky, 1991; England and

Denmark: Bramine 1999, 2003; Norway: Jambu 2000; Poland: Kulik, 2001, Waszkiewicz, Bolanowski, Jasiak and Palczynska, 2004).

Interestingly women over the years have reported considerably less stress in dividing time between work and family, perhaps indicating that they are beginning to successfully renegotiate or redefine the expectations of others (Sibbald et al., 2000). In a survey of female junior doctors, Firth-Cozens (1987) found the largest and most frequent stressor was conflict felt between career and personal life. Women typically maintain major responsibility for home and family. Uhlenberg and Cooney (1990) concluded that the sex-linking of household work is clear, women doctors do not, because they are doctors, relinquish domestic duties. Instead they do almost as much of the household chores as the full-time housewives married to their male counterparts.

The stress associated with balancing family and work roles may be particularly problematic during the period of early career formation. Early career formation often coincides with the early stages of family formation (White, Cox and Cooper, 1992; Allen 1992). In 1987, Cartwright described stress as a product of conflict and bargaining between occupational and traditional gender roles. In some women, this uncompromising desire to fulfill both roles can lead to exhaustion and driven behavior. Cartwright went on to argue that "internal normative value conflicts" can arise leading to additional stresses, unique to women. For women doctors, the interference of the job with family life was the most significant predictor of stress whilst for men it was the joint stressors of practice administration and job demands (Spurgeon and Harrington, 1989).

Cartwright (1987) has suggested that, although women appear to be making choices, they are really making accommodations based on "maximizing role compatibility and minimizing conflict between the sex role and the occupational role".

2.7.2 Role Stagnation (RS)

This stress results in perception that there is no opportunity for one's career progression. Marshall and Cooper (1979) identified two major clusters of potential stressors: lack of job security, fear of redundancy, obsolescence or early retirement, and status incongruity, for example, under or over promotion, frustrations at having reached one's career ceiling. For many workers, their career progression is of overriding importance. The fear of demotion or obsolescence can be strong for those who know they have reached their career ceiling. Role stagnation decreases as people advance in age. Sen (1981) found that people above 50 years of age had the lowest role stagnation. At this level of age, people are generally at the top and senior management cadres, where they carry more responsibilities, greater authority, status and esteem and their prospects of career advancement also increase.

Kedar Nath (1988) has stated that subjects who experience high role stress pertaining to role stagnation, showed less job involvement. Kumar (1989) identified role stagnation to be significantly higher among lower level officers. Srivastav (1997) examined the dynamics of role stress and found that role stagnation was associated negatively and significantly with intro-persistent and extra-persistent coping styles. Pandey (1997) found experience to be positively and significantly associated with role stagnation.

Nusair and Deibageh (1997) reported that lack of career development was the main stressor in doctors working in Jordan. Rout (1999) found in his study of general

practitioners that career and goal achievement was the third main stressor, after time pressure and working environment including communication. Ahmady et al. (2007) also reported a high level of role stagnation in doctors.

2.7.3 Role Expectation Conflict (REC)

This type of stress is generated by different expectations of different significant persons, from the individual occupying the role. It is possible that the significant persons differ in their expectations about the same role and the role occupant is ambivalent as to whom to please. Harigopal (1984) suggested that receiving contradictory instructions from two or more superiors is found to be the most frequently occurring conflict when the immediate superior's instructions contradict the focal person's own job expectations.

Gupta (1988) found that role expectation conflict increases as the length of service increases. It might be possible that as the responsibilities increase gradually, the executive is not able to cope with and understand the expectations of the role made by other authorities and colleagues and concerned people. Kedar Nath (1988) stated that subjects who experience high role stress pertaining to role-expectation conflict show less job involvement.

Ahmed, James and Ahmad (1991) stated that only one dimension of organizational role stress, role expectation conflict, had a significantly negative relationship with extraversion – introversion. Raju and Madhu (1994) revealed that higher level employees experienced lesser role conflict than middle and lower level counterparts who obtained comparable scores. Inappropriate patient demands, unrealistic patient expectations, loss of autonomy, greater accountability and media blame culture were reported as leading contributors to role expectation conflict (Caplan, 1994; Edwards et

al.,1998; Hayter et al.,1996; Sonneck & Wagner,1996; Falkum et al., 1997; Schattner & Coman 1998; Allen et al., 1999; Charles-Jones and Houlker, 1999; Scott and Wordsworth, 1999; Bonn D. & Bonn J., 2000; Simoens et al., 2002 and Vanagas & Bihari-Axelsson, 2005).

Conversely, Pestonjee & Misra (1999) in their study of senior and junior level doctors found role expectation conflict to be the least significant dimension in junior doctors. On the contrary, Pandey (1997) found experience to be positively and significantly associated with role expectation conflict. Sehgal (1997) reported that senior level executives experienced more role expectation conflict and scored higher on total organizational role stress as compared to junior and middle levels. Mishra (1987) in the analysis of the data revealed that public relation officers of public sector experienced significantly higher occupational stress on the dimension of role expectation conflict. Yousef (2000) reported that role expectation conflict independently and negatively affects job satisfaction.

One of the major stressors in doctors has been an unrealistic high expectation by others of the doctors' role (French et al., 2001). Ahmady et al (2007) reported that role-expectation conflict was more in doctors who were older, held a permanent position as faculty, in female doctors, and in those working in clinical fields.

2.7.4 Role Erosion (RE)

This type of role stress is the role occupant's feeling that some functions, which should be belonging to his role, are transferred to, or performed by some other role. This can also happen when the role occupant performs the functions but the credit for them goes to someone else.

Role erosion is higher in the initial years of service and significantly decreases after ten years of service (Gupta, 1988). Sen (1981) also reported a negative relationship between role erosion and length of service. Family size is negatively related with role erosion because a person with a larger family may not want higher responsibilities (Sen, 1981). However, Surti (1982) reported no significant relationship between family size and role erosion among women employees.

Bhatnagar and Bose (1985) indicated the existence of an alienation syndrome in managers because they felt powerless in the face of gradual circumventing of their authority and power in the branches. Erosion of their role leaves many of their capabilities and talents underutilized which is a source of dissatisfaction and stress. In the Indian context, research has surfaced, that executives from public sector banks have accounted for role erosion as a prime source of stress in the organization (Pestonjee, 1992; Sehgal, 1997; Sen, 1981).

Further, Luhadia (1991) stated that role erosion caused maximum stress for middle and junior level officers whereas, Satyanarayana (1995) and Pandey (1997) showed data that role erosion was experienced as a dominant contributor of role stress in high grade jobs. Joshi and Singhvi (1997) indicated that maximum role stress was experienced on the dimension of role erosion. Mohan and Chauhan (1999); Sandra and Frans (2002) as well as Srivastav (2010) have shown that role erosion has emerged as the most prominent stressor in the public sector.

2.7.5 Role Overload (RO)

When the role occupant feels that there are too many expectations from the significant roles in his role set, he experiences role overload (Pareek, 1983 a). There are two aspects of this stress, quantitative and qualitative. The former refers to

having 'too much to do', while the latter, refers to the work being 'too difficult' (French and Caplan, 1970; Marshall & Cooper, 1979). French and Caplan summarize the various research findings by suggesting that both qualitative and quantitative overload produces different symptoms of psychological and physical strain: job dissatisfaction, (Beehr, 1976, 1981; Keenan & Newton, 1984), job tension and lower self-esteem (Margolis and Quinn, 1974).

Role Overload has consistently been the main stressor in doctors work practice. Srilatha (1986) found that people in the age group of 47-58 experienced low role overload. She also reported that executives of about twenty years of service length experience less role overload. Gupta (1988) reported that role overload increases as the length of service increases. As length of service of the executive grows, responsibilities also grow and they feel overloaded.

Kedar Nath (1988) stated that subjects who experience high role stress pertaining to role overload, showed less job involvement. In Murphy & Hurrell's study (1987), work overload and administrative responsibilities assumed, were perceived as sources of stress. Firth-Cozens and Morrison (1989) and Mittal (1992) also concurred that overwork resulted in the higher levels of perceived stress.

Night calls and emergencies in general medical practitioners lead to a feeling of being overwhelmed (Howie, Porter, Heaney and Hopton, 1991; Sutherland and Cooper, 1992; French, MacKinley and Hastings, 2001). For young physicians, the sources of role overload were: dealing with patient relationships, business/financial issues, time pressure, and competence concerns (Simpson and Grant, 1991).

The source of role overload among doctors stressed on the number of hours worked (Bates, 1982; Myerson, 1991; Deary et al.,1996; Ramirez et al.,1996; Fielden & Peckar,1999; Tattersall, Bennett and Pugh,1999).

In a study conducted on doctors practicing emergency medicine in Jordan, the main stressors were found to be qualitative job overload as well as quantitative role overload (Nusair & Deibageh, 1997).

The Working Party Report (1997) of the Association of Anaesthetists of Great Britain and Ireland listed factors including a feeling of being “over-extended” or pressed beyond real or perceived limits at work. Rout (1999) found that patient load, time pressure, interruption, working environment, communication, career and goal achievement were identified as the main stressors in general practitioners. A study by Sibbald et al (2000) showed that there was role overload due to having to arrange hospital admissions and dealing with terminal illness.

In the study done in Iran by Ahmady et al (2007), doctors working in the departments of basic science, those in the older age group, and those holding temporary positions all had negative and significant correlation with role overload. Dasgupta and Kumar (2009) found, in their study of doctors role stress in Shimla, that role overload is the most significant source of role stress.

Workload was the most important source of perceived stress in a study done on American doctors. It showed that they put in an average of 58.03 hours a week. This average was not any higher than that of other professionals such as business executives, public accountants, technology professionals and attorneys. However, being “on-call” may have been contributing to the feeling of being overloaded. Not

being able to schedule any non-work activity during on call days may have been frustrating (Aziz, 2004).

2.7.6 Role Isolation (RI)

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

Marshall and Cooper (1979) have suggested that the nature of the relationship with the boss, subordinates and colleagues is a major source of stress at work. French and Caplan (1972) define poor relations as those, which include low trust, low supportiveness and low interest in listening to and trying to deal with problems that confront the organizational member.

The most notable studies in this area are by Kahn, Wolf, Quinn, Snoek and Rosenthal (1964). French and Caplan's (1972) study came to roughly the same conclusion that mistrust of persons one worked with, was positively related to high role isolation which lead to inadequate communication between people and to psychological strain in the form of low job satisfaction and to feelings of job-related threat to one's wellbeing. Gupta (1988) found that after ten years of service, executives constantly feel isolated from other roles, in contrast to Sen (1981) who found that role isolation has negative correlation with length of service. Sen found that family size is positively related with role isolation because growing family and more responsibilities lead to a feeling of exclusion and loss of linkage.

Bhatnagar and Bose (1985) found that managers felt that their organizational role leaves them with very little time for their other important roles in their personal life. Further, the managers did not feel involved in organizational affairs; this was indicated by their role isolation.

Role isolation was a significant cause of role stress in general practitioners (Branthwaite and Ross 1988). According to Sehgal (1997), junior level workers experienced relatively higher role isolation, while senior level executives scored higher on total organizational role stress as compared to junior and middle levels.

In their study done on the relationship of role isolation and role stress, Ahmady et al (2007) found a lower level of role isolation in doctors working in the departments of basic sciences.

2.7.7 Personal Inadequacy (PI)

This type of stress arises when the role occupant feels that he does not have the necessary skills and training for effectively performing the functions expected from his role. This is found to happen when the organizations do not impart periodic training to enable the employees to cope with the fast changes both within and outside the organization. Kedar Nath (1988) stated that subjects who experience high role stress pertaining to personal inadequacy, showed less job involvement. Kumar (1989) identified personal inadequacy to be significantly higher among lower level executives. Pandey (1997) found experience to be positively and significantly associated with personal inadequacy. Pestonjee & Misra (1999) in their study found that personal inadequacy was the most remote dimension of role stress in both,

junior and senior doctors. Smith (2001) suggested that personal inadequacy could be the result of a gap between what doctors are trained for, and what their work entails.

Personal inadequacy was higher in those working in clinical departments, and it was quite unusual among professors as compared to other ranks (Ahmady et al., 2007). Dasgupta and Kumar (2009), in their study, concluded that personal inadequacy causes more stress in male than female doctors. Abbas et al.(2012), in their study on the impact of organizational role stressors on role stress, showed that personal inadequacy was the second largest contributor to role stress, after role ambiguity.

2.7.8 Self-Role Distance (SRD)

When the role which a person occupies, goes against his self-concept, then he feels self-role distance type of stress. This essentially is a conflict arising out of a mismatch between the person and his job. Sen (1981) found that people above fifty years of age have the lowest self-role distance. Similarly, Srilatha (1986) also reported low self-role distance in the age group of 47-58 years.

On the other hand, Gupta (1988) indicated that self-role distance is higher at the beginning of service among executives; it decreases after five years of service and again increases slightly after ten years of service. Kedar Nath (1988) stated that subjects who experience high role stress pertaining to self-role distance, showed less job involvement. Kumar (1989) and Sehgal (1997) identified self-role distance to be significantly higher among lower level executives. By contrast, Pandey (1997) found experience to be positively and significantly associated with self-role distance. According to Sehgal (1997), junior level executives experienced relatively higher self-role distance, as compared to senior officers. In Ahmady's study (2007), self-role

distance was found to be higher in doctors holding permanent status, while it was less with increase in age, and among female doctors.

2.7.9 Role Ambiguity (RA)

It refers to the lack of clarity about the expectations of role which may arise out of lack of information or understanding. It may exist in relation to activities, responsibilities, personal style, and norms, and may operate at three stages: when the role sender holds his expectations about the role, when he sends it, and, when the occupant receives those expectations.

Role ambiguity has not been elaborately conceptualized in literature (McGrath, 1976; Sarbin and Allen, 1968). Generally, role ambiguity has been defined as the degree to which clear information is lacking regarding the expectations associated with a role, the methods for fulfilling known role expectations and the consequences of role performance (Graen, 1976; Kahn et al., 1964).

Kahn and Quinn (1970) suggested that four different kinds of roles are likely to experience ambiguity: Roles which are new to the organizations, roles which involve expanding or contracting organizations, roles in the organizations exposed to frequent changes in demand, and, roles on processes.

Marshall and Cooper (1979) have pointed out that role ambiguity exists when an individual has inadequate information about his work role, that is, where there is lack of clarity about the work objectives associated with the role, about work colleagues' expectations of the work role, and about the scopes and responsibilities of the job. Both role ambiguity and role conflict were major stressors as revealed by Van-Sel, Brief and Schular (1981).

The negative relationship between age and role ambiguity was supported by Pelitt (1973) and Raju & Madhu (1994) that is, as age increases; one tends to face lesser ambiguity because of routine work. But no significant relationship was obtained by Madhu and Harigopal (1980) in their study. Srilatha and Harigopal (1985) reported a significantly positive relationship between age and role ambiguity amongst managers of the private sector. The higher the level of education, the better the understanding of the job hence lesser the role ambiguity (Malhan, 1983; Zuzan, 1983; Wiggins and Kathlyn, 1985).

Fisher and Gitelsen (1983) reported that factors such as organizational commitment, job involvement, satisfaction with supervisors, tenure, education, and, age were consistently related to role ambiguity. Those with job tenures in the range of 18-25 years were found to experience a greater degree of role ambiguity than managers with job tenures in categories either above or below this range (Srilatha, 1986). But Gupta (1988) found that role ambiguity increases as the length of service increases among public sector executives. Lack of clear direction concerning the organizational goals was found to be among the significant causes of work stress in doctors. (Murphy & Hurrell, 1987).

Pandey (1997) found experience to be positively and significantly associated with role ambiguity. Pestonjee (1999) and Ahmady (2007) reported that role ambiguity was remote in senior doctors, those holding temporary positions, and those in the departments of basic sciences. In the study done by Antoniou et al (2003), role ambiguity was one of the five top stressors in Greek junior doctors. Abbas et al (2012) in their study showed that role ambiguity had the largest impact on role stress.

2.7.10 Resource Inadequacy (RI_n)

This type of stress is evident when the role occupant feels that he is not provided with adequate resources. Pestonjee (1992) reported that resource inadequacy was the most significant dimension causing role stress in junior doctors. Whereas, Satyanarayana (1995) showed data that indicated that resource inadequacy was experienced as a dominant contributor for role stress in high level officers.

Srivastav (1997) revealed that the dynamics of role stress and resource inadequacy were associated positively and significantly with control climate. In yet another study, Ahmady et al. (2007) concluded that resource inadequacy had a negative and significant correlation with years of experience.

In the study done by Antoniou et al. (2003), of the five most important stressors experienced by Greek junior doctors, the fourth was the lack of sufficient finance and resources.

2.8 Rationale for the present research

The justification of personal/demographic factor can be strongly attributed to the relevance of earlier research. Age influences employee commitment (Lynn, Barksdale & Shore 1995). The employee's hierarchical level also affects his/her perception of inequity as well as distributive and procedural fairness (Schminke, Cropanzano & Rupp 2002).

According to Vazquez (2001), since stress is dependent on perception and perception is influenced by personal variables, it can be expected that role stress is dependent on personal variables. Further, role stress is related with job satisfaction (Teas 1983), and job satisfaction is related with personal variables (Asadi, et al. 2008). Estryn-Behar, et al. (1990) studied the relationship between job stress and

personal variables beyond age and gender. This consisted of other variables such as hour of work, type of occupation, shift, number of years of work in hospital, daily travel time to work, marital status, number of children, and the intention to move house for female hospital workers.

Yet another research study by Luecken, et al. (1997) reported the impact of domestic relations to role, irrespective of marital status or social support. Based on the above rationale and justification it is proposed to study role stress across groups formed on the basis of age, hierarchical level, educational qualification, and function performed, in a public sector hospital to examine the impact of personal/demographic factors on organizational role stress. The purpose of this study is to know the impact of Personal and Job/ Organizational factors on Organizational Role Stress in doctors. The Personal/Demographic factors under study are Age, Gender, Marital status and Dual-doctor marriages. Job/organizational factors under study are Organizational Citizenship, Individual Social Responsibility, Job Engagement, Length of Service and Work Climate.

The Problem under study in this research can be stated as: **“What is the impact of age, gender, marital status, dual- doctor marriages as well as organizational citizenship, social responsibility, job engagement, length of service and work climate on organizational role stress among medical doctors working in the public healthcare sector in Goa”.**

2.9 Variables in the Study.

The review of research literature reveals that stress occurs when the abilities of a person are not congruent with the demands of the job, or where obstacles arise in fulfilling these demands. If the organization meets the needs of a person and the person's abilities are useful to the organization, no stress should occur. Stress, thus

can be viewed as the outcome of incongruence or lack of a person-environment fit (Edwards, Caplan and Harrison, 1998). Hence, greater the incongruence of fit, more significant is the level of experienced stress.

Various personal-demographic factors like age, gender, marital status, dual-doctor marriages, and job/organizational factors like organizational citizenship, social responsibility, job engagement, length of service and work climate can act as potential stressors.

The present study focuses on the relationship between the independent personal demographic variables of age, gender and marital status, as well as job/organizational factors including organizational citizenship, social responsibility, job engagement, length of service and work climate, and their effects on the various dimensions of organizational role stress.

a) Age variable

In this variable the level of one's age is studied in relation to Role Stress. The sample is divided into different age groups namely, lower- 20 to 34 years, middle- 35 to 44 yrs, and upper-45 to 60 years. The above age groups were done based on earlier research studies (Kumar 1989, 1997; Fernandes 2009; Srivastav, 2010,).

b) Gender variable

Men and Women react differently to stress levels and hence this variable analyses the responses of male doctors and female doctors to role stress.

c) Marital Status variable

The current sample is divided among doctors who are married and unmarried. Marital status is compared with reference to its impact on role stress.

d) Dual-Doctor Marriages

The sample of married doctors is further split into doctors having doctor spouse, and those married to non-doctors.

e) Organizational Citizenship

Data was analysed based on a 10 dimension scale developed for this study. Analysis of variance among three group namely: Low Medium and High was used based on earlier studies (Fernandes 2009; Srivastav, 2010,)

f) Social Responsibility

Data was analysed based on a 10 dimension scale developed for this study. Analysis of variance among three group namely: Low Medium and High was used based on earlier studies (Srivastav, 2010, Fernandes 2009)

g) Job Engagement.

Data was analysed based on a 10 dimension scale developed for this study. Analysis of variance among three group namely: Low Medium and High was used based on earlier studies (Srivastav, 2010, Fernandes 2009)

The specific design to capture organizational citizenship, social responsibility as well as job engagement uses a new scale comprising of ten dimensions each. A detailed chart reflecting the validity and reliability of this scale is discussed and placed at Chapter Three. Exploratory factor analysis results are place in the Appendix.

h) Length of Service Variable

The sample is divided according to different lengths of service in years. Below 10 years, 11-24 years, and 25 years and above. This variable determines the extent to which the doctor has worked in the public healthcare organization. The above groups were recoded based on earlier research studies (Srivastav, 2010, Fernandes 2009, Kumar 1989, 1997).

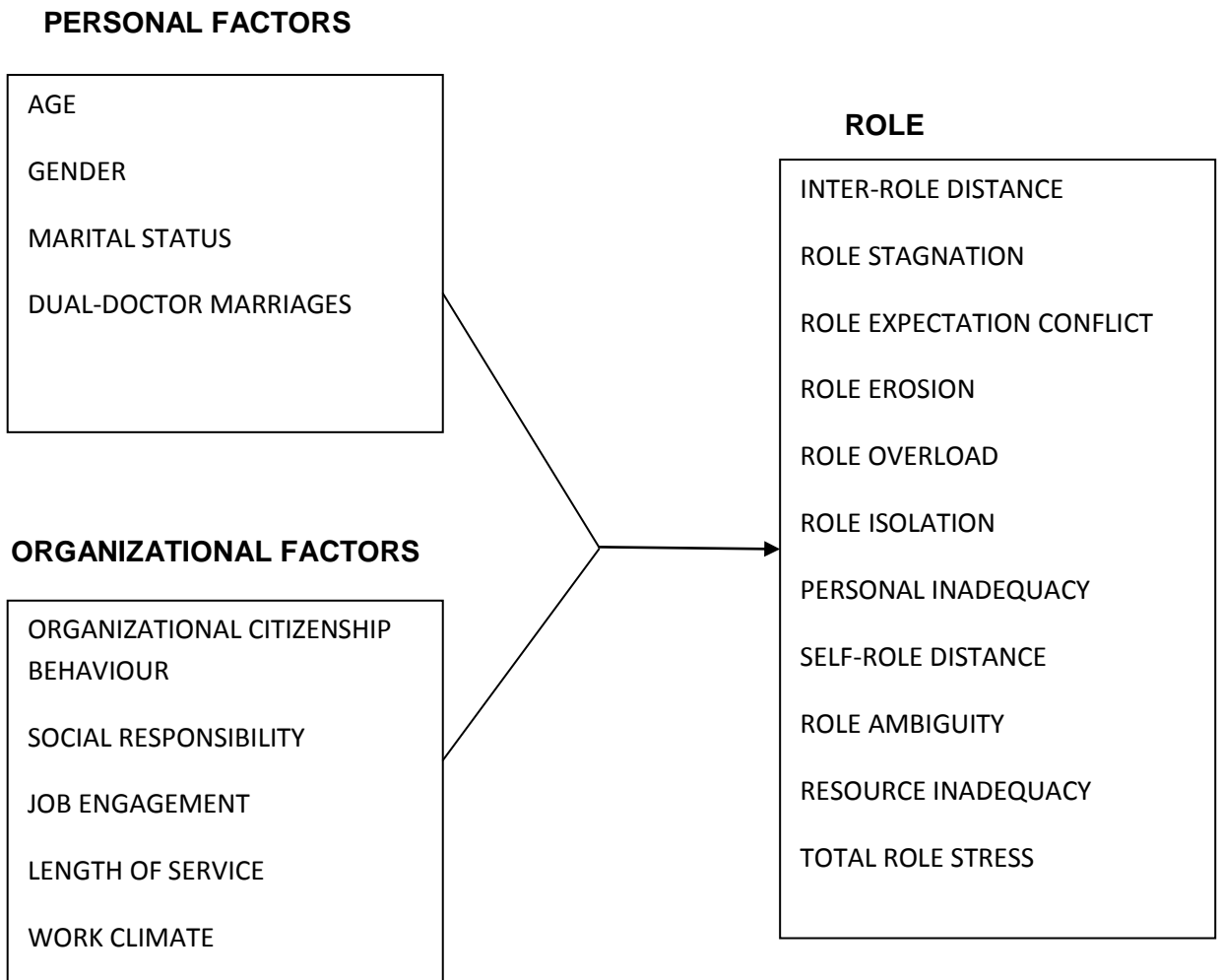
i) Work Climate Variable

Work climate may be defined as the internal influence of surroundings and service conditions and work culture, on an individual. This variable is contributed in the job/organizational factors and it includes four sub-factors such as: Physical Condition of work, Job Equipment, Social Support and Superior Support.

1. Physical condition of work indicates the lighting at work place, the building location, and externals of the workplace, which in turn facilitate working.
2. Equipment for the Job refers to the availability of instruments and drugs that are required for the practice of medicine.
3. Social support refers to the extent of support each doctor receives within the organization through informal and formal interaction with co-workers and colleagues.
4. Superior support refers to the level of support offered to the doctor by way of feedback, appraisal and guidance by senior doctors, in order to make work satisfying.

Finally, the impact of Work climate on role stress is analyzed by taking the total scores of the four factors namely physical conditions at work, equipment for the job, social support, and superior support.

2.10. The Research Model



2.11 The Hypotheses

1. Organizational Role Stress decreases with Age.
2. There will be significant difference between Organizational Role Stress among Male and Female medical doctors
3. There will be significant difference between Organizational Role Stress among Married and Unmarried doctors
4. There will be significant difference between the Organizational Role Stress levels of doctors married to doctors, and doctors married to non-doctors.
5. Organizational Citizenship behavior helps in reducing Organizational Role Stress among medical doctors.
6. Social Responsibility helps in reducing Organizational Role Stress among medical doctors.
7. Job Engagement helps in reducing Organizational Role Stress among medical doctors.
8. Higher Length of Service reduces Organizational Role Stress.
9. Higher levels of Work Climate leads to lower levels of Organizational Role Stress.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1 Selection of Institutions:

Based on the model of study the researcher explored the three types of public healthcare institutions in Goa, namely the Primary Health Centers, the District hospitals in North and South Goa, and Goa Medical College.

3.1.1 Goa Medical College:

Goa Medical College (GMC) is a medical college and hospital in Goa, India. It was built by the Portuguese in 1842 as the *Escola Médico-Cirúrgica de Goa* (Medical-Surgical School of Goa). Originally located in Panaji, the college was moved to Bambolim in the year 1993. It is the oldest medical college in Asia. The college is under the Goa University since 1986 before which it was under the Mumbai University.

Goa Medical College Hospital which now has its headquarters in Bambolim has a long tradition of providing quality services to all sections of the society. The Institute of Psychiatry and Human Behaviour (Bambolim), the TB and Chest Disease Hospital (St. Inez), The Rural Health and Training Centre (Mandur) and the Urban Health Centre (St. Cruz) form part of the establishment. The medical college besides striving to achieve excellence in patient care has been instrumental in training a number of medical professionals who are providing yeomen services to the people in Goa and abroad. The college is affiliated to Goa University, and offers the MBBS course, several MS and MD courses, and some super-specializations. The college employs doctors as medical officers, junior residents, senior residents (residency being a

three year tenure post), and consultants who hold posts of Lecturers, Assistant Professors, Associate Professors and Professors.

3.1.2 District Hospitals and Primary Health Centers

The primary health care infrastructure has been developed as a three tier system - Sub- Centers, Primary Health Centers and Community Health Centers. Sub-Center is the most peripheral contact point between the Primary Health Care System and the community and is manned generally by health workers and a peon/ attendant. Primary Health Center is manned by a Medical Officer supported by para-medical and other staff. Some of the Primary Health Centers have attached hospitals with 12 to 30 beds and are headed by a Health Officer.

The Primary Health Centers act as referral units for the sub-centers and provide curative, preventive, promotive and family welfare services. The Community Health Centers (CHC) are headed by a Health Officer generally with four specialist doctors and a minimum of 30 beds. They serve as referral centers for the Primary Health Centers. In addition, there are Rural Medical Dispensaries (RMDs) in remote and inaccessible areas manned by a resident medical officer and a compounder where regular outpatient clinics are conducted.

The Directorate of Health Services with its network of 5 Community Health Centers, 19 Primary Health Centers (13 with attached hospitals), 172 Sub-Centers, 29 Rural Medical Dispensaries, one Medical Dispensary, provides basic health care services to the people of Goa particularly to those living in rural areas. The two District Hospitals viz. Hospicio Hospital, Margao in South Goa District and Asilo Hospital, Mapusa in North Goa District, and three other specialised /general hospitals viz. Leprosy Hospital, Macasana; T.B. Hospital, Margao; one Cottage Hospital, Chicalim;

under the Directorate also serve as referral Hospitals. There are in all 1234 beds in the hospitals under the Directorate of which 424 beds are attached to Community and Primary Health Centers. There are 17 Dental clinics and other special clinics for implementation of various programs such as Family Welfare, T.B., S.T.D., Malaria, Leprosy, Control of Blindness, etc. There are two Homeopathic Dispensaries (one attached to Urban Health Center, Panaji and the other attached to Community Health Center, Pernem) and one Ayurveda Dispensary (attached to Urban Health Center, Mapusa). There are four Urban Health Centres in the four major towns viz. Panaji, Margao, Vasco and Mapusa and one Medical Dispensary at Sada, Vasco and Sexually Transmitted Disease clinic at Baina, Vasco.

3.2 Sample Size

The selected doctors employed in the various primary health centers, district hospitals, and Goa Medical College in the entire state of Goa were considered. The choice of the sample was restricted to Goa only, primarily because of the cost factor and also to focus on one State as a unit of health activity. The Goa medical scenario consists of primary health centres, district hospitals, Goa Medical College as well as other private hospitals such as Apollo Hospital, Vintage, Trinity Hospital, Manipal Hospital. However since this study was focused on the public sector and in order to capture the impact of role stress in an organizational setting, the present study focused as above, thus catering to convenient sampling. A total number of 513 doctors responded to our request, and 454 questionnaires which were fully completed were accepted for this research.

3.3 Measurement

Two sets of questionnaires have been deployed to measure Personal and Organizational Variables and Organizational Role Stress. The following are the details of the instruments used for this study.

3.3.1 Personal and Organizational Stressors

This questionnaire consisted of personal/demographic factors such as age, sex, marital status, and educational qualification, level of training, and language skills. While the organizational factors were citizenship behavior, social responsibility, job engagement, work grade, level of training, span of control, length of service and work climate. A copy of the questionnaire is placed in the Appendix.

3.3.2 Organizational Role Stress

The scale developed by Pareek (1983 b) was used to measure the extent of role stress among the doctors in the State of Goa. The organizational role stress scale is developed on the Likerts 5-point scale, indicating how true a particular statement is for the scale. The assessment is based on ten different role dimensions, namely Inter-Role Distance (IRD), Role Stagnation (RS), Role Expectation Conflict (REC), Role Erosion (RE), Role Overload (RO), Role Isolation (RI), Personal Inadequacy (PI), Self Role Distance (SRD), Role Ambiguity (RA) and Resource Inadequacy (RIn).

These dimensions have already been explored in Chapter One. The entire questionnaire has 50 items, five for each dimension ranging from 0 to 4.

0. The concerned respondent is asked to rate zero, if he/she never or rarely feels the way the statement describes.
1. One if he/she occasionally (a few times) feels the way described in the statement.
2. Two, if he/she sometimes feels the way.
3. Three, if he/she feels frequently that way.
4. If he/she very frequently or always feels that way.

The total score for each dimension is obtained simply by adding the scores for each particular area. The score on each role stress dimension thus ranges from 0 - 20 as the dimension includes 5 questions each, having minimum 0 and maximum 4. The overall organizational role stress score is obtained by adding the score of all dimensions. The total organizational role stress score thus ranges from 0 – 200. In terms of validity this questionnaire has been worked upon by Sen (1981) by measuring the self consistency of this instrument. He correlated each item with the total score on the instrument for about 500 respondents.

All except two correlations were significant at .001 levels; one at .002 levels another at .008 levels. Hence the result shows high internal consistency of the scale. This construct validity of the instrument has also been tested (Sen, 1981) by factor analysis and it has been found fairly acceptable by its statistical norms. The retest reliability coefficients were calculated for a group of about 500 employees from 3 banks (Sen, 1981). Table 3.1 gives retest reliability for all the 8 stresses, and the total role stress score. As may be seen all the co-efficients, except one, are significant at .001 levels; one coefficient is significant at .003 levels. The scale has acceptable reliability:

Sr. No.	Variable	Coefficient	Levels of Significance
1.	Self Role Distance	.45	.001
2.	Inter Role Distance	.58	.001
3.	Role Stagnation	.63	.001
4.	Role Ambiguity	.65	.001
5.	Role Overload	.53	.001
6.	Role Erosion	.37	.003
7.	Role Inadequacy	.58	.001
8.	Total Role stress	.73	.001

Table 3.1 Retest reliability for the 8 stressors, and the total role stress

The Organizational Role Stress scale is considered to be one of the best instruments for the measurement of ORS. Further it has also been validated and its reliability has been verified (Pareek, 2002). The ORS scale has been branded as a classic inventory for the measurement of role stress in organizations (Gordon, 2004).

3.3.3 Organizational Citizenship Behavior Scale

A new scale was developed to capture Organizational Citizenship Behavior to measure the extent of perception of belonging to an institutionalized profession among the medical doctors. The Organizational Citizenship Behavior scale is developed on the Likert's 5- point scale indicating how true a particular statement is for the scale.

The entire questionnaire has 10 items:

0. The concerned respondent is asked to rate zero, if he/she never or rarely feels the way the statement describes.
1. One if he/she occasionally (a few times) feels the way described in the statement.
2. Two, if he/she sometimes feels that way.
3. Three, if he/she frequently feels that way.
4. If he/she very frequently or always feels that way.

The total score for OCB is obtained simply by adding the scores of all ten questions. The total OCB score thus ranges from 0-40. In terms of validity this questionnaire has been worked out in the current research by measuring the self consistency of this instrument. The questionnaire has been correlated for each item with the total score on the instrument for 454 respondents. Table 3.2a, 3.2b, 3.2c offer the reliability for

this score. The scale has acceptable reliability. Exploratory factor analysis is place in the Appendix.

3.2a - Reliability Statistics for Organizational Citizenship Behavior

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	No of Items
.902	.902	10

3.2b - Inter-Item Correlation Matrix for Organizational Citizenship Behavior

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
M1	1.000	.672	.591	.675	.669	.624	.547	.513	.557	.525
M2	.672	1.000	.539	.554	.643	.577	.435	.452	.483	.486
M3	.591	.539	1.000	.387	.549	.467	.477	.455	.437	.426
M4	.675	.554	.387	1.000	.457	.607	.436	.447	.464	.469
M5	.669	.643	.549	.457	1.000	.428	.479	.397	.476	.459
M6	.624	.577	.467	.607	.428	1.000	.351	.451	.452	.389
M7	.547	.435	.477	.436	.479	.351	1.000	.270	.375	.341
M8	.513	.452	.455	.447	.397	.451	.270	1.000	.310	.344
M9	.557	.483	.437	.464	.476	.452	.375	.310	1.000	.459
M10	.525	.486	.426	.469	.459	.389	.341	.344	.459	1.000

3.2c - Item Total Statistic for Organizational Citizenship Behavior

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
M1	17.94	61.986	.835	.711	.881
M2	17.87	61.456	.743	.580	.886
M3	18.19	64.827	.654	.475	.892
M4	17.87	62.882	.685	.550	.890

M5	17.95	63.574	.692	.553	.890
M6	18.00	63.071	.661	.506	.892
M7	18.33	66.701	.553	.364	.899
M8	18.12	66.267	.545	.338	.899
M9	18.15	66.053	.604	.385	.896
M10	18.06	65.404	.584	.362	.897

3.3.4 Social Responsibility Scale

A new scale was developed to capture Social Responsibility to measure the extent of perception of social responsibility in medical practice, among doctors. The Social Responsibility scale is developed on the Likert's 5- point scale indicating how true a particular statement is for the scale. The entire questionnaire has 10 items:

0. The concerned respondent is asked to rate zero, if he never or rarely feels the way the statement describes.
1. One if he occasionally (a few times) feels the way described in the statement.
2. Two, if he sometimes feels that way.
3. Three, if he frequently feels that way.
4. If he very frequently or always feels that way.

The total score for Social Responsibility is obtained simply by adding the scores of all ten questions. The total Social Responsibility score thus ranges from 0-40. In terms of validity this questionnaire has been worked out by measuring the self consistency of this instrument. The questionnaire has been correlated each item with the total score on the instrument for 454 respondents. Table 3.3a, 3.3b, 3.3c offers the reliability for all the Social Responsibility dimensions and the total Social Responsibility score. The scale has acceptable reliability. Exploratory factor analysis is place in the Appendix.

Table 3.3a - Reliability Statistics for Social Responsibility

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.880	.881	10

Table 3.3b - Inter-Item Correlation Matrix for Social Responsibility

	SR1	SR2	SR3	SR4	SR5	SR6	SR7	SR8	SR9	SR10
SR1	1.000	.539	.486	.533	.488	.502	.444	.443	.419	.384
SR2	.539	1.000	.537	.459	.462	.515	.468	.428	.394	.369
SR3	.486	.537	1.000	.431	.439	.518	.527	.384	.392	.360
SR4	.533	.459	.431	1.000	.408	.383	.368	.382	.357	.332
SR5	.488	.462	.439	.408	1.000	.440	.381	.402	.473	.303
SR6	.502	.515	.518	.383	.440	1.000	.460	.391	.392	.308
SR7	.444	.468	.527	.368	.381	.460	1.000	.377	.392	.360
SR8	.443	.428	.384	.382	.402	.391	.377	1.000	.528	.383
SR9	.419	.394	.392	.357	.473	.392	.392	.528	1.000	.387
SR10	.384	.369	.360	.332	.303	.308	.360	.383	.387	1.000

Table 3.3c- Item-Total Statistics for Social Responsibility

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SR1	24.17	58.624	.679	.484	.863
SR2	24.19	57.419	.667	.465	.863
SR3	24.36	58.200	.651	.457	.865
SR4	24.27	59.318	.575	.363	.870
SR5	24.26	59.216	.602	.385	.868

SR6	24.33	58.206	.620	.416	.867
SR7	24.43	57.897	.599	.384	.868
SR8	24.46	58.187	.591	.384	.869
SR9	24.49	57.888	.593	.401	.869
SR10	24.36	59.715	.500	.264	.876

3.3.5 Job Engagement Scale

A new scale was developed to capture Job Engagement to measure the extent of perception of belonging to an institutionalized profession among the medical doctors. This scale is developed on the Likert's 5- point scale indicating how true a particular statement is for the scale. The entire questionnaire has 10 items:

0. The concerned respondent is asked to rate zero, if he never or rarely feels the way the statement describes.
1. One if he occasionally (a few times) feels the way described in the statement.
2. Two, if he sometimes feels that way.
3. Three, if he frequently feels that way.
4. If he very frequently or always feels that way.

The total score for Job Engagement is obtained simply by adding the scores of all ten questions. . The overall Engagement score is obtained by adding the score of all questions. The total Job Engagement score thus ranges from 0-40. In terms of validity this questionnaire has been worked out in the current research by measuring the self consistency of this instrument. The questionnaire has been correlated each item with the total score on the instrument for about 454 respondents. Table 3.4a, 3.4b, 3.4c offer the reliability for the entire Job Engagement dimension and the total Job Engagement score. The scale has acceptable reliability. Exploratory factor analysis is place in the Appendix.

3.4a - Reliability Statistics for Job Engagement

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.893	.895	10

3.4b- Inter-Item Correlation Matrix for Job Engagement

	JE1	JE2	JE3	JE4	JE5	JE6	JE7	JE8	JE9	JE10
JE1	1.000	.587	.529	.692	.500	.545	.525	.485	.528	.464
JE2	.587	1.000	.497	.535	.518	.624	.484	.410	.519	.454
JE3	.529	.497	1.000	.353	.468	.431	.561	.409	.466	.419
JE4	.692	.535	.353	1.000	.361	.542	.346	.484	.488	.444
JE5	.500	.518	.468	.361	1.000	.295	.531	.429	.400	.316
JE6	.545	.624	.431	.542	.295	1.000	.304	.474	.517	.348
JE7	.525	.484	.561	.346	.531	.304	1.000	.296	.415	.313
JE8	.485	.410	.409	.484	.429	.474	.296	1.000	.444	.424
JE9	.528	.519	.466	.488	.400	.517	.415	.444	1.000	.514
JE10	.464	.454	.419	.444	.316	.348	.313	.424	.514	1.000

3.4c- Item-Total Statistics for Job Engagement

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
JE1	23.39	58.079	.760	.635	.875
JE2	23.26	56.329	.720	.577	.876
JE3	23.66	58.477	.637	.467	.882
JE4	23.23	57.990	.654	.557	.881
JE5	23.39	60.172	.584	.443	.886

JE6	23.35	58.329	.629	.530	.883
JE7	23.54	58.743	.571	.459	.887
JE8	23.51	58.131	.589	.399	.886
JE9	23.50	57.487	.665	.462	.880
JE10	23.36	58.200	.565	.377	.888

3.4 Data Collection

The participants in the proposed study were doctors (men and women) working in the Primary Health Centers, District hospitals and Goa Medical College. 600 questionnaires were distributed to these doctors between November 2010 to March 2012. During the distribution of the questionnaires the researcher explained the purpose of the study to the concerned individual and assured about the confidentiality of their responses. There was generally a good response and interest in filling up the questionnaires. Some respondents added their insight and experiences in the area of stress and hence they were encouraged to talk and share their views. A majority of doctors responded quickly to the questionnaire; however some took over a week while others took a month to submit the completed questionnaires. This was noticed especially in the period between April - May 2011 when receiving the completed forms depended on the doctors returning from their vacation leave. Meeting the doctors and connecting through a few key individuals who were co-operative helped in completing the data collection. Moreover making a number of calls and meeting doctors individually helped in completing the data collection.

3.5 Data Analysis

Mean standard deviation, t-value, Pearson product moment correlation and ANOVA have been calculated with the help of the SPSS software.

CHAPTER FOUR

4. PERSONAL/DEMOGRAPHIC FACTORS

4.1 Introduction

The following chapter analyzes the causal relationship of the Demographic factors on Organizational Role Stress. For the purpose of this study, factors such as Age, Gender, Marital Status and Dual-Doctor Marriages have been considered as independent variables. However Organizational Role Stress, captured through ten dimensions are considered as the dependent variables in the study.

While running the statistical test, age was analyzed on the following coding namely: lower-20 to 34 years, middle- 35 to 44 years and upper- 45 to 60 years.

Gender difference was calculated by dividing the sample into male and female medical doctors.

Marital status results were calculated by dividing the sample based on married and unmarried medical doctors.

Further, the married doctors were divided into those married to doctors, and those married to non-doctors.

The data collected from medical doctors was analyzed using SPSS and the following results explain the findings of the study.

4.2 Demographic Factors and Organizational Role Stress

4.2.1 Age

The mean scores of Total Role Stress of the medical doctors grouped into Lower 20-34 years, Middle 35-44 years and Upper 45-60 years were found to be 107.07, 102.72, and 81.78 respectively, as placed in Table 4.1.

Except for Resource Inadequacy all the role stress dimensions have a similar relationship with age as follows: role stress is highest when age is lowest, role stress is lowest when age is highest, and role stress is at a medium level in middle age.

All these findings are significant at the level of $p < .01$. The correlation results placed at Table 4.2 reveal that total role stress reduces with the increase in age and the results are statistically significant at $p < .01$.

Hence the hypothesis, that "Organizational Role Stress decreases with increase in Age" stands partially confirmed except for Resource Inadequacy.

Table 4.1 : Level of Age and Role Stress of Medical Doctors					
Role Stressors	Age Group	Mean	S.D	F	SIG
IRD	20-34 Lower Age Group	11.75	3.832	80.171	.000
	35-44 Middle Age Group	10.86	2.425		
	45-60 Upper Age Group	7.82	1.877		
RS	20-34 Lower Age Group	12.30	3.548	121.296	.000
	35-44 Middle Age Group	11.83	3.227		
	45-60 Upper Age Group	7.29	2.473		
REC	20-34 Lower Age Group	10.41	4.030	26.809	.000
	35-44 Middle Age Group	10.23	2.421		
	45-60 Upper Age Group	8.06	2.494		
RE	20-34 Lower Age Group	10.96	3.583	42.849	.000
	35-44 Middle Age Group	10.23	2.465		
	45-60 Upper Age Group	7.89	2.943		
RO	20-34 Lower Age Group	9.30	2.453	26.770	.000
	35-44 Middle Age Group	9.43	1.921		
	45-60 Upper Age Group	7.76	2.172		
RI	20-34 Lower Age Group	10.65	2.672	6.121	.002
	35-44 Middle Age Group	9.65	1.836		
	45-60 Upper Age Group	10.19	2.698		
PI	20-34 Lower Age Group	13.13	3.827	93.732	.000
	35-44 Middle Age Group	12.74	2.772		
	45-60 Upper Age Group	8.62	2.792		
SRD	20-34 Lower Age Group	11.04	3.082	71.147	.000
	35-44 Middle Age Group	10.10	1.955		
	45-60 Upper Age Group	7.86	1.944		
RA	20-34 Lower Age Group	8.64	3.586	15.904	.000
	35-44 Middle Age Group	8.34	2.672		
	45-60 Upper Age Group	6.81	2.770		
RIN	20-34 Lower Age Group	8.95	2.739	1.328	.266
	35-44 Middle Age Group	9.31	2.265		
	45-60 Upper Age Group	9.49	3.794		
TRS	20-34 Lower Age Group	107.0	22.73	86.795	.000
	35-44 Middle Age Group	102.72	10.69		
	45-60 Upper Age Group	81.78	17.57		

Table 4.2 Correlation of Age and Role stress

Types of Role Stressors	
IRD	-.475**
RS	-.525**
REC	-.368**
RE	-.396**
RO	-.283**
RI	-.137**
PI	-.495**
SRD	-.500**
RA	-.302**
RIN	-.018
TRS	-.537**

**p<.01 * p<.05

Younger doctors are generally inexperienced and hence are not able to deal with role stress until they mature in their role. As age increases job knowledge increases, the organizational social network expands and their ability to adapt to stress also increases resulting in lower role stress.

The findings are consistent with earlier studies by Srilatha and Harigopal (1985), Griffith et al. (1999), Al –Omar (2003), as well as Vanagas & Bihari-Axelsson (2005). Further, in a study conducted by Spurgeon, Barwell & Maxwell (1995), older general practitioners were more stressed by contract demands compared to younger doctors, but younger doctors were more stressed by unrealistic patient demands.

Aziz (2004), however in his study has revealed that among primary health care doctors, stress increases with age, specifically for those more than 50 years of age.

Resource Inadequacy is experienced when adequate resources (manpower, infrastructure, materials etc.) are not available for carrying out the responsibilities of

the role. Merely rising up in age will logically not solve this operational problem, and in order to reduce Resource Inadequacy, the organizational setup must ensure availability of adequate resources at the workplace for efficient functioning along with regular resource audits.

4.2.2 Gender

Mean scores of total role stress in case of male doctors is 83.83 which is lower than that of female doctors with a score of 111.31 and its t-ratio is -18.188, which is statistically significant as shown in the following table 4.3. Hence the above result placed at table 4.3 reveals that the level of role stress for male doctors is less, compared to the level of role stress for female medical doctors.

The table 4.3 further indicates that male and female medical doctors differed significantly in their mean scores on personal inadequacy ($t=-15.899$), self-role distance ($t= -14.490$, $P<.01$), role stagnation ($t= -12.326$, $P<.01$), role expectation conflict ($t= -12.219$, $P<.01$), inter role distance ($t=-11.175$, $p< .01$), role overload ($t=-9.636$, $P<.01$), and role ambiguity ($t=-9.12$, $p<0.01$).

The correlation results placed at Table 4.4 reveal that Total Role Stress is less in male as compared to female medical doctors, and the result is significant at $p<.01$.

Role Stressors	Table 4.3 - Test of significant difference of Gender and role stress among medical doctors				
	Male N= 233		Female N=221		
	Mean	S.D	Mean	S.D	t- ratio
IRD	8.64	2.776	11.76	3.150	-11.175**
RS	8.58	3.532	12.44	3.144	-12.326**
REC	7.95	2.443	11.26	3.242	-12.219**
RE	8.29	2.964	11.20	3.059	-10.299**
RO	7.88	2.212	9.81	2.035	-9.636**
RI	9.50	2.465	10.94	2.305	-6.426**
PI	9.27	3.130	13.82	2.962	-15.899**
SRD	8.16	2.077	11.29	2.501	-14.490**
RA	6.71	2.667	9.22	3.150	-9.120**
RIN	8.91	3.420	9.57	2.512	-2.352*
TRS	83.83	18.463	111.31	13.458	-18.188**

**p< 0.01, *p<0.05

Table 4.4 Correlation of Gender and Role stress

Types of Role Stressors	
IRD	-.466**
RS	-.500**
REC	-.501**
RE	-.436**
RO	-.413**
RI	-.289**
PI	-.599**
SRD	-.565**
RA	-.396**
RIN	-.109*
TRS	-.647**

**p<.01 *p<.05

Hence the Hypothesis that **“there will be significant difference in the organizational role stress among male and female doctors”** stands confirmed.

There is sufficient evidence to the above hypothesis in the literature that supports that female doctors are stressed consequent to women entering the male dominated paradigm of work culture. Our findings are consistent with those of Hendrix, Spencer and Gibson (1994), who revealed that working women are affected by stressors which are common to both sexes, but also others which are unique to women.

Other studies such as Firth-Cozens (1990) reported that studies which have focused specifically on female doctors have revealed increased stress arising from prejudice, lack of role models and career conflict. Conflict between their work and personal lives seems to have been particularly stressful for female doctors (Hayes, 1986; Whitley et al, 1991; Chambers and Campbell, 1996; Blix et al, 1994; Bynoe,1994; Rout, 1996; Griffith,1999; Kirkcaldy,2002; Vanagas & Bihari-Axelsson, 2005 and Abbas et al.,2012). A survey by Swanson et al. (1996) found lower stress and higher job satisfaction levels in female general practitioners compared to their male counterparts. Yet female hospital consultants were found to experience more work-related stress than their male colleagues. Consultants were also reported to be significantly more stressed than general practitioners on sub-scales of "extrinsic stressors, concerns about management structure, working relationships and achievement". Swanson concluded that women were still experiencing difficulties with career advancement in hospital medicine. Parkhouse and Ellin (1988) have suggested that gender-linked stress can lead women doctors to make important compromises between their personal lives and careers. He reported that women are more likely than men to enter a speciality which is not their first choice. Many women encountered a stage in which they contemplated leaving the rigid structure of hospital

medicine for the greater flexibility of general practice (White, O'Connor and Garrett, 1997).

By contrast Dasgupta & Kumar (2009) reported that male doctors are more stressed than female doctors in the areas of inter-role distance and resource inadequacy. Yet in another study, male doctors in a sample of dual career families of doctors, perceived their work as more stressful and less satisfying than females (Swanson and Power, 1999).

Some studies done have reported no significant differences between role stress between the genders. These include studies done by Deaux (1984); Martocchio & O'Leary(1989); Dua (1994); Gmelch & Burns (1994); Smith et al (2000); Antoniou et al., (2003); Aziz (2007); Kalyani et al. (2009) and Abbas et al. (2012).

4.2.3 Marital Status

Mean scores of total role stress in case of married doctors is 90.79 which is lower than that of female doctors with a score of 102.67 and its t-ratio is 6.17, which is statistically significant (Table 4.5). The level of role stress for married doctors is less compared to the level of stress for unmarried medical doctors except for Role Overload ($t=1.527$) and Resource Inadequacy ($t=.225$). The table further indicates that unmarried medical doctors differed significantly in their mean scores on RS($t=7.490$, $p<.01$), IRD ($t= 6.925$, $p <.01$) RE ($t=4.708$, $p<.01$), RI ($t= 4.170$, $p< .01$), SRD ($t=3.331$, $p<.01$) and RA ($t=2.871$, $p<.01$). This is further reflected in the correlation shown in Table 4.6

Role Stressors	Table 4.5: Role stress among married and unmarried medical doctors				
	Married N=245		Unmarried N= 209		
	Mean	S.D	Mean	S.D	t-ratio
IRD	9.05	2.746	11.09	3.528	6.925**
RS	9.07	3.776	11.64	3.536	7.490**
REC	9.16	3.183	9.91	3.366	2.420*
RE	8.92	3.238	10.37	3.290	4.708**
RO	8.64	2.444	8.97	2.229	1.527
RI	9.68	2.409	10.64	2.481	4.170**
PI	10.39	3.718	12.41	3.632	5.842**
SRD	9.22	2.548	10.08	2.905	3.331**
RA	7.48	2.886	8.32	3.347	2.871**
RIN	9.20	3.362	9.27	2.712	.225
TRS	90.79	20.976	102.67	19.954	6.17**

*p<0.05, **p< 0.01

Table 4.6 Correlation of Marital Status and Role stress

Types of Role Stressors	
IRD	-.304**
RS	-.332**
REC	-.113*
RE	-.216**
RO	-.072
RI	-.192**
PI	-.265**
SRD	-.153**
RA	-.132**
RIN	-.011
TRS	-.279**

**p<.01 *p<.05

The hypothesis that **“There will be significant difference between the stress levels of married and unmarried medical doctors”** stands partially confirmed except for **Role Overload and Resource Inadequacy**.

Role Overload is not impacted by marital status. RO is a feeling of being overwhelmed, and is experienced when there are too many expectations from others in his/her role set. This stress could be best reconciled through dialogue and redefining the role.

Resource Inadequacy is not impacted by marital status as it is experienced by the role occupant when adequate resources are not available to carry out role responsibilities. This could be resolved with necessary resource audit and supply of required resources.

The results obtained are consistent with earlier studies of Sen (1981); Kumar (1989);Whitley et al (1991) and Griffith et al. (1999). More stress among unmarried doctors may be owing to their comparative lack of security, resulting in higher self esteem, autonomy, and greater self actualization needs. It may often lead to clashes and interpersonal conflicts (Sen, 1981).

Single doctors were four times more likely to have significant burnout compared to married doctors. This may be attributed to their role as single individuals, living with their parents and hence being responsible for caring for their parents. Being single, it may be assumed that they don responsibilities of managing their home front on their own, with no spousal support. Also, career assumes the all important parameter in their lifestyle pattern. Further, the role occupant has to deal with low levels of emotional support from lack of a confiding partner. This may also indicate social

isolation in the Indian context, where marriage and family status are so highly valued. (Bhugra, Bhui & Gupta, 2008).

In another study of doctors, the stress in those occupying different marital social roles i.e. unmarried, married, or married and mothers did not differ significantly from each other in terms of experiencing role conflict (Malhotra & Sachdeva, 2005). This was also reflected in the study by Abbas et al. (2012).

4.2.4 Dual Doctor Marriages

Role Stressors	Table 4.7 - Test of significant difference of Doctor and Non Doctor Spouse and role stress among medical doctors				
	DOCTOR SPOUSE N= 138		NON DOCTOR SPOUSE N=107		
	Mean	S.D	Mean	S.D	t- ratio
IRD	10.90	3.034	8.21	3.350	8.232**
RS	11.55	3.582	7.63	3.066	11.597**
REC	10.29	3.143	7.66	2.932	8.400**
RE	10.78	2.955	6.90	2.573	12.991**
RO	9.46	1.972	7.13	2.371	9.799**
RI	10.57	2.251	9.22	2.817	4.824**
PI	12.54	3.301	8.74	3.664	10.642**
SRD	10.62	2.443	7.26	2.032	14.854**
RA	8.49	2.988	6.48	3.169	6.324**
RIN	9.76	2.735	7.86	3.322	5.686**
TRS	104.96	15.990	77.01	19.967	14.078**

*p<0.05, **p <0.01

Table 4.8 Correlation of Dual-Doctor Marriages and Role stress

Types of Role Stressors	
IRD	-.290**
RS	-.298**
REC	-.227**
RE	-.475**
RO	-.453**
RI	-.160**
PI	-.354**
SRD	-.377**
RA	-.121**
RIN	-.155**
TRS	-.433**

**p<.01 *p<.05

“There will be significant difference between the Organizational Role Stress levels of doctors married to doctors, and doctors married to non-doctors” stands confirmed.

Role Stress was significantly higher in doctors who were married to doctors than in those married to non-doctors (t=14.078, p <0.01). This result is also reflected in the correlation Table 4.8.

This study is in conformity with earlier studies which showed that being married to a doctor increases occupational role stress (Sekaran, 1983; Greenhaus & Parasuraman, 1986; Rout, 1996; Swanson and Power, 1999).

From this finding, one can infer that being married to a doctor is associated with aggravated stress levels, rather than being married to a non-doctor. This can be attributed to the fact that a non-doctor can be more supportive, than a doctor spouse who will have a tendency to be judgmental. The non-doctor spouse would be more sympathetic to the doctors’ stress, as against a doctor spouse who may

himself/herself be in a stressful work environment, hence worsening the stressful situation.

There is substantial evidence that medical careers are highly stressful for both male and female doctors (Cooper *et al.*, 1989; Sutherland & Cooper, 1993; Swanson *et al.*, 1996), and demands of medical work have an adverse impact on marital relationships and family life (Gabbard *et al.*, 1987).

One explanation for this may lie in the emotional content of medical work and the strong ethical commitment of the medical profession, whereby the needs or demands of the patient take precedence over the needs of the doctor, and his or her family. For some of those doctors who reported work as being a source of conflict with their partner, the 'patient comes first' ethic was frequently mentioned as a reason for conflict between work and time for self or partner.

This is less likely to occur in other professions, whereas, a sick patient, who is essentially a human being in need of assistance, is the source of conflict. Work demands during 'home' or family time was a major source of conflict for dual-career doctors, mentioned more frequently by males than by females. In this sense 'spillover' of work role or being "on-call" was perceived as a source of stress which may be compounded where both partners have heavy work role demands, as in the medical profession (Swanson & Power,1999).

CHAPTER FIVE

5. ORGANIZATIONAL FACTORS AND ROLE STRESS IN DOCTORS

5.1 Introduction

The chapter will deal with Organizational factors studied in literature and will also contribute to new variables such as Organizational Citizenship, Social Responsibility, Job Engagement, and other variables such as Length of Service and Work Climate.

The need to study the impact of organizational factors on role stress is due to the need to understand the complex phenomenon of how these factors enable reduction or control of stress. Organizational effectiveness is considered as a multi-faceted concept (Cameron, 1978; Georgopoulos & Tannenbaum, 1957; Goodman, Pennings and Associates, 1977; Katz & Kahn 1978).

Stress research has used mainly personal consequences as a measure of organizational effectiveness which have been studied. However the total system as a whole is not clear. The variables studied in this chapter relate to what happens to role stress as a consequence of factors such as Organizational Citizenship, Social Responsibility, Job Engagement, Length of Service and Work Climate.

New variables such as Organizational Citizenship Behavior, Social Responsibility and Job Engagement have been extensively studied in understanding the causal impact on Organizational Role Stress in Medical Doctors.

5.2 Organizational Factors and Role Stress

5.2.1 Organizational Citizenship Behavior

Table no 5.1 furnishes results of Anova between stress levels for different levels of Organizational Citizenship Behavior among Medical Doctors. The Total Role Stress mean scores of medical doctors of the Public sector for the levels of Citizenship Low, Medium and High are 109.63, 101.71 and 91.01 respectively ($F=28.540$, $p<.01$) and the result is statistically significant. The method of studying variance amidst three group has been earlier done by Srivastav (2010), Fernandes (2008, 2009).

Except for RIn, the remaining role stress variables have demonstrated similar relationship with the level of organizational citizenship behavior as follows: Role stress is highest when organizational citizenship behavior is lowest; role stress is lowest when organizational citizenship behavior is high and role stress is at a medium level when organizational citizenship behavior is moderate. All these findings are significant at the level of $p<.01$.

The correlation result placed at table 5.2 clearly indicates that there is an inverse relationship between organizational citizenship behavior and role stress. In other words the degree of role stress decreases with an increase in the individuals' perspective of organizational citizenship behavior.

By undertaking citizenship one is fueled with energy and confidence and the feeling that one is doing a great job to cope with the stressors at the work place. Hence, the confidence and high energy which is the outcome of citizenship helps in reducing role stress.

Table 5.1 – Level of Organizational Citizenship Behavior and Role Stress of Medical Doctors					
Role Stressor	Level of Citizenship	Mean	S.D	F	SIG
IRD	LOW	11.37	3.227	28.976	.000
	MEDIUM	11.36	3.432		
	HIGH	9.10	2.967		
RS	LOW	12.39	3.099	25.565	.000
	MEDIUM	11.42	3.734		
	HIGH	9.35	3.781		
REC	LOW	11.06	3.806	14.949	.000
	MEDIUM	10.03	3.130		
	HIGH	8.86	3.054		
RE	LOW	11.00	3.443	7.851	.000
	MEDIUM	9.84	3.429		
	HIGH	9.25	3.165		
RO	LOW	9.81	2.073	8.038	.000
	MEDIUM	8.74	2.205		
	HIGH	8.57	2.410		
RI	LOW	10.74	2.523	2.352	.096
	MEDIUM	10.24	2.261		
	HIGH	10.02	2.595		
PI	LOW	13.03	3.284	15.183	.000
	MEDIUM	12.18	3.625		
	HIGH	10.63	3.835		
SRD	LOW	11.33	2.796	23.569	.000
	MEDIUM	10.08	2.611		
	HIGH	8.98	2.625		
RA	LOW	9.16	3.618	14.992	.000
	MEDIUM	8.55	3.237		
	HIGH	7.22	2.796		
RIN	LOW	9.74	3.044	1.378	.253
	MEDIUM	9.28	2.741		
	HIGH	9.07	3.171		
TRS	LOW	109.63	19.831	28.540	.000
	MEDIUM	101.71	18.596		
	HIGH	91.01	20.933		

Table 5.2 Correlation of OCB and Role stress

Types of Role Stressors	
IRD	-.354**
RS	-.326**
REC	-.275**
RE	-.211**
RO	-.187**
RI	-.104*
PI	-.279**
SRD	-.316**
RA	-.260**
RIN	-.081
TRS	-.365**

** p<0.01, *p<0.05

Hence based on the above results the hypothesis that “**Organizational Citizenship Behavior helps in reducing Organizational Role Stress among Medical Doctors,**” stands confirmed except for RIn.

Organizational Citizenship Behavior does not help much in reducing RIn. Resource inadequacy is experienced when there are poor resources. Hence to resolve resource inadequacy the organization needs to promote resource audits, and to equip departments with appropriate and adequate tools and instruments for work.

Research suggests that organizational citizenship behavior is consistently related to organizational effectiveness (Podsakoff and MacKenzie, 1997), while other research has categorized individuals' behavior in an organization into two dimensions: in-role behavior and extra-role behavior. In-role behavior involves those who do the least possible to maintain membership while extra-role behavior involves those who go beyond the general expectations to promote the effective operation of the organization or to benefit others in the organization. Such extra-role behavior is

considered as organizational citizenship behavior. Examples include cooperating with others, orienting new staff, volunteering for extra work, and helping others in their job.

While there is substantial literature on the importance of citizenship in building behavior in an organization, there is no reported evidence of the relationship between organizational citizenship and organizational role stress in medical doctors studied in literature and hence this needs to be further investigated.

5.2.2 Social Responsibility

Table no 5.3 furnishes results of Anova between stress levels for different levels of Social Responsibility among medical doctors. The total role stress mean scores of medical doctors of the Public sector for the levels for Social Responsibility for Low, Medium and High are 121.48, 102.95, and 91.65 respectively, ($F=37.873$, $p<.01$) and the result is statistically significant. The method of studying variance amidst three group has been earlier done by Srivastav (2010), Fernandes (2008, 2009).

It is interesting to note that all the role stress dimensions have demonstrated a similar relationship with the level of Social Responsibility as follows: Role stress is highest when Social Responsibility is low; role stress is lowest when Social Responsibility is high and role stress is at a medium level when Social Responsibility is moderate. All these findings are significant at the level of $p<.01$.

The Correlation results placed at table 5.4 clearly indicates that there is an inverse relationship between Social Responsibility and Role Stress. In other words the degree of role stress decreases with the increase in the perspective of Social Responsibility.

Table 5.3 Level of Social Responsibility and Role Stress of Medical Doctors					
Role Stressors	Level of Social Responsibility	Mean	S.D	F	SIG
IRD	LOW	11.44	3.042	7.459	.001
	MEDIUM	10.77	3.350		
	HIGH	9.69	3.296		
RS	LOW	13.15	2.537	8.917	.000
	MEDIUM	10.75	3.760		
	HIGH	10.04	3.917		
REC	LOW	13.37	3.628	53.973	.000
	MEDIUM	10.83	3.090		
	HIGH	8.49	2.833		
RE	LOW	11.74	2.850	6.856	.001
	MEDIUM	9.93	3.271		
	HIGH	9.38	3.354		
RO	LOW	10.74	.984	13.779	.000
	MEDIUM	9.09	2.503		
	HIGH	8.48	2.223		
RI	LOW	12.07	2.659	11.932	.000
	MEDIUM	10.49	2.178		
	HIGH	9.85	2.544		
PI	LOW	14.70	2.771	23.263	.000
	MEDIUM	12.43	3.985		
	HIGH	10.64	3.494		
SRD	LOW	12.67	2.304	25.633	.000
	MEDIUM	10.15	2.661		
	HIGH	9.13	2.653		
RA	LOW	11.22	3.490	35.629	.000
	MEDIUM	8.87	3.136		
	HIGH	7.09	2.783		
RIN	LOW	10.37	3.027	5.256	.006
	MEDIUM	9.66	2.948		
	HIGH	8.89	3.023		
TRS	LOW	121.48	11.524	37.873	.000
	MEDIUM	102.95	17.858		
	HIGH	91.65	21.235		

Table 5.4 Correlation of Social Responsibility and Role stress

Types of Role Stressors	
IRD	-.235**
RS	-.242**
REC	-.391**
RE	-.176**
RO	-.199**
RI	-.224**
PI	-.301**
SRD	-.285**
RA	-.341**
RIN	-.133**
TRS	-.378**

** p<0.01, *p<0.05

Hence based on the above results the hypothesis that **“Social Responsibility helps in reducing Organizational Role Stress among Medical Doctors” stands confirmed**”. By undertaking Social Responsibility one is fueled with the zeal of being in charge of one’s action and this offers the medical doctors a sense of responsibility that in turn reduces the impact of stressors at the work place. All social responsibility, both individual and corporate, is voluntary; it is about going above and beyond what is called for by the law. It involves an idea that it is better to be proactive toward solving a problem rather than just being reactive to a problem.

While there is substantial literature on the importance of Social Responsibility in building behavior in an organization, there is no reported evidence of the relationship between Social Responsibility and Organizational Role Stress in doctors and this aspect needs to be further studied.

5.2.3 Job Engagement

Table no 6.1 furnishes results of Anova between stress levels for different levels of job engagement among medical doctors. The method of studying variance amidst three group has been earlier done by Srivastav (2010), Fernandes (2008, 2009).

The total role stress mean scores of medical doctors of the Public sector for the levels of job engagement for Low, Medium and High are 121.48 102.91 and 91.54, (F=38.256 , $p<.01$) and the result is statistically significant.

It is interesting to note that all the role stress dimensions have demonstrated a similar relationship with the level of Job Engagement as follows: Role stress is highest when Job Engagement is low, role stress is lowest when Job Engagement is high and role stress is at a medium level when Job Engagement is moderate. All these findings are significant at the level of $p<.01$.

The Correlation results placed at table 5.6 clearly indicates that there is an inverse relationship between Job Engagement and Role stress.

In other words the degree of role stress decreases with the increase in the perspective of Job Engagement in all role dimensions.

Role Stressors	Level of Job Engagement	Mean	S.D	F	SIG
IRD	LOW	11.44	3.042	7.492	.001
	MEDIUM	10.76	3.321		
	HIGH	9.68	3.312		
RS	LOW	13.15	2.537	8.908	.000
	MEDIUM	10.74	3.752		
	HIGH	10.03	3.923		
REC	LOW	13.37	3.628	56.680	.000
	MEDIUM	10.86	3.067		
	HIGH	8.44	2.819		
RE	LOW	11.74	2.850	6.965	.001
	MEDIUM	9.94	3.256		
	HIGH	9.37	3.362		
RO	LOW	10.74	.984	14.655	.000
	MEDIUM	9.12	2.500		
	HIGH	8.45	2.215		
RI	LOW	12.07	2.659	11.763	.000
	MEDIUM	10.48	2.160		
	HIGH	9.85	2.557		
PI	LOW	14.70	2.771	22.733	.000
	MEDIUM	12.39	3.957		
	HIGH	10.64	3.513		
SRD	LOW	12.67	2.304	26.141	.000
	MEDIUM	10.16	2.640		
	HIGH	9.12	2.661		
RA	LOW	11.22	3.490	35.885	.000
	MEDIUM	8.86	3.107		
	HIGH	7.08	2.795		
RIN	LOW	10.37	3.027	4.852	.008
	MEDIUM	9.62	2.937		
	HIGH	8.90	3.034		
TRS	LOW	121.48	11.524	38.256	.000
	MEDIUM	102.91	17.686		
	HIGH	91.54	21.329		

Table 5.6 Correlation of Job Engagement and Role stress

Types of Role Stressors	
IRD	-.235**
RS	-.242**
REC	-.390**
RE	-.176**
RO	-.199**
RI	-.224**
PI	-.301**
SRD	-.285**
RA	-.341**
RIN	-.132**
TRS	-.378**

**p<.01, *p< .05

Hence based on the above results the hypothesis that **“Job Engagement helps in reducing Organizational Role Stress among Medical Doctors stands confirmed”**. By undertaking Job Engagement one is fully immersed in the activity of the role and this leads to a reduction in the stress levels experienced.

Role stress and stressors, in turn, result in burn out that ultimately affects the employee’s level of engagement (Schaufeli & Bakker, 2004). Coetzee & de Villiers (2010) found that job stressors such as role ambiguity and lack of job autonomy relate significantly negatively to all the work engagement variables – vigor, dedication and absorption. This study further reveals that higher the level of job stressors, lower the level of job engagement.

Earlier studies have shown that there is significant and negative relationship between employee engagement and job stress (Iqbal et al. 2012). Many researchers studied the effect of job stress on the above mentioned related constructs (Jamal, 1984; Rose, 2003; Coetzee & de Villiers, 2010).

Employee engagement is highly affected by job resources (Schaufeli & Bakker, 2004). Job resources provide employees with psychological autonomy and more concentration.

Inadequacies of these resources cause stress which affects the employee's work in terms of satisfaction and involvement (Baumeister & Leary, 1995). Coetzee & Rothmann (2007) found that job demands that failed to be fulfilled by the employee cause stress and these job demands like work load are negatively related to work engagement.

While there is substantial literature on the importance of Job Engagement in building behavior in an organization, there is no reported evidence of the relationship between Job Engagement and Organizational Role Stress in medical doctors in literature and hence this relationship needs to be further investigated.

5.2.4 Length of Service

The mean scores of each role variable for the three levels of Length of Service (Below 10 years, 11-24 years and 25 years and above) are tabulated with level of significance using Anova, seen in Table 4.5. Three levels of age group based on earlier studies (Srivastav, 2010, Fernandes 2009, Kumar 1989, 1997). However the Total Role Stress mean scores were found to be 105.56, 93.99 and 79.86 with $F=60.102$. ($p<.01$) which is statistically significant.

Except for RI and RIn the remaining role stress variables have demonstrated similar relationship with the level of length of service as follows: Role stress is highest when length of service is low, role stress is lowest when length of service is highest and role stress is at a medium level when length of service is moderate. All these findings are significant at the level of $p<.01$.

The correlation results placed at Table 5.8 reveals an inverse relationship between Length of Service and Organizational Role stress except for RIn and the results are found statistically significant at $p<.01$.

Role Stressors	Length of Service	Mean	S.D	F	SIG
IRD	Below 10 years	11.41	3.603	47.466	.000
	11 to 24 years	9.50	2.614		
	25 and Above	7.82	1.814		
RS	Below 10 years	12.51	3.155	100.69	.000
	11 to 24 years	8.96	3.503		
	25 and Above	7.38	2.891		
REC	Below 10 years	10.47	3.700	24.520	.000
	11 to 24 years	9.17	2.391		
	25 and Above	7.76	2.505		
RE	Below 10 years	10.32	3.494	20.636	.000
	11 to 24 years	9.89	2.843		
	25 and Above	7.73	2.933		
RO	Below 10 years	9.06	2.287	17.979	.000
	11 to 24 years	9.22	2.303		
	25 and Above	7.51	2.056		
RI	Below 10 years	10.29	2.470	.415	.661
	11 to 24 years	10.16	2.738		
	25 and Above	10.01	2.118		
PI	Below 10 years	13.26	3.543	80.483	.000
	11 to 24 years	10.48	3.284		
	25 and Above	8.31	2.361		
SRD	Below 10 years	10.80	2.853	55.067	.000
	11 to 24 years	9.09	2.200		
	25 and Above	7.65	1.811		
RA	Below 10 years	8.65	3.372	15.031	.000
	11 to 24 years	7.55	2.711		
	25 and Above	6.62	2.764		
RIN	Below 10 years	8.83	2.550	6.667	.431
	11 to 24 years	9.99	2.953		
	25 and Above	9.09	3.987		
TRS	Below 10 years	105.56	20.226	60.102	.000
	11 to 24 years	93.99	18.068		
	25 and Above	79.86	16.474		

Table 5.8 Correlation of Length of Service and Role stress

Types of Role Stressors	
IRD	-.327**
RS	-.500**
REC	-.309**
RE	-.206**
RO	-.168**
RI	-.042
PI	-.437**
SRD	-.408**
RA	-.258**
RIN	-.013
TRS	-.414**

Based on the above results the hypothesis that “**Higher Length of Service leads to lower level of Organizational Role Stress in Medical Doctors**” stands confirmed except for RI and RIn.

Role isolation is not impacted by length of service as it results when the role occupant feels isolated from the communication channels and feels that he or she is not a part of what is happening. This could be minimized through role linkage by creating bridges between poorly interacting roles.

Resource inadequacy is not impacted by length of service in medical doctors. Resource Inadequacy is experienced by the role occupant when adequate resources are not available to carry out the role responsibilities. This could be resolved with regular audits of resources available, and appropriate resource supplies.

The above results are consistent with earlier studies (Pelitt, 1973; Richardson & Stanton, 1973; Nahta, 1980; Sen, 1981; Surti, 1982; Griffith et al., 1999).

Adverse changes in mood and cognitive performance of less experienced doctors after night duties due to sleep deprivation have been reported (Orton and Gruzelier, 1989; Spurgeon & Harrington, 1989). Houson and Alit in 1997 concluded that junior doctors experienced significant increases in stress leading to medical errors. Maladaptive coping behavior and high levels of alcohol consumption, smoking, substance abuse and even suicide has been reported in junior doctors as a result of high levels of stress (Firth-Cozens 1987; McKeivitt et al., 1995; Kumar & Basu, 2000; Pickard et al., 2000; Newbury- Birch et al., 2001). Junior house officers and registrars reported significantly higher levels of burnout than either senior registrars or consultants (Guthrie et al., 1999). More experienced doctors seem to handle stress better (Aziz, 2004).

In Pestonjee and Mishra's study of junior doctors (1999), role erosion and role isolation were dominant stressors while personal inadequacy and role expectation conflict were remote contributors to role stress. On the other hand, in senior doctors, role erosion and inter-role distance emerged as dominant, whereas personal inadequacy and role ambiguity as remote contributors. However there was no overall significant difference between the two groups except in the case of inter-role distance which was found to be significantly higher in senior doctors.

Gupta (1988) as well as Dua (1994) however, had a contradictory finding that suggests that role stress increases with increase in length of service. Lease (1999) and Winter et al., (2000) also found that role stress increased with length of service and experience. In a recent study, there appears to be no relation between role stress and years of experience (Abbas et al., 2012).

5.2.5 Work Climate

The mean scores of each role variable for the three levels of Length of Service (Below 10 years, 11-24 years and 25 years and above) are tabulated with level of significance using Anova and placed at table 5.10. However the Total role stress means scores were found to be 105.12, 97.39 and 94.05 respectively with $F= 7.809$ at $p<.01$.

Except for Role Stagnation, the remaining role stress variables have demonstrated a similar relationship with the level of Work Climate as follows: Role stress is highest when Work Climate is Low; role stress is lowest when Work Climate is highest and role stress is at a medium level when Work Climate is moderate.

The correlation results placed at Table 5.10 reveals an inverse relationship between Work and Organizational Role stress except for Role Stagnation and the results are found statistically significant.

TABLE 5.9: LEVEL OF WORK CLIMATE AND ROLE STRESS OF MEDICAL DOCTORS					
ROLE STRESSORS	LEVEL OF WORK CLIMATE	MEAN	S.D	F	SIG
IRD	POOR	10.48	3.123	.756	.026
	GOOD	10.24	3.371		
	EXCELLENT	9.96	3.412		
RS	POOR	10.45	3.865	1.363	.257
	GOOD	10.82	3.657		
	EXCELLENT	10.16	4.025		
REC	POOR	10.92	3.583	13.995	.000
	GOOD	9.89	3.366		
	EXCELLENT	8.77	2.911		
RE	POOR	10.51	3.251	3.437	.033
	GOOD	9.32	3.352		
	EXCELLENT	9.73	3.327		
RO	POOR	9.64	2.152	6.009	.003
	GOOD	8.57	2.414		
	EXCELLENT	8.71	2.273		
RI	POOR	11.16	2.641	7.575	.001
	GOOD	10.14	2.283		
	EXCELLENT	9.88	2.528		
PI	POOR	12.22	3.939	2.899	.006
	GOOD	11.65	3.775		
	EXCELLENT	11.06	3.741		
SRD	POOR	10.48	3.007	4.062	.018
	GOOD	9.62	2.780		
	EXCELLENT	9.44	2.638		
RA	POOR	9.26	3.544	10.855	.000
	GOOD	8.03	3.127		
	EXCELLENT	7.34	2.892		
RIN	POOR	10.05	3.086	3.560	.029
	GOOD	9.16	2.955		
	EXCELLENT	8.99	3.026		
TRS	POOR	105.12	21.152	7.809	.000
	GOOD	97.39	20.349		
	EXCELLENT	94.05	21.352		

Table 5.10 Correlation of Work Climate and Role stress

TYPES OF ROLE STRESSORS	
IRD	-.104**
RS	-.086
REC	-.291**
RE	-.110*
RO	-.135**
RI	-.233**
PI	-.141**
SRD	-.174**
RA	-.270**
RIN	-.140**
TRS	-.244**

The findings are in line with the hypothesis that **“higher levels of Work Climate lead to lower levels of Organizational Role Stress in Medical Doctors” stands confirmed except for RS .**

Our study concurs with that of Wu et al. (2008), who found that the main significant predictor of exhaustion in doctors besides role overload was physical environment. It is a well known fact that our network support within the organization as well as outside can provide valuable support (House, 1981).

Support received from ones peers, colleagues and friends has been recognized as an effective mechanism for dealing with the negative impact of stress (Eccles and Crane, 1988; Semmer,2003; Spielberger et. al., 2003; Wong, 2004 and Haslam and Reicher, 2006; Kellogg et al., 2006). These findings are consistent with the findings of earlier studies.

Inadequate support from senior staff was an important source of stress in a study done in junior doctors. (Dudley 1990). Firth-Cozens and Morrison (1989) also found that the second largest source of stress, after role overload, was poor support of senior doctors.

Role Stagnation is not impacted by Work Climate as role stagnation is a feeling of being stuck in the same role due to lack of opportunities, and this could be resolved by taking recourse to human resource audit and intervention by exercising role transition. Allowing the role occupant to socialize for the new role, and providing necessary training and support to take on a new role could be effective.

CHAPTER SIX

6. CONCLUSION

6.1 Introduction

The main objective of this study was to understand the impact of Workplace Stressors on Medical Doctors in Goa. The results indicated that the stress phenomena may be an important component of a medical doctor's organizational life. On the basis of the outcome of this research, the results yielded, and their interpretation; it would seem reasonable to conclude that the conceptual schematization that laid the foundation for the study held reasonably well. The research model consisted of three broad categories of variables.

- Study of Demographic Variables and their impact on Organizational Role Stress.
- Study of Organizational Variables and their impact on Organizational Role Stress.
- Study of New variables such as Organizational Citizenship, Social Responsibility, and Job Engagement and their impact on Organizational Role Stress.

The earlier chapters have given a detailed account of the results of the data analysis followed by appropriate interpretations of the hypotheses. While some results have supported the postulations, other results conformed to the hypotheses partially. In this chapter we will draw conclusions derived from the study along with their theoretical and practical implications.

6.2 Conclusion

In Chapter Four we confirmed that Organizational Role Stress decreases with increase in Age except for Resource Inadequacy. This can be due to two reasons based on research. Medical doctors grow with age and as individuals develop broader and wider perspectives to life; this enables them to handle the propensity of stress maturely and logically. Hence a higher level of age reflects the implication of maturity and the ability to handle stress effectively (Birren, 1969; Srilatha and Harigopal, 1985). Yet in another study, it is seen that coping with stress improves, and stress reduces as individuals increase in age (Srivastav, 2006). While age conforms to a similar relation in reducing stress, as one advances with age, it is logical that Resource Inadequacy is the outcome of lack of resources and hence needs to be resolved by providing the right infrastructure. Along with age and maturity one has a lower propensity to blame other and take responsibility for medical actions.

It was revealed that Female medical doctors had significantly higher levels of Organizational Role Stress compared to the Male medical doctors. While it is noticed that male doctors have more control over their decision making and emotions, it is also a known fact that they are able to accept situations logically and handle stressful situations more effectively than female doctors. Female medical doctors on the other hand utilize emotional and social networks or at times lose concentration and have less control on the situation (Abrol, 1990; Olsson, Kandolin, & Kauppinen, 1990; Vingerhoets & Van Heck, 1990 & Thoits, 1995). While some of the stressors are common to both genders, there are some pressures and demands that are uniquely associated with women employees. The finding suggests need for strategic alignment to enable a manageable level of stress among women.

Yet in another hypothesis it was confirmed that there was a significant difference among Married and Unmarried medical doctors except for Role Overload and Resource Inadequacy. While this hypothesis was not fully supported we can certainly draw a few inferences for the effective reduction of organizational role stress. Earlier research suggests that higher stress among unmarried individuals may be owing to their comparative lack of security resulting in higher self esteem, autonomy, and self actualization needs (Sen, 1981; S.Kumar, 1989). This could also be due to the fact that they do not have emotional support normally received from the home front. While the results are not fully confirmed, we could use the study to help and train unmarried medical doctors to work in stressful medical practice through utilization of a cross cultural team and a heterogeneous work force.

It was revealed that Doctors married to Doctors experienced higher Organizational Role Stress, compared to Doctors married to Non-doctors. Demands of medical work have an adverse impact on marital relationships and family life (Gabbard *et al.*, 1987). The needs or demands of the patient, and a “patient-first” work ethic culture tend to take precedence over the needs of the doctor, and his or her family. This is less likely to occur in other professions not involving patients. Work demands during 'home' or family time was a major source of conflict for dual-career doctors, mentioned more frequently by males than by females. In this sense 'spillover' of work role or being “on-call” was perceived as a source of stress which may be compounded where both partners have heavy work demands, as in the medical profession (Swanson & Power,1999). One possible reason for such an incidence is the pressure of being “On Call” that leaves a lot of the day to ambiguity and uncertainty. This leads to less time for family and children and thus adds to frustration and inability to meet ones expectations. However this construct needs further investigation and study.

In this study we investigated **three new variables** and their impact on organizational role stress. The variables studied were ***Organizational Citizenship Behavior, Social Responsibility and Job Engagement.***

The hypothesis that Organizational Citizenship Behavior (OCB) helps in reducing organizational role stress in medical doctors stands confirmed except for Resource Inadequacy. While OCB is a recent development in the academic world it has become imperative to notice the impact it has made in the sustainability of an organization. OCB represents “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization” (Organ, 1988). Research suggests that OCB is consistently related to organizational effectiveness (Podsakoff and MacKenzie, 1997). It is noteworthy to learn that medical doctors in this study have responded positively to the need for organizational citizenship behavior and this in turn has led to lowering the level of organizational role stress. While this behavior cannot be forced upon individuals it implies that encouraging such behavior through informal interaction would enhance the outcome for the medical doctor as well as the medical industry. Personal discussion with doctors revealed that individual with a strong sense of citizenship thrived on reaching out to colleagues, work teams as well as patients and thus enjoyed contributing.

The hypothesis that Social Responsibility helps in reducing organizational role stress in medical doctors stands confirmed. Individual Social Responsibility is at the root of corporate social responsibility, because a corporate comprises of individuals and hence determines the social responsibility culture it creates. Individuals are becoming more socially responsible and, in response to this corporations and companies need to become more socially responsible to meet consumer demands. The medical fraternity should encourage individual doctors to be trained during their studentship including internship to be experientially responsive to

social issues relating to the medical set up. Such training will not only offer individuals an opportunity to harness the need for responsibility but will gradually build a community which reflects the true nature of corporate social responsibility – a concept that can only take life secondary to collective individual response. Personal discussion within the doctor's community revealed that social responsibility leads to a sense of achieving respect and motivates younger doctor in following role models.

The hypothesis that Job Engagement helps in reducing organizational role stress in medical doctors stands confirmed. While this is one of the “hottest topics in management”, getting employees engaged is one of the greatest challenges faced by many organizations (Welbourne, 2007; Frank et al., 2004). Currently it has been considered as the main contributor in gaining a competitive edge (Saks & Gruman 2010). Fully engaged employees enjoy and love their work and maintain good levels of energy and connection with their work. (Schaufeli & Salanova, 2007). The challenge today is to pick up candidates with passion during interviews and support medical doctors with time and effort to establish their role in the profession. This can be achieved through informal as well as formal interventions. Individuals should be supported in investing their full energy in the work activity (Saks & Gruman, 2011).

Higher Length of Service reduces Organizational Role Stress, stands confirmed except for Role Isolation and Resource Inadequacy. It is imperative to note that medical doctors with higher length of service are normally more experienced and are in a position to handle stressful situations in a better manner. Earlier studies conform to these findings (Pelitt, 1973; Richardson & Stanton, 1973; Nahta, 1980; Sen, 1981; Surti, 1982; Gupta, 1988). It would be appropriate to harness and offer demanding roles to people with higher length of service to make optimum use of human resources. Younger medical doctors hesitate to take decisions in cases of emergencies, while as doctor employees increase in length of service there is more confidence and responsibility seen in handling difficult medical

cases. Personal interaction revealed a number of junior doctors expressed comfort with a senior doctor supporting them in taking difficult major decisions.

The hypothesis that a higher level of Work Climate leads to lower levels of role stress is confirmed except for Role Stagnation. Based on the above study it is important to increase the support from peers and superiors to employees and help medical doctors to deal with stressful situations with the aid of work climate initiatives. Earlier research has confirmed that initiatives aimed at reducing and preventing stress that have focused on improvements to the work and organizational environments seem to have met with some success (Clarke, 2000; Cox & Cox ,1991 1996; Cox & Flin ,1998). Heterogeneity of role stress confirms that there cannot be one uniform solution/intervention which holds good for the organization as a whole. More likely what would be profitable is a tailor made and specific solution/intervention for different parts of the organization (Srivastav, 2010).

6.3 Implication of the Study

Based on the above results and findings, there are a number of recommendations that could help in the reduction of organizational role stress among medical doctors. In the chapter on demographic variables, medical doctors with lower age group, female doctors as well as unmarried doctors experience higher organizational role stress. The medical organization can take appropriate steps in nurturing doctors with tools and techniques to combat organizational role stress. This could be achieved through systematic training embedded in the curriculum of medical study, further supported by counseling and mentoring possibilities that can support grooming of medical talent and unleash it for a bigger social contribution. Appropriate training programs need to be conducted from time to time for the competency mapping of younger doctors to meet present day requirements. Such programs will not only

mould their attitude but also assist them in choosing their field of work, and path of career progression. Secondly having noticed the recent entry of women doctors into the field of medicine in large numbers, the medical human resources body could re-establish links with work-life balance especially for the women doctors who have a higher responsibility for child bearing and child development.

There is currently a practice of offering maternity as well as child care leave to the female medical doctors in Goa, yet a future strategy needs to be formulated for effective support in order to reduce organizational role stress. Special emphasis could be offered to timings of work; support teams in case of emergency, so that “On – Call” duties could be assisted with group intervention rather than depend on just a few individuals. The public healthcare sector should be open to offering the best environmental support to doctors, especially in the form of the essential instruments and job equipment, easy availability of drugs and medications, good service conditions and superior support. This will in turn increase the receptivity of the employed doctors and lead to higher retention and productive output. Initiatives aimed at reducing and preventing stress that have focused on improvements to the work and organizational environments seem to have met with some success, but a new strategy would require organizations to take a highly participative approach with high quality appraisal, personal development, and other modern human resource management techniques.

There is need to develop a systematic approach to primary prevention of stress involving better teamwork and leadership training, career counseling and education about errors, backed up by a secondary service strategy providing coaching, counseling and psychotherapy. Employers should encourage and integrate coping strategies in the lives of the doctors by offering training packages, refresher courses or seminars that encourage them to explore the various options available to deal with

stress. As stress has become endemic in medical practice it should be tackled as a mainstream element of management and an essential part of patient safety.

In the organizational coping strategies, variables such as Organizational Citizenship, Social Responsibility, and Job Engagement emerged as contributory factors in lowering the level of organizational role stress among medical doctors. Organizational Citizenship, Social Responsibility and Job Engagement are strongly driven by the altruistic perspective of medical doctors. These can be augmented by placing visible role models, communicating ethical expectations, providing training and rewarding ethical acts. An ethical climate in a way reinforces the desire for Organizational Citizenship Behavior, Social Responsibility and Job Engagement.

The results of this study further the evidence that the impact of demographic as well as organizational factors such as Organizational Citizenship, Social Responsibility, and Job Engagement is significant. The study reveals that organizational role stress decreases as medical doctors advance in age. Married doctors experience lower role stress compared to unmarried doctors, and male doctors experience lower organizational role stress as compared to female doctors. It is imperative to note that organizational factors such as Organizational Citizenship Behavior, Social Responsibility, Job Engagement, Length of Service and Work Climate help in reducing role stress

6.4 Directions for Future Research

While this study was conducted among public sector medical doctors in Goa, the outcomes of the study would certainly bear more relevance with the inclusion of other variables in a larger sample across India. It would also be helpful to study the impact of cross-functional industries and thereby make a comparative analysis.

The current study resulted in various findings which have been interesting as well as relevant. However in utilizing a wider sample base as well as cross-functional areas would help in refining new research response to help theory building. Secondly this study revealed results using different factors individually. A complex multivariate methodology would offer distinctive findings, especially on the impact of the various variables studied so far. This in turn would help resolve issues relating to multicollinearity.

The new variables studied such as Organizational Citizenship, Social Responsibility, and Job Engagement could be further tested for scale refinement as well as comparing them with their impact on role stress in other industries.

Amidst the limitations, the outcomes of this study have been interesting as well as encouraging.

The results could certainly help practitioners to design appropriate measures to help reduce the impact of organizational role stress in the medical profession. The outcome of this study have been encouraging as far as the objective of stress reduction is concerned and practitioners, policy makers and employers need to further work on developing practical programs for implementing the findings of this study.

While the focus of this research was to study the different levels of demographic and organizational factors on role stress, interaction effects between different independent variables could be decided along with a focus on moderating influence on organizational role stress. Special initiatives could be taken in the medical industry to promote and design quality of worklife for doctors, especially for women doctors.

CHAPTER SEVEN

7. SUMMARY

7.1 Introduction

The Modern century has experienced turbulence linked to a number of changes at the workplace and developments which have drawn attention to the postindustrial workplace (Murphy, 1999), also referred to as the 'new organizational reality' (Gowing, Kraft, and Quick, 1997). Research contributions have revealed the consequences of stress associated with demographic and personal issues which have hampered the overall effectiveness of the organization (Alluisi & Fleshman, 1982; Celoline, 1982; Chadwick- Jones, Nicholson, and Brown, 1982; Saffer 1984). Organizations have been held financially accountable for issues related to job stress, and stress has become expensive for the organization. While organizations must now spend for stress-related illnesses of employees, they also have to fight to remain competitive in a global marketplace (Peters & Waterman, 1982; Rothwell, Prescott & Taylor, 1998).

It has always been an accepted fact that stress among physicians, nurses and other health professionals is high (Caplan, 1994; Graham, Ramirez, and Cull, 1996; Al-Aameri and Al-Fawzan, 1998). This can be attributed to the responsibility for "people" rather than "objects", and the fact that their actions or omissions have a profound impact on human life (Rees, 1995; Antoniou, 2001). The important fallout related to stress in the medical profession is that the quality of health care administered can be extremely influenced by the stress levels of health staff (Firth-Cozens and Moss, 1998).

7.2 Concept of Stress

Stress may be viewed in at least three different ways: as a response to some demand, as a situation, and as a relationship between a person and the environment (Fiedler & Garcia, 1987). While some bridges between these various concepts do exist (Baum, Fleming, & Singer, 1982), most research tends to focus on one perspective. The following is the review of the different perspectives:

Stress as a Response

A pioneer in stress research defined the term as 'the non-specific response of the body to any demand'. Hans Selye (1956) coined the term 'stress syndrome', and showed that the stress syndrome is fundamental to virtually all higher forms of animals. He developed a comprehensive theory of the body's adaptive processes, based on a three-stage General Adaptation Syndrome (GAS) which is a widely accepted model that explains the stress phenomenon.

Alarm Reaction: The first stage is an alarm reaction composed of an initial shock phase and then a counter-shock or rebound phase.

Stage of Resistance: During this stage the individual attempts to adjust to the demands imposed by the stressor.

Stage of Exhaustion: The final stage of exhaustion occurs when the individual's ability to adapt has reached its limit.

A number of criticisms towards Selye's model reflect the inability to understand the nature or response to stimuli. Mainly, the GAS approach does not address the issue of cultural, social and psychological filters to the individuals response to stress, nor that a response to a potential threat may in turn become the stimulus for another response.

Stress as an Interaction

Defined as a 'structural' approach (Stahl, Grim, Donald, and Neikirk, 1975) and 'quantitative' (Straus, 1973), stress is described as the relationship between stimulus and response. According to Lazarus and Launier (1978), a definition like this which focuses only on the interaction between two variables extends the attempt to only explain relationships limited to 'structural manipulations'.

Hence the interactional approach is limited to causal interaction and outcomes. In contrast, however, the transactional model of stress works to explore the essential nature of stressor response along with the dynamic stress process contained in it.

Stress as a Relationship between People and the Environment

The third approach defines stress as a relationship between the individual and the environment (Lazarus, 1966). Stress can be viewed both as an intrinsic factor as well as extrinsic factor depending on the causative factors leading to stress. Stress is experienced due to the factors inherent within an individual's personality or due to factors existing in the environment.

From this perspective, therefore, a person has certain abilities, needs and values and there are certain opportunities available in the environment to match the requirement of the person.

7.3 Concept of Role Stress

A member in an organization assumes a role, which can be defined as expectation of self and others from the focal person at the workplace. A role can be understood in terms of a role set. The focal role individual usually has superior, co-workers, and subordinates who are significant others in his/her role set (Banton, 1965; Gross,

Mason, & McEachern, 1958; Neiman & Hughes, 1951). In many instances, the incumbent personalizes the position (Graen, 1976) so that individuals in the same position will exhibit different effective behaviors. The freedom experienced in every role performance allows people to fill a role without experiencing role strain (Komarovsky, 1973; Merton, 1966). In situations wherein individuals occupy roles which conflict with their value system, it leads to an outcome of role stress or role conflict.

Role Stress

Kahn and Quinn (1970) have identified three categories of role stress, namely expectation generated stress, expectation-resource discrepancies and role-personality mismatch. The first category encapsulates role ambiguity and role conflict. The second category includes role overload, responsibility-authority dilemma, and inadequate technical information. The third category relates to the gaps between the role and personality.

The concept of an organization is a system of roles and role itself is a system. Organizational roles constitute the basic human resource infrastructure on which the success of human resource systems and process depends (Srivastav, 2006). According to Pareek (1981), membership of an organization and the concept of an organizational role have inbuilt potential for stress. Stress due to occupation of a role in an organization is known as Organizational Role Stress (ORS).

While explaining various role related terms, Pareek states that each individual in the society performs several roles. All these roles make up ones role space. The self is in the centre of the role space. Since the roles are at various distances from the self and from each other, these relationships define the role space. Each role has its own

systems, which has been called role set. Role set is the pattern of relationships between the focal role and other role occupants. In this, the role of the role occupant is in the center and all other roles are around the person's particular role.

In the role behavior of an individual, several variables are involved: the self, the other role senders, the expectations by the other roles, expectations by the self and other roles occupied by the focal role person. It is in the nature of the role that it has built-in potential for conflict and stress. So stress is a natural variable in the role performance. While performing several roles or within one's role, a person may find that he/she is not being directed to the desired goal. The consequence is disillusionment, frustration, tension, conflict and stress.

Pareek (1981), on the basis of theoretical speculation and statistical analysis has identified ten different types of role stresses prevalent in any organizational setting, as below:

Inter Role Distance (IRD)

An individual usually performs more than one role and there may be conflict between these roles. Thus, there is conflict between the organizational role and other roles, for example, stress due to the conflict of not being able to share time between work demands and family demands. The distance or conflict among these various roles represents inter-role distance.

Role Stagnation (RS)

As an individual grows older, he grows in the role that he occupies in an organization. With the advancement of the individual, the role changes, and with this change in

role, the need for taking up a new role becomes crucial. Such stress results in perception that there is no opportunity for one's career progression.

Role Expectation Conflict (REC)

When there are conflicting expectations or demands by different role senders (persons) having expectations from the role, the role occupant may experience this stress. It is possible that the significant persons differ in their expectation about the same role and the role occupant is ambivalent as to whom to please.

Role Erosion (RE)

A feeling that some important functions which a role occupant would like to perform have been given to some other roles or it could be a feeling that there is not much challenge in the functions given to the role occupant. Moreover, this can also happen when the role occupant performs the functions but the credit has gone to someone else.

Role Overload (RO)

When an individual feels that there are too many expectations from the 'significant' others in his role set, he experiences role overload. There are two aspects of this stress, namely quantitative and qualitative. The former refers to having 'too much to do' while the latter refers to it being 'too difficult'.

Role Isolation (RI)

In a role set, the role occupant may feel that certain roles are psychologically closer to him, while others are at a much greater distance. The main criterion of distance is the frequency and ease of interaction. This forms a measure of the strength of the linkages among the roles.

Personal Inadequacy (PI)

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

Self Role Distance (SRD)

This type of stress arises out of conflict between the self-concept and expectations from the role, as perceived by the role occupant. The conflict of one's values and self concepts with the requirements of the organizational role is known as self role conflict. This is essentially a conflict arising out of a mismatch between the person and his job.

Role Ambiguity (RA)

When the individual is not clear about the various expectations that people have from his role, the conflict that he faces is called role ambiguity. It may be due to lack of information available to the role occupant. It may exist in relation to activities, responsibilities, personal styles and norms and may operate at the three stages; when the role sender holds his expectations about the role, when he sends it, and when the occupant receives those expectations

Resource Inadequacy (RI)

When the resources required by the role occupant for performing the role effectively are not available, these may be related to information, people, material, finance, or facilities.

7.4 Rationale for the Study

A review of literature purports that various empirical researchers in various organizational settings have concluded that almost every aspect of the job context for example, work activities, supervisory style, interpersonal patterns, the structure of job characteristics etc., can act as potential stressors. Scholars such as Beehr and Newman (1978) and Van-Sel et al (1981) among others have found that personal characteristics are equally responsible for both, the focal person's perception of stressors as well as reactions to them. Some of the personality variables which were examined to assess the individuals sensitivity to stress situations are locus of control (Spielberger,1966), job involvement (Weissenberg & Gruenfeld, 1968) and many demographic variables like age, sex, marital status, educational level, organizational tenure etc.

An overview of literature in this sphere reveals important findings, mixed with certain discontinuities and deficiencies. For example, it is striking that despite the attention given separately to various personal and job/organizational stressors in causation of the stress reaction, there is not enough conclusive evidence which deals with the intricate linkage that prevails between different types of role stresses and personal and job/organizational stressors. There is a paucity of literature describing the impact of personal and organizational factors on organizational role stress in medical doctors.

The purpose of this study is to know the impact of Personal and Job/Organizational factors on Organizational Role Stress. The Personal demographic factors under study are Age, Gender, Marital Status and Dual Doctor Marriages. Job/organizational factors under study are Organizational Citizenship, Social Responsibility, Job Engagement, Length of Service and Work Climate.

The Problem under study in this research can be stated as: **“What is the impact of organizational citizenship, social responsibility and job engagement on organizational role stress in medical doctors, in addition to the impact of other demographic and organizational variables already studied in the literature.”**

7.5 Variables in the Study

The review of research literature reveals that stress occurs when the abilities of a person are not congruent with the demands of the job, or where obstacles arise in fulfilling these demands. If the organization meets the needs of a person and the person's abilities are useful to the organization, no stress should occur. Stress, thus can be viewed as the outcome of incongruence or lack of a person-environment fit (Edwards, Caplan and Harrison, 1998). Hence, greater the incongruence of fit, more significant is the level of experienced stress.

Various personal/demographic factors like age, gender, marital status, dual doctor marriages and job/organizational factors like organizational citizenship, social responsibility, job engagement, length of service and work climate can act as potential stressors.

The present study focuses on the relationship between the independent personal/demographic variables of age, gender, marital status and dual doctor marriages, as well as job/organizational factors including organizational citizenship, social responsibility, job engagement, length of service and work climate, and their effects on the various dimensions of organizational role stress.

Personal/Demographic Variables

The following brief offers the different personal and demographic variables that have been included in this study. They are as follows:

a. Age variable

In this variable the influence of age is studied in relation to Role Stress. The sample is divided into different age groups namely, 20-34 years, 35-44 yrs, and 45-60 yrs. The first age group is considered 'lower' age group, while 35-44 is considered the 'middle' age group and 45-60 is considered 'upper' age group.

b. Gender variable

Men and Women react differently to stress levels and hence this variable analyzes the responses of male doctors and female doctors to role stress.

c. Marital Status variable

The current sample is divided among doctors who are married and unmarried. The marital status is compared with reference to its impact on Role Stress.

d. Dual-Doctor Marriages Variable

The sample of married doctors is further divided into those with doctor spouses and those with non-doctor spouses.

Organizational Variables

The following are the organizational variable studied in this research. The first three variables are new factors that have not been previously investigated in literature along with role stress.

a. Organizational Citizenship Behavior

This dimension was calculated via a structured questionnaire based on 5 point Likert scale. Responses received were grouped into three categories namely, low, medium and high Organizational Citizenship Behavior.

b. Social Responsibility

This dimension was calculated via a structured questionnaire based on a 5 point Likert scale. Responses received were grouped into three categories namely, low, medium and high Social Responsibility

c. Job Engagement.

This dimension was calculated via a structured questionnaire based on a 5 point Likert scale. Responses received were grouped into three categories namely, low medium and high Job Engagement

d. Length of Service Variable

The sample is divided according to different lengths of service in years. Below 10 years, 11-24 years, and 25 years and above. This variable determines the extent to which the doctor has worked in the public healthcare organization.

e. Work Climate Variable : Work climate may be defined as the internal influence of surroundings and service conditions and work culture, on an individual. This variable is contributed in the job/organizational factors and it includes four sub-factors such as: Physical Condition of work, Job Equipment, Social Support and Superior Support.

Each variable was scored on a 5 point Likert scale:

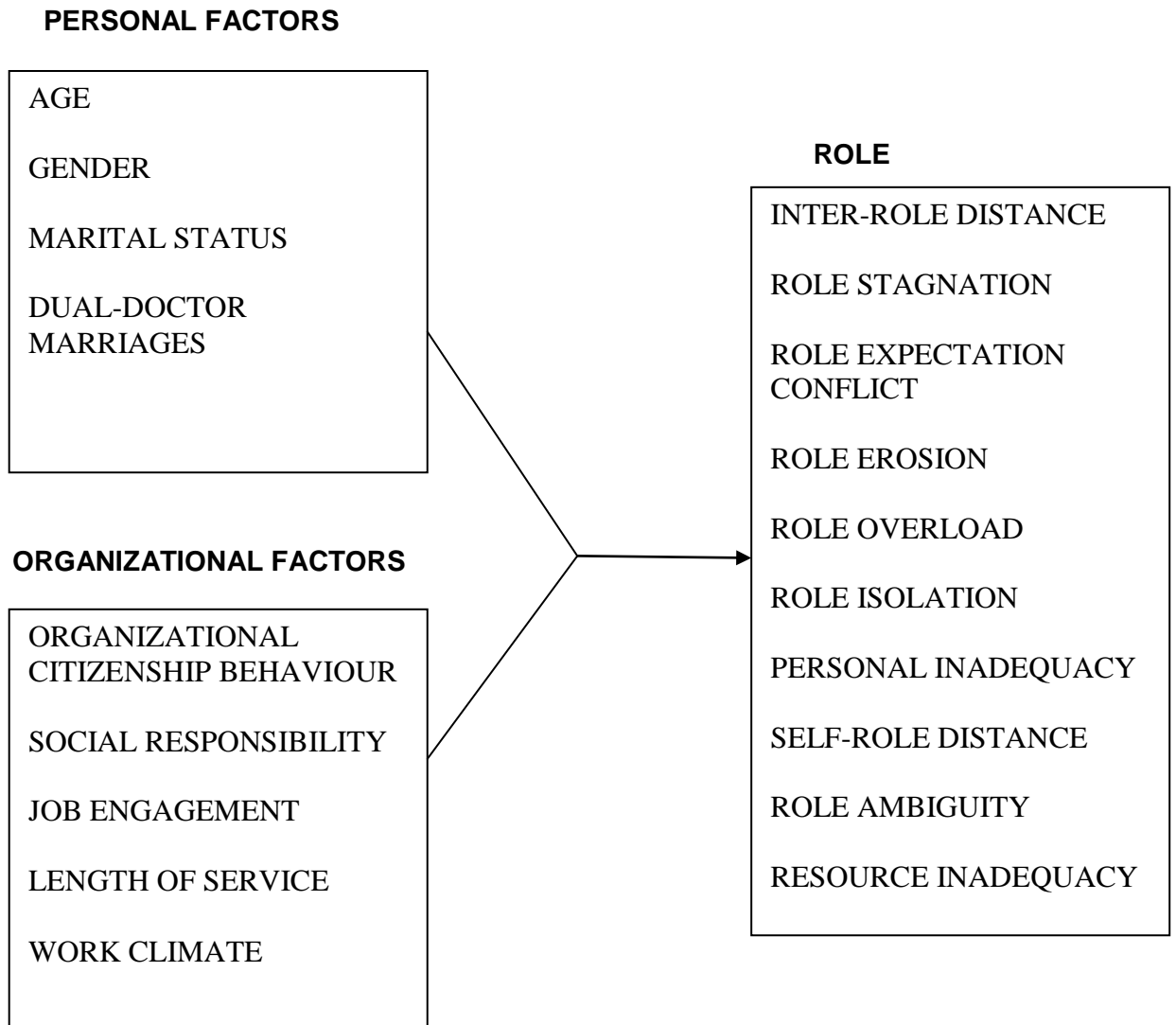
Physical condition of work indicates the lighting at work place, the building location, and externals of the workplace, which in turn facilitate working.

Equipment for the Job refers to the availability of instruments and drugs that are required for the practice of medicine.

Social support refers to the extent of support each doctor receives within the organization through informal and formal interaction with co-workers and colleagues.

Superior support refers to the level of support offered to the doctor by way of feedback, appraisal and guidance by senior doctors, in order to make work satisfying. Finally, the impact of Work climate on role stress is analyzed by taking the total scores of all factors.

7.6 RESEARCH MODEL



7.7 The Hypotheses

1. Organizational Role Stress decreases with Age.
2. There will be significant difference between Organizational Role Stress among Male and Female Medical Doctors.
3. There will be significant difference between stress levels of Married and Unmarried doctors.
4. There will be a significant difference in the Role Stress levels of Doctors married to Doctors and Doctors married to Non-doctors.
5. Organizational Citizenship Behavior helps in reducing Organizational Role Stress among Medical doctors.
6. Social Responsibility helps in reducing Organizational Role Stress among Medical Doctors.
7. Job Engagement helps in reducing Organizational Role Stress among Medical Doctors.
8. Higher Length of Service reduces Organizational Role Stress in Medical Doctors.
9. Better Work Climate leads to lower levels of Organizational Role Stress in Medical Doctors.

7.8 The Method

The participants in the proposed study were medical doctors working in the public healthcare sector of Goa. 600 Questionnaires were distributed to them, of which 454 completed questionnaires have been analyzed in this study. Two sets of questionnaires were given to collect data i.e. questionnaire relating to all personal and organizational stressors and the organizational role stress scale developed by Pareek (1983 a & b).

All the raw data was analyzed using the Statistical Package for Social Sciences (SPSS) and the analysis was done by using Mean standard deviation, t-value, and Pearson product moment correlation and ANOVA.

7.9 Findings and Discussion

Organizational Role Stress decreases with increase in Age stands confirmed except for Resource Inadequacy.

This can be due to two reasons based on research. Medical doctors grow with age and as individuals develop broader and wider perspectives to life they are able to handle the propensity of stress maturely and logically. Hence a higher level of age reflects the implication of maturity and the ability to handle stress effectively (Birren, 1969; Srilatha and Harigopal, 1985). Yet in another study, it was seen that coping with stress improves, and stress reduces as individuals increase in age (Srivastav, 2006). One of the implications that we could certainly draw here is that stressful medical practices requiring serious responsibility and accountability should be offered to medical doctors who have more experience due to age.

It was revealed that Female medical doctors had a significantly higher level of Organizational Role Stress compared to Male medical doctors.

While it is noticed that male doctors have more control over their decision making and emotions, it is also a known fact that they are able to accept situations logically and handle situations more effectively than female doctors. Female medical doctors on the other hand utilize emotional and social networks or at times lose concentration and have less control on the situation (Abrol, 1990; Olsson, Kandolin, & Kauppinen, 1990; Vingerhoets & Van Heck, 1990 & Thoits, 1995). While some of the stressors are common to both genders, there are some pressures and demands that are uniquely associated with women employees. The finding suggests need for strategic alignment to enable manageable level of stress among women.

Yet in another hypothesis it was confirmed that there was significant difference among married and unmarried medical doctors except for Role Overload and Resource Inadequacy.

While this hypothesis was not fully supported we can certainly draw a few inferences for the effective reduction of organizational role stress. Earlier research suggests that higher stress among unmarried individuals may be owing to their comparative lack of security, resulting in greater need for self-esteem, autonomy, and self-actualization (Sen, 1981; Kumar, 1989). This could also be due to the fact that they do not have emotional spousal support. While the results are not fully confirmed, we could use the study to help and train unmarried medical doctors to relate to the medical functioning through cross cultural team mates using a heterogeneous work force.

It was revealed that Doctors married to Doctors experienced higher Organizational Role Stress than Doctors married to Non-doctors.

Role Stress was significantly higher in doctors who were married to doctors than in those married to non-doctors. This study is in conformity with earlier studies which showed that being married to a doctor increases occupational role stress (Sekaran, 1983; Greenhaus & Parasuraman, 1986; Rout, 1996; Swanson and Power, 1999).

From this finding, one can infer that being married to a doctor is associated with aggravated stress levels, rather than being married to a non-doctor. This can be attributed to the fact that a non-doctor can be more supportive, than a doctor spouse who will have a tendency to be judgmental.

The non-doctor spouse would be more sympathetic to the doctor's stress, as against a doctor spouse who may himself/herself be in a stressful work environment, hence worsening the stressful situation.

In this study we investigated three new variables and their impact on organizational role stress. The variables studied were ***Organizational Citizenship Behavior, Social Responsibility and Job Engagement.***

The hypothesis that Organizational Citizenship Behavior helps in reducing Organizational Role Stress in medical doctors stands confirmed except for Resource Inadequacy.

While OCB is a recent development in the academic world it has become imperative to notice the impact it has made in the sustainability of an organization. OCBs represent "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization"(Organ,1988). Research suggests that OCBs are consistently related to organizational effectiveness (Podsakoff and MacKenzie, 1997). It is noteworthy to learn that medical doctors in this study have responded positively to the need for organizational citizenship behavior and this in turn has led to lowering the level of organizational role stress.

While this behavior cannot be forced upon individuals it implies that encouraging such behavior through informal interaction would enhance the outcome for the medical doctor as well as the medical industry.

The hypothesis that Social Responsibility helps in reducing organizational role stress in medical doctors stands confirmed.

Individual social responsibility is at the root of corporate social responsibility, because a corporate comprises of individuals and hence determines the social responsibility culture it creates. Individuals are becoming more socially responsible and, in response to this corporations and companies need to become more socially responsible to meet consumer demands. The medical fraternity should encourage individual doctors to be trained during their internship to be experientially responsive to social issues relating to the medical set up. Such training will not only offer individuals an opportunity to harness the need for responsibility but will gradually build a community which reflects the true nature of corporate social responsibility – a concept that can only take life secondary to collective individual response.

The hypothesis that Job Engagement helps in reducing organizational role stress in medical doctors stands confirmed.

While this is one of the “hottest topics in management”, getting employees engaged is one of the greatest challenges faced by many organizations (Welbourne, 2007, Frank et al., 2004). Currently it has been considered as the main contributor in gaining a competitive edge (Saks & Gruman 2010). Fully engaged employees enjoy and love their work and maintain good levels of energy and connection with their work (Schaufeli & Salanova, 2007). The challenge today is to pick up candidates with passion during interviews and support medical doctors with time and effort to establish their role in the profession. This can be achieved through informal as well as formal interventions. Individuals should be supported in investing their full energy in the work activity (Saks & Gruman, 2011).

Higher length of service reduces Organizational Role Stress stands confirmed except for Role Isolation and Resource Inadequacy.

It is imperative to note that medical doctors with higher length of service are normally more experienced and are in a position to handle stressful situations in a better manner. Earlier studies also conform to the findings (Pelitt, 1973; Richardson & Stanton, 1973; Nahta, 1980; Sen, 1981; Surti, 1982; Gupta, 1988). It would be appropriate to harness and offer demanding roles to people with a higher length of service to make optimum use of human resources.

A higher level of work climate leads to lower levels of role stress is partially confirmed except for role stagnation.

Based on the above study it is important to increase the openness of the employees and help medical doctors to prevent stress with the aid of work climate initiatives. Earlier research has confirmed that Initiatives aimed at reducing and preventing stress that have focused on improvements to the work and organizational environments seem to have met with some success (Clarke, 2000; Cox & Cox ,1991 1996; Cox & Flin ,1998).

7.10 Implications of the Study

Based on the above results and findings, there are a number of recommendations that could help in the reduction of Organizational Role Stress among medical doctors.

In the chapter on demographic variables it has been noticed that medical doctors with lower age group, female doctors as well as unmarried doctors experience higher organizational role stress. It follows that positions incurring greater workload and consequent role stress should be allocated to older age group doctors, as well as having male and married individuals as a part of the senior team.

Secondly having noticed the recent entry of women doctors in large numbers, the medical human resource body could re-establish links with work-life balance especially for the women doctors who have a higher responsibility of child bearing and children development. There is currently a practice of offering maternity benefits and child care leave to the medical doctors in Goa, yet a future strategy needs to be formulated for effective support in the coping mechanisms to reduce organizational role stress. Special emphasis could be offered to timings of work; support teams in case of emergency, so that "On – Call" duties could be assisted with group intervention rather than depend on just a few individuals.

The public healthcare sector should be open to offering the best environmental support to doctors, especially in the form of the essential instruments and job equipment, easy availability of drugs and medications, good service conditions and superior support. This will in turn increase the receptivity of the employed doctors and lead to higher retention and productive output. Initiatives aimed at reducing and preventing stress that have focused on improvements to the work and organizational

environments seem to have met with some success, but a new strategy would require organizations to take a highly participative approach with high quality appraisal, personal development, and other modern human resource management techniques. The medical organization can take appropriate steps in nurturing their medical students with tools and techniques to combat organizational role stress. This could be achieved through systematic training imbedded in the curriculum of medical study, further supported with counseling and mentoring possibilities that can support competency mapping of younger doctors-to-be to meet present day requirements. Such programs will not only mold their attitude but also assist them in choosing their field of specialization, and path of career progression.

For doctors, there is need to develop a systematic approach to primary prevention of stress involving better teamwork and leadership training, career counseling and education about errors, backed up by a secondary service strategy providing coaching, counseling and psychotherapy. Employers should encourage and integrate coping strategies in the lives of the doctors by offering training packages, refresher courses or seminars that encourage them to explore the various options available to deal with stress. As stress has become endemic in medical practice it should be tackled as a mainstream element of management and an essential part of patient safety. In the organizational coping strategies, variables such as Organizational Citizenship, Social Responsibility, and Job Engagement emerged as contributory factors in lowering the level of organizational role stress among medical doctors. The energy required for building Organizational Citizenship, Social Responsibility and Job Engagement is strongly driven by the altruistic perspective of the medical doctors. Building and sustaining of cultures depends on the availability of visible role models, communication of ethical expectations and also providing more emphasis on training in medical ethics.

7.11 Directions for Future Research

The current study was conducted among public sector medical doctors in Goa, and it resulted in various findings which have been interesting, as well as relevant. However, utilizing a wider sample base as well as cross-functional areas would help in refining research findings. Secondly this study revealed results using different factors individually. A complex multivariate methodology would offer distinctive findings especially on the impact of the various variables studied so far. This in turn would help in resolving issues related to multi-collinearity.

The new variables studied such as Organizational Citizenship, Social Responsibility, and Job Engagement could be further tested for scale refinement as well as their impact on other industries and cross-function with industry. Amidst the limitations, the outcomes of this study have been interesting as well as encouraging. The results could certainly help practitioners to design appropriate measures to help reduce the impact of organizational role stress in the field of medicine. This could be supplemented with the developing of coping strategies. The outcomes of this study have been encouraging as far as the objective of stress reduction is concerned and practitioners, policy makers and employers need to work further on developing practical programs for implementing the findings of this study.

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APPENDIX

TABLE 1 - CORRELATION OF AGE AND ROLE STRESS													
		AGE	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
AGE	Pearson Correlation	1	.475(**)	.525(**)	.368(**)	.396(**)	.283(**)	.137(**)	.495(**)	.500(**)	.302(**)	-.018	.537(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.003	.000	.000	.000	.710	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	.475(**)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	.525(**)	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	.368(**)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	.396(**)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	.283(**)	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	.137(**)	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.003	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	.495(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	.500(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	.302(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	-.018	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.710	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	.537(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 2 - CORRELATION OF GENDER WITH ROLE STRESS

		GENDER	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
GENDER	Pearson Correlation	1	.466(**)	.500(**)	.501(**)	.436(**)	.413(**)	.289(**)	.599(**)	.565(**)	.396(**)	.109(*)	.647(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.020	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	.466(**)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	.500(**)	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	.501(**)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	.436(**)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	.413(**)	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	.289(**)	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	.599(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	.565(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	.396(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	.109(*)	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.020	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	.647(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Cor ** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 3 – CORRELATION OF MARITAL STATUS AND ROLE STRESS

		M/U	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
M/U	Pearson Correlation	1	.304(**)	.332(**)	-.113(*)	.216(**)	-.072	.192(**)	.265(**)	.153(**)	.132(**)	-.011	.279(**)
	Sig. (2-tailed)		.000	.000	.016	.000	.128	.000	.000	.001	.005	.819	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	.304(**)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	.332(**)	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	-.113(*)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.016	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	.216(**)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	-.072	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.128	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	.192(**)	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	.265(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	.153(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	.132(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.005	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	-.011	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.819	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	.279(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

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TABLE 4 - CORRELATION OF DUAL CAREERS AND ROLE STRESS

		DUAL CAREER	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
DUALCAREER	Pearson Correlation	1	.290(**)	.298(**)	.227(**)	.475(**)	.453(**)	.160(**)	.354(**)	.377(**)	.121(**)	.155(**)	.433(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.001	.000	.000	.010	.001	.000
	N	465	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	-.290(**)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	-.298(**)	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	-.227(**)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	-.475(**)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	-.453(**)	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	-.160(**)	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	-.354(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	-.377(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	-.121(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.010	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	-.155(**)	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.001	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	-.433(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 5 - CORRELATION OF ORGANIZATIONAL CITIZENSHIP BEHAVIOR AND ROLE STRESS

		OCB	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
OCB	Pearson Correlation	1	.354(**)	.326(**)	.275(**)	.211(**)	.187(**)	-.104(*)	.279(**)	.316(**)	.260(**)	-.081	.365(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.027	.000	.000	.000	.086	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	.354(**)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	.326(**)	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	.275(**)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	.211(**)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	.187(**)	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	-.104(*)	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.027	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	.279(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	.316(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	.260(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	-.081	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.086	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	.365(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 6 – CORRELATION OF SOCIAL RESPONSIBILITY AND ROLE STRESS

		SOCRESP	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
SOCRESP	Pearson Correlation	1	.235(**)	.242(**)	.391(**)	.176(**)	.199(**)	.224(**)	.301(**)	.285(**)	.341(**)	.133(**)	.378(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	-.235(**)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	-.242(**)	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	-.391(**)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	-.176(**)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	-.199(**)	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	-.224(**)	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	-.301(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	-.285(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	-.341(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	-.133(**)	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.005	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	-.378(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 7 – CORRELATION OF JOB ENGAGEMENT AND ROLE STRESS

		JOBENG	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
JOBENG	Pearson Correlation	1	.235(**)	.242(**)	.390(**)	.176(**)	.199(**)	.224(**)	.301(**)	.285(**)	.341(**)	.132(**)	.378(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	-.235(**)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	-.242(**)	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	-.390(**)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	-.176(**)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	-.199(**)	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	-.224(**)	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	-.301(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	-.285(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	-.341(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	-.132(**)	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.005	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	-.378(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 8 - CORRELATION OF LENGTH OF SERVICE AND ROLE STRESS													
		LENGTH	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
LENGTH	Pearson Correlation	1	.327(**)	.500(**)	.309(**)	.206(**)	.168(**)	-.042	.437(**)	.408(**)	.258(**)	.013	.414(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.373	.000	.000	.000	.790	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	-.327(**)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	-.500(**)	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	-.309(**)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	-.206(**)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	-.168(**)	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	-.042	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.373	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	-.437(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	-.408(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	-.258(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	.013	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.790	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	-.414(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 9 - CORRELATION OF WORK CLIMATE AND ROLE STRESS

		WC	IRD	RS	REC	RE	RO	RI	PI	SRD	RA	RIN	TRS
WC	Pearson Correlation	1	-.104(*)	-.086	.291(**)	-.110(*)	.135(**)	.233(**)	.141(**)	.174(**)	.270(**)	.140(**)	.244(**)
	Sig. (2-tailed)		.026	.068	.000	.019	.004	.000	.003	.000	.000	.003	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	-.104(*)	1	.690(**)	.300(**)	.444(**)	.293(**)	.236(**)	.585(**)	.482(**)	.347(**)	.048	.688(**)
	Sig. (2-tailed)	.026		.000	.000	.000	.000	.000	.000	.000	.000	.312	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	-.086	.690(**)	1	.325(**)	.484(**)	.349(**)	.177(**)	.631(**)	.644(**)	.288(**)	-.003	.718(**)
	Sig. (2-tailed)	.068	.000		.000	.000	.000	.000	.000	.000	.000	.949	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	.291(**)	.300(**)	.325(**)	1	.219(**)	.451(**)	.337(**)	.551(**)	.582(**)	.771(**)	.385(**)	.732(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	-.110(*)	.444(**)	.484(**)	.219(**)	1	.639(**)	.344(**)	.358(**)	.560(**)	.146(**)	.271(**)	.659(**)
	Sig. (2-tailed)	.019	.000	.000	.000		.000	.000	.000	.000	.002	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	.135(**)	.293(**)	.349(**)	.451(**)	.639(**)	1	.274(**)	.356(**)	.667(**)	.237(**)	.312(**)	.655(**)
	Sig. (2-tailed)	.004	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	.233(**)	.236(**)	.177(**)	.337(**)	.344(**)	.274(**)	1	.227(**)	.302(**)	.372(**)	.332(**)	.508(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	.141(**)	.585(**)	.631(**)	.551(**)	.358(**)	.356(**)	.227(**)	1	.563(**)	.491(**)	.123(**)	.760(**)
	Sig. (2-tailed)	.003	.000	.000	.000	.000	.000	.000		.000	.000	.009	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
SRD	Pearson Correlation	.174(**)	.482(**)	.644(**)	.582(**)	.560(**)	.667(**)	.302(**)	.563(**)	1	.470(**)	.266(**)	.823(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	.270(**)	.347(**)	.288(**)	.771(**)	.146(**)	.237(**)	.372(**)	.491(**)	.470(**)	1	.435(**)	.681(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.002	.000	.000	.000	.000		.000	.000
	N	454	454	454	454	454	454	454	454	454	454	453	454
RIN	Pearson Correlation	.140(**)	.048	-.003	.385(**)	.271(**)	.312(**)	.332(**)	.123(**)	.266(**)	.435(**)	1	.451(**)
	Sig. (2-tailed)	.003	.312	.949	.000	.000	.000	.000	.009	.000	.000		.000
	N	453	453	453	453	453	453	453	453	453	453	453	453
TRS	Pearson Correlation	.244(**)	.688(**)	.718(**)	.732(**)	.659(**)	.655(**)	.508(**)	.760(**)	.823(**)	.681(**)	.451(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

COMPLETE CORRELATION CHART

		Correlations																				
		AGE	SEX	EDU	SALAR	MOTLEV	LENGHT	MEDCOT	SOCRESP	JOBENG	IRD	RS	REC	RE	RO	RI	PI	ORD	RA	RN	TRG	
AGE	Pearson Correlation	1																				
	Sig. (2-tailed)																					
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
SEX	Pearson Correlation	-.435	1																			
	Sig. (2-tailed)	.000																				
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
EDU	Pearson Correlation	.104	-.046	1																		
	Sig. (2-tailed)	.027	.326																			
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
SALAR	Pearson Correlation	.277	-.027	.017	1																	
	Sig. (2-tailed)	.000	.867	.724																		
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
MOTLEV	Pearson Correlation	.288	-.316	-.038	.104	1																
	Sig. (2-tailed)	.000	.000	.420	.027																	
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
LENGHT	Pearson Correlation	.722	-.405	.004	.146	.185	1															
	Sig. (2-tailed)	.000	.000	.938	.002	.000																
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
MEDCOT	Pearson Correlation	.342	-.355	.119	.135	.176	.263	1														
	Sig. (2-tailed)	.000	.000	.011	.004	.000	.000															
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
SOCRESP	Pearson Correlation	.285	-.325	.137	.139	.197	.216	.625	1													
	Sig. (2-tailed)	.000	.000	.003	.003	.000	.000	.000														
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
JOBENG	Pearson Correlation	.285	-.325	.137	.140	.198	.216	.625	1.000	1												
	Sig. (2-tailed)	.000	.000	.003	.003	.000	.000	.000	.000													
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
IRD	Pearson Correlation	-.475	.466	-.151	-.040	-.221	-.327	-.354	-.235	-.225	1											
	Sig. (2-tailed)	.000	.000	.001	.391	.000	.000	.000	.000	.000	.000											
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
RS	Pearson Correlation	-.525	.500	-.082	-.024	-.199	-.500	-.326	-.242	-.242	.690	1										
	Sig. (2-tailed)	.000	.000	.050	.608	.000	.000	.000	.000	.000	.000	.000										
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
REC	Pearson Correlation	-.388	.501	.088	-.087	-.327	-.309	-.275	-.391	-.390	.300	.325	1									
	Sig. (2-tailed)	.000	.000	.147	.157	.000	.000	.000	.000	.000	.000	.000	.000									
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
RE	Pearson Correlation	-.398	.408	-.054	-.013	-.235	-.206	-.211	-.175	-.175	.444	.464	.219	1								
	Sig. (2-tailed)	.000	.000	.544	.780	.000	.000	.000	.000	.000	.000	.000	.000	.000								
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
RO	Pearson Correlation	-.283	.413	.198	-.084	-.279	-.188	-.187	-.199	-.199	.293	.349	.461	.639	1							
	Sig. (2-tailed)	.000	.000	.000	.176	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000							
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
RI	Pearson Correlation	-.137	.289	-.071	-.077	-.305	-.042	-.104	-.224	-.224	.236	.177	.337	.344	.274	1						
	Sig. (2-tailed)	.003	.000	.130	.100	.000	.373	.027	.000	.000	.000	.000	.000	.000	.000	.000						
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
PI	Pearson Correlation	-.495	.599	-.088	-.085	-.290	-.437	-.279	-.301	-.301	.585	.631	.561	.358	.356	.227	1					
	Sig. (2-tailed)	.000	.000	.148	.167	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000					
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
ORD	Pearson Correlation	-.500	.585	.063	-.076	-.295	-.408	-.316	-.285	-.285	.482	.644	.582	.580	.667	.302	.563	1				
	Sig. (2-tailed)	.000	.000	.183	.106	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000				
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
RA	Pearson Correlation	-.302	.396	-.069	-.013	-.246	-.258	-.260	-.341	-.341	.347	.288	.771	.146	.237	.372	.461	.470	1			
	Sig. (2-tailed)	.000	.000	.144	.789	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000			
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454
RN	Pearson Correlation	-.018	.109	-.004	.030	-.137	.013	-.081	-.133	-.132	.048	-.003	.385	.271	.312	.332	.123	.286	.435	1		
	Sig. (2-tailed)	.710	.020	.938	.522	.003	.790	.095	.005	.005	.312	.949	.000	.000	.000	.000	.009	.000	.000	.000		
	N	453	453	453	453	453	453	453	453	453	453	453	453	453	453	453	453	453	453	453	453	453
TRG	Pearson Correlation	-.537	.647	-.045	-.086	-.374	-.414	-.385	-.378	-.378	.668	.718	.732	.659	.655	.508	.760	.623	.661	.461	1	
	Sig. (2-tailed)	.000	.000	.340	.232	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	454	453	454

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 11 Exploratory Factor Analysis for Medical Citizenship Behaviour

KMO and Bartlett's Test			Communalities		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.926		Initial	Extraction
Bartlett's Test of Sphericity	Approx. Chi-Square	2206.663	M1	1.000	.778
	df	45	M2	1.000	.654
	Sig.	.000	M3	1.000	.531
			M4	1.000	.572
			M5	1.000	.588
			M6	1.000	.542
			M7	1.000	.407
			M8	1.000	.392
			M9	1.000	.467
			M10	1.000	.442

Extraction Method: Principal Component Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.372	53.723	53.723	5.372	53.723	53.723
2	.807	8.068	61.792			
3	.718	7.178	68.970			
4	.653	6.534	75.504			
5	.558	5.575	81.079			
6	.530	5.295	86.374			
7	.469	4.689	91.063			
8	.344	3.445	94.508			
9	.313	3.132	97.640			
10	.236	2.360	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix (a)

	Component
	1
M1	.882
M2	.809
M3	.729
M4	.757
M5	.767
M6	.736
M7	.638
M8	.626
M9	.683
M10	.665

Extraction Method: Principal Component Analysis.

a) 1 components extracted.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy shows higher values or .926 which states that the factor analysis is appropriate. Bartlett's test of sphericity indicates the correlation matrix is an identity matrix, indicating that the variables are unrelated significant at .000. The above chart of communalities reveals in the extraction column that the values are higher indicating acceptable communality except for string 9 and 10 of the scale. This needs to be further refined and investigated. Moreover only one component was extracted in the Rotated Component matrix leading to one factor loading of the scale.

Table 12 Exploratory Factor Analysis for Social Responsibility

KMO and Bartlett's Test			Communalities		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.929		Initial	Extraction
Bartlett's Test of Sphericity	Approx. Chi-Square	1660.853	SR1	1.000	.579
	df	45	SR2	1.000	.565
	Sig.	.000	SR3	1.000	.542
			SR4	1.000	.446
			SR5	1.000	.478
			SR6	1.000	.506
			SR7	1.000	.473
			SR8	1.000	.455
			SR9	1.000	.458
			SR10	1.000	.343

Extraction Method: Principal Component Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.846	48.461	48.461	4.846	48.461	48.461
2	.849	8.488	56.949			
3	.723	7.226	64.176			
4	.694	6.935	71.111			
5	.565	5.650	76.760			
6	.541	5.414	82.174			
7	.477	4.772	86.946			
8	.461	4.611	91.557			
9	.430	4.301	95.858			
10	.414	4.142	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component
	1
SR1	.761
SR2	.752
SR3	.736
SR4	.668
SR5	.692
SR6	.711
SR7	.688
SR8	.674
SR9	.676
SR10	.586

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy shows higher values or .926 which states that the factor analysis is appropriate. Bartlett's test of sphericity indicates the correlation matrix is an identity matrix, indicating that the variables are unrelated significant at .000. The above chart of communalities reveals in the extraction column that the values are higher indicating acceptable communality except for string 4,5,7,8,9, and 10 of the scale. Certain string depicting lower communality need to be further investigated. Moreover only one component was extracted in the Rotated Component matrix leading to one factor loading of the scale.

Table 13 Exploratory Factor Analysis for Social Responsibility

KMO and Bartlett's Test			Communalities		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.891			
Bartlett's Test of Sphericity	Approx. Chi-Square	2120.248			
	df	45			
	Sig.	.000			

	Initial	Extraction
JE1	1.000	.681
JE2	1.000	.626
JE3	1.000	.509
JE4	1.000	.545
JE5	1.000	.443
JE6	1.000	.510
JE7	1.000	.436
JE8	1.000	.450
JE9	1.000	.546
JE10	1.000	.419

Extraction Method: Principal Component Analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.165	51.651	51.651	5.165	51.651	51.651
2	.998	9.977	61.628			
3	.713	7.126	68.755			
4	.650	6.499	75.254			
5	.589	5.888	81.142			
6	.518	5.179	86.321			
7	.463	4.635	90.956			
8	.372	3.716	94.672			
9	.278	2.778	97.450			
10	.255	2.550	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix(a)

	Component
	1
JE1	.825
JE2	.791
JE3	.713
JE4	.738
JE5	.665
JE6	.714
JE7	.660
JE8	.671
JE9	.739
JE10	.648

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy shows higher values or .9891 which states that the factor analysis is appropriate. Bartlett's test of sphericity indicates the correlation matrix is an identity matrix, indicating that the variables are unrelated significant at .000. The above chart of communalities reveals in the extraction column that the values are higher indicating acceptable communality of the scale except for 5, 7, 8, and 10. The reason for the lower communality need to be further investigated. Moreover only one component was extracted in the Rotated Component matrix leading to one factor loading of the scale.

Questionnaire

PERSONAL/ DEMOGRAPHIC FACTORS

Age _____

Sex (1) Male (2) Female

Marital Status (1) Unmarried (2) Married

Education (1) MBBS (2) Diploma (3) MD/MS (4) MCh

Monthly Income (1) Upto 40,000 (2) 40,000-70,000 (3) 70,000-100,000 (4) Over 100,000

Number of Children _____

Spouse occupation (1) Business (2) Service (3) Housewife

JOB/ ORGANIZATIONAL FACTORS

1. Job levels (1) Junior (2) Middle (3) Senior
2. No of subordinates directly controlled _____
3. Length of service in the present organization _____ Years _____ Months
4. Work Climate:

	V Poor	Poor	Average	Good	V Good
Physical Conditions (Office/bldg/layout/A.C/etc)	0	1	2	3	4
Equipment for job (Instruments /drugs)	0	1	2	3	4
Social Support (Interaction with colleagues)	0	1	2	3	4
Superior Support (Feedback/Appraisal/Guidance/etc)	0	1	2	3	4

People have different feelings about their roles. Statements describing some such feelings are given below. Read each statement and indicate against the items, how often you have the feeling expressed in the statement in relation to your role in your organization. Use the numbers given below to indicate your own feelings. If you find that the category to be used in answering does not adequately indicate your own feelings use the one, which is closest to the way you feel. Do not leave any item unanswered. Answer items in the order given below.

- Please encircle.
- 0 If you **never or rarely** feel this way
 - 1 If you **occasionally (a few times)** feel this way
 - 2 If you **sometimes** feel this way
 - 3 If you **frequently** feel this way
 - 4 If you **very frequently or always** feel this way

- | | | | | | | |
|----|---|---|---|---|---|---|
| 1 | My role tends to interfere with my family life. | 0 | 1 | 2 | 3 | 4 |
| 2 | I am afraid I am not learning enough in my present role to take up higher responsibility. | 0 | 1 | 2 | 3 | 4 |
| 3 | I am not able to satisfy the conflicting demands of various people over me. | 0 | 1 | 2 | 3 | 4 |
| 4 | My role has recently been reduced in importance. | 0 | 1 | 2 | 3 | 4 |
| 5 | My workload is too heavy. | 0 | 1 | 2 | 3 | 4 |
| 6 | Other role occupants do not give enough attention and time to my role. | 0 | 1 | 2 | 3 | 4 |
| 7 | I do not have adequate knowledge to handle the responsibilities in my role. | 0 | 1 | 2 | 3 | 4 |
| 8 | I have to do things in my role that are against my better judgment. | 0 | 1 | 2 | 3 | 4 |
| 9 | I am not clear on the scope and responsibility of my job. | 0 | 1 | 2 | 3 | 4 |
| 10 | I do not get information needed to carry out responsibilities assigned to me. | 0 | 1 | 2 | 3 | 4 |
| 11 | I have various other interests (social, religious etc) which remain neglected because I do not get time to attend to these. | 0 | 1 | 2 | 3 | 4 |
| 12 | I am too preoccupied with my present role responsibilities to be able to prepare for taking higher responsibility. | 0 | 1 | 2 | 3 | 4 |

13	I am not able to satisfy the conflicting demands of the various poor level people and my juniors.	0	1	2	3	4
14	Many functions of what should be a part of my role have been assigned to some other role.	0	1	2	3	4
15	The amount of work I have to do interferes with the quality I want to maintain.	0	1	2	3	4
16	There is not enough interaction between my role and other roles.	0	1	2	3	4
17	I feel I have more skills to handle the responsibilities in my role.	0	1	2	3	4
18	I am not able to use my training and expertise in my role.	0	1	2	3	4
19	I do not know what the people I work with expect from me.	0	1	2	3	4
20	I do not get enough resources to be effective in my role.	0	1	2	3	4
21	My role does not allow me to have enough time with my family.	0	1	2	3	4
22	I do not have time and opportunities to prepare myself for future challenges of my role.	0	1	2	3	4
23	I am not able to satisfy the demands of clients and others since these are conflicting with one another.	0	1	2	3	4
24	I would like to take more responsibility than I am handling at present.	0	1	2	3	4
25	I have been given too much responsibility.	0	1	2	3	4
26	I wish there was more consultation between my role and other roles.	0	1	2	3	4
27	I have not had pertinent training for my role.	0	1	2	3	4
28	The work I do in the organization is not related to my interest.	0	1	2	3	4
29	Several aspects of my role are vague and unclear.	0	1	2	3	4
30	I do not have enough people to work with me in my role.	0	1	2	3	4
31	My organizational responsibilities interfere with my extra-organizational roles.	0	1	2	3	4
32	There is very little scope for personal growth in my role.	0	1	2	3	4
33	The expectations of my seniors conflict with those of my juniors.	0	1	2	3	4

34	I can do much more than what I have been assigned.	0	1	2	3	4
35	There is a need to reduce some parts of my role.	0	1	2	3	4
36	There is no evidence of involvement of several roles (including my role) in joint problem solving or collaboration in planning action.	0	1	2	3	4
37	I wish I had prepared myself well for my role.	0	1	2	3	4
38	If I had full freedom to define my role I would be doing some things different from what I do now.	0	1	2	3	4
39	My role has not been defined clearly and in detail.	0	1	2	3	4
40	I am rather worried that I lack the necessary facilities needed in my role.	0	1	2	3	4
41	My family and friends complain that I do not spend time with them due to heavy demands of my work role.	0	1	2	3	4
42	I feel stagnant in my life.	0	1	2	3	4
43	I am bothered with the contradictory expectations different people have from my role.	0	1	2	3	4
44	I wish I had been given more challenging tasks to do.	0	1	2	3	4
45	I feel overburdened in my role.	0	1	2	3	4
46	Even when I take initiative for discussion or help, there is not much response from other roles.	0	1	2	3	4
47	I need more training and preparation to be effective in my work role.	0	1	2	3	4
48	I experience conflict between my values and what I have to do in my role.	0	1	2	3	4
49	I am not clear as to what priorities are in my role.	0	1	2	3	4
50	I wish I had more financial resources for the work assigned to me.	0	1	2	3	4

Organizational Citizenship Behavior

1	I am happy to do unpaid work in my free time.	0	1	2	3	4
2	I do not waste my working time.	0	1	2	3	4
3	I voluntarily help subordinate staff.	0	1	2	3	4
4	I volunteer to be on committees /attend meetings.	0	1	2	3	4
5	I support extracurricular activities in my organization.	0	1	2	3	4
6	I arrive to work and meetings on time.	0	1	2	3	4
7	I take the initiative to introduce myself to new staff.	0	1	2	3	4
8	I give colleagues advance notice of changes in schedule.	0	1	2	3	4
9	I dont delegate an excessive amount of work to my juniors.	0	1	2	3	4
10	I make innovative suggestions to improve the overall quality of the workplace.	0	1	2	3	4

Social Responsibility

1	I maintain a clean workplace.	0	1	2	3	4
2	I dispose of biowaste in the recommended manner.	0	1	2	3	4
3	I prefer biodegradable items over nonbiodegradable items.	0	1	2	3	4
4	I ensure that my staff wear clean uniforms and dress professionally.	0	1	2	3	4
5	I donate to charity.	0	1	2	3	4
6	My workplace is adapted to the needs of differently abled.	0	1	2	3	4
7	I contribute towards a pension fund/retirement benefit.	0	1	2	3	4
8	I maintain detailed transparent records.	0	1	2	3	4
9	I give priority to senior citizens.	0	1	2	3	4
10	I give priority to pregnant women.	0	1	2	3	4

Job Engagement

1	I am proud of my employer.	0	1	2	3	4
2	I am satisfied with my employer.	0	1	2	3	4
3	I feel a deep sense of job satisfaction.	0	1	2	3	4
4	I am given opportunities to perform well at work.	0	1	2	3	4
5	I receive recognition and positive feedback at work.	0	1	2	3	4
6	I receive personal support from my seniors.	0	1	2	3	4
7	The effort I put is above & beyond the minimum required.	0	1	2	3	4
8	I understand the link between my job and my organizations mission.	0	1	2	3	4
9	I have prospects for future growth in my organization.	0	1	2	3	4
10	I intend to stay permanently in my organization.	0	1	2	3	4

Language skills

		Unable to speak	Few words	Few sentences	Can be understood	Fluent
1	English	0	1	2	3	4
2	Konkani	0	1	2	3	4
3	Marathi	0	1	2	3	4
4	Hindi	0	1	2	3	4
5	Kannada	0	1	2	3	4
	Others	0	1	2	3	4