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, Borrell, 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 Richardson, 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 Houlker, 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

Srilahta 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 & Bamett, 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 coworkers. Finally, civic virtue is being constructively involved in an organization’s 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 one’s 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 Conceelman, 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

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 ones 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-persistive and extra-persistive 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
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 Anaethetists 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 (RIin)

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 rational 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

PERSONAL FACTORS

AGE
GENDER
MARITAL STATUS
DUAL-DOCTOR MARRIAGES

ORGANIZATIONAL FACTORS

ORGANIZATIONAL CITIZENSHIP BEHAVIOUR
SOCIAL RESPONSIBILITY
JOB ENGAGEMENT
LENGTH OF SERVICE
WORK CLIMATE

ROLE

INTER-ROLE DISTANCE
ROLE STAGNATION
ROLE EXPECTATION CONFLICT
ROLE EROSION
ROLE OVERLOAD
ROLE ISOLATION
PERSONAL INADEQUACY
SELF-ROLE DISTANCE
ROLE AMBIGUITY
RESOURCE INADEQUACY
TOTAL ROLE STRESS
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.


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.