

CHAPTER 7

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

With reference to chapter 1, section 1.7.2, the aim of this chapter is to formulate the conclusions (step 7) and to discuss the limitations (step 8) with the regard to the literature and empirical objectives of the research. Recommendations (step 9) will also be made with reference to the literature review, empirical study and the training, monitoring and development of community service doctors.

7.1 CONCLUSIONS

The conclusions are discussed in terms of the specific literature review objectives and the specific empirical objectives (see chap. 1, sec. 1.3.2). These conclusions are linked to the research hypotheses and central thesis of the research as identified in chapter 5, section 5.5 and the integration of the literature concepts as identified at the end of chapter 4.

7.1.1 Conclusions pertaining to the literature review objectives

The conclusions pertaining to the literature review will be addressed individually:

7.1.1.1 *Literature Aim 1*

The first literature objective was to analyse and integrate the existing literature on stress, with a specific focus on stress in the medical profession. A comprehensive literature review on stress was conducted in chapter 2. The following issues were discussed: history of the concept “stress”; the definitions and models of stress; and the dynamics of stress, namely discussions surrounding the aetiology, symptoms, outcomes and management interventions of stress in general and in the medical profession.

The literature analyses confirmed the view of the cognitive theory of psychological stress and coping, better known as the transactional model of stress and coping (Lazarus and colleagues, 1966). Proponents of this view, suggest that stress is a dynamic, mutually reciprocal, bi-directional relationship between the person and the environment.

The literature review on stress in the medical profession indicated a recent trend in investigations of stress in this world of work, since there was previously a reluctance of medical doctors to discuss the dynamics and effects of their work situation; the literature refers to this as the “conspiracy of silence” (McCue, 1986, p. 7), “god’s in white complex” (Sonneck & Wagner, 1996, p. 255) and the maintaining of the legacy of the “medical macho-image” (Ellis, 1996a, p. 296). There was a unanimous description of the medical profession being extremely stressful and hazardous to medical doctors’ wellbeing. The literature review also confirmed the role of personality characteristics and behavioural patterns in predisposing some medical doctors to be more severely affected by the inherent stresses of medical work than others. The literature review also established that medical school training is indeed a stressful experience.

It can be concluded that based on the literature review, the stress phenomenon can best be understood transitionally and that the medical profession can be categorised as a highly stressful occupation. Thus, the first literature objective has been addressed.

7.1.1.2 Literature Aim 2

The second literature aim was to conceptualise and integrate the existing literature on burnout, with special emphasis on burnout in the medical profession. A comprehensive literature review on burnout was conducted in chapter 3. The following issues were discussed: history of the concept “burnout”; the definitions and models of burnout; the dynamics of burnout, namely discussions surrounding the aetiology, symptoms, outcomes and management interventions of burnout in general and in the medical profession.

The literature analyses confirmed that Maslach and Jackson's (1982) tricomponent view of burnout was most comprehensive in understanding this phenomenon. These theorists concluded that burnout is not a simple, unidimensional problem, but a complex issue that is best explained in terms of *emotional exhaustion, depersonalisation and personal accomplishment* within the confines of the human services professions.

The review on the dynamics of this phenomenon revealed that burnout is a process and not a discrete event. It is a prolonged stress reaction which is the consequence of the disillusionment in the quest to derive a sense of existential significance from work.

A synthesis of the aetiology, symptoms and outcomes of burnout, as well as interventions aimed coping with burnout - both in general and unique to the medical profession - unanimously accentuated that burnout is a common problem facing helping professionals and it has serious debilitating consequences for medical doctors who do not take the necessary protective steps in preventing and treating burnout (Lemkau et al, 1994, p. 221; McCue, 1996; Schweitzer 1994, p. 352). The literature review thus confirmed that the implications of burnout are far-reaching for individual, organisational and social functioning.

Greater understanding on the conceptualisation of the burnout concept and its dynamics in the medical profession has thus been attained. The second literature objective has been addressed.

7.1.1.3 *Literature Aim 3*

The third literature objective was to synthesise the existing knowledge of salutogenic functioning and coping. A presentation and integration of the existing literature on salutogenic functioning and salutogenic constructs was achieved in chapter 4. The following issues were discussed: history of the salutogenic paradigm; the definition and model of salutogenesis; the selection and discussion of salutogenic constructs; coping theory including the definition, models; dynamics

of coping and how salutogenic constructs act as coping mechanisms in stress and burnout and whether salutogenic personality constructs have the ability to differentiate between copers and noncopers.

The salutogenic model (Antonovsky, 1987a) proved to be a more superior conceptualisation of health and disease than the traditional pathogenic approach. This model proved to be a comprehensive paradigm which shed new light on stress and coping research, since it focused on the strengths that individuals portray in their ability to manage tension in such a way that they do not succumb to illness.

Four salutogenic constructs were motivated for inclusion in the empirical study. The sense of coherence, hardiness, locus of control and learned resourcefulness concepts proved invaluable in answering the salutogenic question.

The literature established that salutogenic functioning cannot be separated from coping. Thus there was a need to conceptualise and integrate coping theory. The literature analysis confirmed that coping forms the basis of salutogenesis, which is essentially concerned with the positive outcomes of the stress process. The definitions and models of coping were discussed and it was concluded that the transactional model of coping best depicts the dynamics of this elusive concept. In the transactional model, coping was viewed as those cognitive and behavioural efforts needed to master, reduce or tolerate internal and external demands (Lazarus & Folkman, 1984a; 1984b). Most comprehensive models of stress viewed coping as a buffer factor that mediated the relationship between antecedent stressful events and negative outcomes (Endler & Parker, 1990; Folkman et al, 1986, p. 571).

In an attempt to determine how salutogenic constructs act as coping mechanisms in the face of stress and burnout, the literature indicated support for the notion that similar environments or situational events may not always be considered “stressful” from one individual to another, or from one moment in time to another. Support for this was confirmed in chapter 4 (and the integration) by the

salutogenic orientation which suggested that individuals who experience high degrees of stress without falling ill have a personality structure differentiating them from persons who become sick under stress (Antonovsky, 1979; Friedman, 1990, p. 283; Kobasa, 1979a; 1979b; Rosenbaum, 1982; Rotter, 1966). Whilst this implied the role that personality constructs play in moderating the stress-illness relationship, salutogenic theorists did not ignore the role of the socioeconomic environment in nurturing the development of the personality (Antonovsky, 1982). According to the literature, there was solid evidence for associations among individual personality differences, emotional reactions, health-related behaviours, physiological responses and diseases. Furthermore, following the transactional model of coping, all the salutogenic constructs share the assumption that an individual's perception of his or her world is the most crucial aspect of coping.

The aim of conceptualising and integrating the existing literature on salutogenic functioning and discussing how salutogenic constructs act as coping mechanism in the face of stress and burnout, has been established. Thus, the third literature objective has been addressed.

7.1.1.4 Literature Aim 4

The fourth literature objective was to integrate the literature to ascertain the theoretical link among stress, burnout and salutogenic functioning in general and in the medical profession. An assessment of whether salutogenic personality constructs had the ability to differentiate between coping and noncoping was also addressed.

The integration confirmed that stress and its effect on human health are the foci of the salutogenic model, which is based on the field of study that explores the links between stress and health ease/dis-ease (Antonovsky, 1979; Cooper & Payne, 1991; Strümpfer, 1990; Wolf & Ratner, 1999).

The literature also confirmed that prolonged exposure to a stressful situation does lead to eventual breakdown or burnout (Cooper & Payne, 1991; Maslach & Jackson, 1981; Robbins, 1996; Selye, 1976).

Personality, as a variable, was found to influence both the manifestation of burnout as well as one's predisposition to burnout (Welch et al, 1982 cited in Arumugam, 1992, p. 28; Cherniss, 1980; Medeiros & Tate, 1982 in Garden, 1989, p. 224; Lazarus, 1966). The literature cautioned that whilst there was no personality trait or personality configuration that, in and of itself, would cause someone to burnout, it is possible, however, that certain personality characteristics may predispose and/or make some individuals more vulnerable to burnout (Carroll & White, 1982, p. 46; Maslach, 1982, p. 63). More specifically, the literature review indicated that it was possible to identify a relationship between the medical personality and burnout (Ellis, 1996a). Keeping in mind that variables do not function in isolation, most data in the medical profession pointed to the fact that personality differences were more important than background or situational variables in understanding differences in burnout in junior doctors (Lemkau et al, 1994; 1988, p. 688). A list of personal characteristics thought to be predisposing factors to burnout in the medical profession was presented. Despite the importance of the personality variable, the literature highlighted the job, the organisation and societal factors as crucial in the study of burnout - especially at an aetiological level (Cherniss, 1995).

The evidence presented and confirmed a definite relationship between stress, personality functioning and burnout. From this, it was then possible to determine whether salutogenic constructs had the ability to differentiate between copers (those community service doctors not burning out) and noncopers (those community service doctors who show signs of burning out). In chapter four, the salutogenic construct was conceptualised by looking at stress that is relevant to the construct and the stress responses of individuals were discussed. The literature reported that personality variables, together with appraisal and coping have a significant relation to psychological symptoms and that personality variables motivate through their influence on how individuals think about themselves and their world (Folkman et al, 1986, p. 578; Lazarus, 1966; Maddi, 1984; Kobasa, Maddi & Kahn, 1982, p. 169).

The literature supported the notion that individuals scoring high on salutogenic variables, tend to use transformational coping in favour of regressive coping and reports show that this in turn decreases illness both at the main effect and at a buffer level (Antonovsky, 1982; Kobasa & Pucetti, 1983; Maddi, 1990; Rosenbaum, 1988; Rotter, 1966; Steptoe, 1991, p. 215).

A description of how salutogenic personality constructs of sense of coherence, hardiness, locus of control and learned resourcefulness act as coping mechanism in the face of stress and burnout was presented. It was suggested that individuals with personality dispositions of this sort (those that scored high on sense of coherence, hardiness, internal locus of control and learned resourcefulness) possessed a valuable aid in avoiding the illness-provoking biological and psychological states and should remain healthy while experiencing events that would be debilitating for others without those personality dispositions.

From this it can be assumed that the salutogenic personality variables, together with appraisal and coping, have a significant relation to psychological symptoms, in this case burnout, and that the salutogenic constructs have the ability to differentiate between copers (those community service doctors not burning out) and noncopers (those community service doctors who show signs of burning out).

The integration of the literature revealed a direct positive relationship between stress and burnout, where burnout is the consequence of prolonged stress. Personality in general and for the purpose of this research, salutogenic personality constructs as variable was found to play an important role in stress and burnout. Burnout, as indicated by the literature, was found to be inversely related to salutogenic functioning were salutogenic constructs were found to act as coping mechanism in the face of stress and burnout. Thus, the fourth literature objective of integrating stress, burnout and salutogenic functioning and the ability of salutogenic personality constructs to differentiate between copers and noncopers in community service doctors has been established.

7.1.2 Conclusions pertaining to the empirical study objectives

Conclusions pertaining to the empirical study will be dealt with individually:

7.1.2.1 Empirical objective 1

The first empirical objective was to determine stress levels amongst community service doctors in KwaZulu-Natal hospitals.

The findings identified that career development followed by the responsibility for people were rated as the two highest stressors for the community service doctors, while qualitative work overload, role ambiguity, role conflict and quantitative work overload were considered stressors in the moderate category. Role ambiguity and role conflict also appeared as significant for those doctors in the low stress category.

The means and standard deviations of the present sample of community service doctors, when compared to a helping profession's sample (Arumugam, 2003), indicated significantly higher levels of stress for role ambiguity, work overload (quantitative) and career development stress. The sample of community service doctors reported similar results in their experience of role conflict and work overload (qualitative) when compared to the helping profession's sample. Further confirmation of quantitative work overload being a significant stressor for community service doctors was indicated by the positive correlation between stress and the number of hours worked.

According to the Stress Diagnostic Survey's classification system, scores higher than 24 (this is on a scale from 5 to 35) indicate high stress. In terms of the scale from 0 to 100 used in the present study, scores higher than 63,3 were thus indicative of high stress. None of the means for the individual subscales for community service doctors was higher than 63,3; these mean scores fell between 16,6 and 63,3 which reflects moderate stress.

The conclusion to empirical objective 1, is that community service doctors in KwaZulu-Natal hospitals are experiencing higher levels of stress in comparison to other helping professionals. In terms of the manual, however, the mean scores of the community service doctors fall in the moderate range, which does not indicate high stress. The first empirical objective has thus been addressed.

7.1.2.2 Empirical objective 2

The second empirical objective was to determine the level of burnout amongst community service doctors in KwaZulu-Natal hospitals.

The classification of scores, according to the MBI manual, indicated that the present sample reported high levels of burnout with regard to depersonalisation frequency and intensity; moderate to low burnout was reported for personal accomplishment frequency and intensity, and moderate to high burnout for emotional exhaustion frequency and intensity.

The means and standard deviations for each subscale for the present sample were compared to the general helping profession's sample (Maslach & Jackson, 1981). The results were significant for only two scales in favour of higher burnout levels for the community service doctors: depersonalisation frequency and depersonalisation intensity. On the scales emotional exhaustion and personal accomplishment, community service doctors achieved similar scores and in the similar range and could not, therefore, be shown to be more significantly burnt out than other helping professionals.

From the results, it was concluded that community service doctors in KwaZulu-Natal provincial hospitals are experiencing high levels of burnout only for depersonalisation. The second empirical objective has thus been addressed.

7.1.2.3 *Empirical objective 3*

The third empirical objective was to measure the level of salutogenic functioning amongst community service doctors in KwaZulu-Natal hospitals.

In terms of the descriptive analysis for the sense of coherence, the community service doctors scored relatively higher on the meaningfulness subscale than on comprehension and manageability. On the hardiness scale, they scored much lower on the commitment subscale than on the control and challenge subscales. Moderate scores appeared on the other subscales.

The means and standard deviations for each salutogenic variable were compared to comparative research data for different helping professions. The mean difference on the majority of individual scales, when compared to the eight comparative groups (2 per salutogenic variable), provided preliminary evidence of low levels of salutogenic functioning in community service doctors.

Further analysis revealed that community service doctors in KwaZulu-Natal hospitals are experiencing varied levels of salutogenic functioning as evident by sense of coherence functioning being significantly lower than both norm groups, hardiness functioning being significantly high for the first comparative group and significantly low for the second comparative group, locus of control being moderate or similar to the first comparative group and being significantly lower for the second comparative group, and learned resourcefulness being significantly higher for the first comparative group and being moderate or similar to the second comparative group. In summary, this group - when compared to other helping professions - indicates: low salutogenic functioning for 50 percent of the analyses, moderate salutogenic functioning for 25 percent of the analyses and high salutogenic functioning for 25 percent of the analyses.

From these results, it can be concluded that the sample of community service doctors in KwaZulu-Natal hospitals are not experiencing significantly low levels of

salutogenic functioning in general, but rather for sense of coherence only. Thus, the third empirical objective has been addressed.

7.1.2.4 Empirical objective 4 and empirical objective 5

The fourth and fifth empirical objective was to determine the relationship between stress and salutogenic functioning, and burnout and salutogenic functioning amongst community service doctors in KwaZulu-Natal hospitals. Correlations between individual scales and composite scales were undertaken to determine the relationships between these variables.

With regard to empirical objective 4, few significant correlations were found between levels of stress and salutogenic functioning. These findings were applicable for

- comprehension and role conflict, qualitative work overload and responsibility for people
- manageability and qualitative work overload, career development stress and responsibility for people
- meaningfulness and responsibility for people
- commitment and role conflict, role ambiguity, work overload qualitative and career development stress
- control and role ambiguity
- challenge and qualitative work overload

No associations were found for learned resourcefulness and stress. Similarly, no significant relationships were reported for locus of control and stress.

With regards to empirical objective 5, few significant relationships were found between levels of burnout and salutogenic functioning. These findings were applicable for

- comprehension and depersonalisation
- meaningfulness and personal accomplishment

- control and personal accomplishment
- challenge and emotional exhaustion
- learned resourcefulness and depersonalisation
- locus of control and depersonalisation (predicting a positive relation)

Subsequent correlations between these composite scores revealed

- significant relationship between stress and burnout
- no significant relationship between stress and salutogenic functioning
- no significant relationship between burnout and salutogenic functioning

Finally, the *t*-test also revealed nonsignificant relationships between high and moderate levels of burnout and individual salutogenic constructs.

In summary, minimal significant relationships between stress, burnout and salutogenic functioning were found in the correlation of independent scales for these variables. No significant relationships were found for the correlation of composite variables for stress and salutogenic functioning, and burnout and salutogenic functioning. In other words, stress scores (empirical objective 4) and burnout scores (empirical objective 5), in general, were unable to differentiate between salutogenic functioning in community service doctors in KwaZulu-Natal hospitals. This concludes the fourth and fifth empirical objectives.

7.1.2.5 *Empirical objective 6*

The sixth empirical objective was to ascertain the differentiation between coping and noncoping in salutogenic terms amongst community service doctors in KwaZulu-Natal hospitals.

Two groups (high and moderate burnout) were correlated with the composite salutogenesis construct and the composite stress scale. Details of how burnout groups were categorised into high and moderate groups are presented in chapter 6, section 6.6.2.

The results of the correlations indicated a significant relationship between stress, and burnout which confirms the findings of the literature review. However, the composite salutogenesis variable did not correlate significantly with the other composite variables of stress and burnout. This was also verified by the *t*-tests results ($\text{Prob} > |t|$, none of the values come even close to 0,05). If the assumption that the two groups established for burnout (high and moderate) are equated to “noncopers” and “copers”, then it follows that copers are not different from noncopers as far as the salutogenic functioning is concerned.

From the above correlational analysis of the composite variables and the *t*-test results, there is no evidence of significant relationships and, hence it can be concluded that in the sample of community service doctors in KwaZulu-Natal hospitals, the salutogenic construct scores were unable to differentiate between copers and noncopers. Thus, the sixth empirical objective has been addressed.

7.1.3 Integration of the literature and empirical results

With reference to the research hypothesis and central thesis of this research as identified in chapter 5 (sec. 5.5), the results of the sample of community service doctors in KwaZulu-Natal hospitals, indicate that within this population, the relationship between salutogenic functioning and stress and burnout levels could not be unreservedly confirmed.

Contrary to the literature report, no significant relationship was found between stress, burnout and salutogenic functioning in general. Furthermore, salutogenic construct scores were unable to differentiate between copers and noncopers. (The reader is advised to see the integration of the literature and empirical objective presented at the end of chapters 4 and 6 for a comprehensive discussion on this topic.). Empirical findings one, two and three confirm, to a limited extent, the literature conclusions that

- incidences of stress and burnout are high in the medical profession (McCue, 1996; Schweitzer, 1994)

- salutogenic properties act as generalised resistance resources and have buffering effects on stress and burnout (Antonovsky, 1979; Friedman, 1990, p. 283; Kobasa, 1979a; 1979b; Rosenbaum, 1982; Rotter, 1966)
- individuals scoring low on salutogenic variables tend to use regressive coping in favour of transformational coping; this increases illness both at the main effect and at a buffer level (Antonovsky, 1982; Kobasa & Pucetti, 1983; Maddi, 1990; Rotter, 1966; Rosenbaum, 1988)

Empirical findings four, five and six were unable to replicate the literature conclusions. Based on the literature reports, it was predicted that high stress and burnout are equivalent to noncoping and high levels of salutogenic functioning is equivalent to coping. From this it was expected that high scores on stress and burnout would implicate the opposite, that is, low scores for salutogenic functioning in that the salutogenic properties act as generalised resistance resources and have buffering effects on stress and burnout. However, when these scores were correlated, no significant association was found between levels of stress/burnout and salutogenic functioning. In addition, salutogenic construct scores were unable to differentiate between copers and noncopers.

According to the results, personality as a variable was ineffective in differentiating between coping and noncoping in the sample. Thus, no matter how well or poorly one scored on salutogenic functioning, this is an insufficient predictor of who will and will not suffer from burnout. It is concluded that variables other than personality had a confounding effect on the manner in which community service doctors experienced their situations.

The following explanations (see the limitations in sec. 7.2 below) are also presented as possible reasons for why the empirical objectives 4, 5 and 6 did not replicate the literature conclusion.

Answers to the literature and empirical objectives have been provided. This completes step 7 of the empirical study.

7.2 LIMITATIONS

With reference to step 8, section 1.7 of the research methodology as outlined in chapter 1, the limitations of this research are as follows:

- (1) The mere presence or absence of burnout and stress symptoms (in the form of high or low scores on these variables) may not be sufficient to explain the individuals functioning.
- (2) Quantitative analysis is restrictive in obtaining the full picture of the complexities of an individual's functioning. Possibly entering the life world of the individual could have proved more valuable than relying on quantitative measures alone. Cordes and Dougherty (1993) indicate that qualitative research could be valuable in future studies on burnout.
- (3) To seek the association of burnout and salutogenic constructs is difficult, because each is located in the opposing paradigms of pathogenesis and salutogenesis.
- (4) Variables, other than personality, could have accounted for the variance in coping with stress and burnout. One possible reason is that the influence of the environment could have had a substantially greater effect on the respondent's ability to cope with stress and burnout, thus outweighing the effect of the personality on coping. This has been reiterated by leading burnout theorists. Maslach (1978, p. 114) states: "The search for the causes of burnout is better directed away from identifying the bad people and toward uncovering the characteristics of the bad situation where many good people function." This viewpoint emphasises the central role of situational factors in understanding burnout (Farber, 1983, p. 5). Pines and Aronson (1988, p. 51) advocate that their analysis of the causes of burnout has focused on the environment, not because individual differences are unimportant, but because almost all individuals can be affected by

environmental changes, regardless of their personality characteristics or cognitive styles. The literature suggests that the complete environment (occupational, organisational, sociopolitical, home and recreational environments) has more practical utility in understanding burnout than concentrating on the individual's intrapsychic experience (Antonovsky & Sagy, 1986, p. 223; Golembiewski & Roundtree, 1986; Pines & Aronson 1988). The subjective experiences of an individual in terms of physical, psychological and social functioning, also always play a moderating role in the relationship between cause effect analyses (see the transactional models of stress and coping in chap. 2 and chap. 4 for details on the multivariate nature of stress and coping).

If community service is considered as a recent life event, the literature indicates that recent life events accounted for a small percentage of the total variance in sense of coherence and that other necessary resources were mobilised to cope with the stressors (Carmel & Bernstein, 1990; Wolf & Ratner, 1999, p. 195). Thus, no colinearity between the effect of community service and the sense of coherence is expected.

Furthermore, according to Antonovsky (1996b), an individual's sense of coherence becomes relatively stable by the age of 30 (approximate mean age of the sample). This stability of the SOC in terms of age could be reason for little or no fluctuation in relationship to burnout.

- (5) The sample size of this research was small, $N = 41$. Small sample sizes lack statistical rigor. Gilbar, (1998, p. 48) indicates that the small sample size does not reduce the importance of the findings, but points to the necessity for further research in this aspect of burnout and salutogenesis.

Often an important variable may not correlate with other variables, because the range is too restrictive since the scores are too homogenous. Homogeneity in responses could be attributed to the fact that similar type of people tend to participate in research studies (Hurrell et al in Cooper & Payne, 1991)

- (6) Four salutogenic constructs were utilised to represent salutogenesis. The literature indicates a growing body of knowledge of constructs that fall under this paradigm. Possibly the number and type of constructs used in this study were insufficient or incomplete enough to generalise the findings to how individuals manage stress and remain healthy.
- (7) The literature indicates that concepts such as stress, burnout, coping and personality are conceptually diverse and mean different things to different observers. This lack of definitional clarity and consensus has been the greatest limitation in the advancement of sound empirical testing at the theoretical and methodological levels. Empirically, there is a lack of comparative analysis, insufficient use of control groups, overcoming difficulties in using concepts that are primarily subjective in nature and controlling for the numerous individual and environmental variables involved (Ratliff, 1988, p. 153; Shinn et al, 1981, p. 69).
- (8) The sample represented community service doctors from both rural and urban hospitals. Thus, the generalisations must be viewed with caution, as a recent publication on community service doctors indicate a vast disparity in the opinions and experiences of community service doctors from urban and rural hospital (Reid, 2000).
- (9) Compulsory community service was introduced in 1999. This research was also conducted in the same year. Other than one piece of literature (Reid, 2000), there was a lack of research available on the South African community service situation.

The limitations of the research have been presented. This concludes step 8 of the empirical study.

7.3 RECOMMENDATIONS

With reference to step 9 of the research methodology in chapter 1, section 1.7, the recommendations of this research are presented next. Based on the results of the literature and empirical analysis, recommendations will be made with regard to future research, training and development of community service doctors in KwaZulu-Natal hospitals.

7.3.1 Recommendations pertaining to the literature review

From the literature review, the following recommendations are made:

- (1) No significant relationship was found between salutogenic functioning and the high levels of reported stress/burnout. According to the results, personality as a variable was ineffective in differentiating between coping and noncoping in the sample. Thus, no matter how well or poorly an individual in this sample scored on salutogenic functioning, it was insufficient as a predictor of burnout. It is concluded that variables other than personality played a greater role in the manner the sample experienced their situation.

The researcher is of the opinion that it is reasonable to assume that situational variables could have played a causative role in predicting copers and noncopers. Situational risk factors contributing to poor mental health among consultants was well documented in the literature. Another study on the same sample of community service doctors found that respondents complained of being more seriously affected by the rural work situation than the urban work situation (Reid, 2000); yet, another indication of the role that work-related variables play. It is recommended that future research studies concentrate more specifically on the aetiological role of working conditions and situational variables in stress and burnout in the medical profession. Also, a comparative study of urban and rural hospital situation in the future

could establish the effect of the environmental variables on the experience of burnout in community service.

- (2) Whilst situational variable could have accounted for the greater levels of burnout in this study, the crucial role of personality factors in moderating the stress illness relationship should not be totally ignored. Salutogenesis has proven to illuminate ways of developing the personality characteristics that can aid in a productive and healthy living in both work and nonwork spheres. Future research should continue in this light.
- (3) It needs to be taken into consideration that an improvement of work variables are dependent on macroeconomic and political structural changes, which, if implemented, are long-term solutions. Thus, any immediate attempt to deal with the inherent stress of community service work lies on the onus of the individual's capacity to cope with the situation. There is a need for continued research on coping, because there are numerous qualities within the individual that can be strengthened, reinforced and enabled which have clinical and occupational implications for dealing with stress and burnout. To support this recommendation, future research studies should concentrate on the learning about the role moderators and mediators play in the connection between stressful life events and illness or health. Lazarus's multistage model of coping serves as a heuristic framework on which future coping studies can be built on (Kravetz et al, 1993). Longitudinal data need to be obtained to fully confirm the nature of relationships highlighted here.
- (4) Person-environment fit notion highlights that some individuals may thrive at higher levels of organisational stress than others. Future research endeavours should, therefore, become relevant for both individual and organisational interventions. It is recommended that employees' attitude variables regarding organisational and personal stress must be evaluated prior to designing intervention programmes. This can be done using the Medical Personnel Stress Scale, which is a 48-item subjective stress measurement instrument capable of assessing both organisational and individual dimensions of stress. The chronbach alpha for this scale is 0,85 (Hammer et al, 1985, p. 156).

- (5) It is recommended that industrial and clinical psychologists take note of the diagnostic criteria that allow burnout to be identified within an individual, as well as the differential diagnosis that exists for burnout (De Wet, 1998, p. 323).
- (6) The establishment of reliable stress intervention programmes rests on reaching consensus on both the theoretical and methodological levels. Also, in order for stress and burnout theories to be relevant and to benefit society, there is a need for practical application of existing knowledge. An integrated conceptual effort can begin by first attaining better operational definition and objective measurable criteria on concepts such as stress, burnout and the moderators that affect them. The researcher believes that the transactional model of stress and coping is an excellent framework from which to expand.
- (7) The theoretical and methodological closure needed (mentioned above) could assist in the development of valid and reliable diagnostic procedures for individuals and organisations, thus leading to standardised, specialised, cost-effective techniques for dealing with specific aspects of work-related stress and burnout at different levels. This, in turn, will be combined into intervention programmes that focus on identification, prevention and human resource management, rather than on mediation and remediation alone (Paine, 1982, p. 25).
- (8) The literature revealed that female medical students and female physicians show higher levels of stress and burnout, and that the incidence of suicide is higher for females than for their male physician counterparts. Although there was a balanced gender distribution in this sample, analysis of demographics did not form part of the empirical objectives. Further research is required to explore the risk factors for the particularly poor mental health of female junior doctors (Graham & Ramirez, 1997, p. 230).
- (9) It is recommended that future studies incorporate salutogenesis into the emerging paradigm of fortigenesis. Fortigenesis is a new paradigm, which

appears to be “more embracing, more holistic, than salutogenesis” (Strümpfer, 1995, p. 82). Whilst salutogenesis is concerned with the origins of health, fortigenesis focuses on the origins of psychological strength in general. The inclusion of fortigenesis would be beneficial to the development of both salutogenesis and personality research. Intervention research will have a lot to gain from fortigenesis.

The recommendations arising from the literature study have addressed.

7.3.2 Recommendations pertaining to the empirical study

From the empirical study, the following recommendations are made:

- (1) This study was a quantitative research analysis. However, it is well-known fact that qualitative analysis has the power to yield much richer information on topics such as stress, burnout and personality. Qualitative research, especially in combination with quantitative analysis could be valuable in future studies on burnout (Cordes and Dougherty, 1993).
- (2) Small sample sizes lack statistical rigor, in the case of this study $N = 41$. Gilbar (1998, p. 48) indicates that the small sample size does not reduce the importance of the findings, but point to the necessity for further research in this aspect of burnout and salutogenesis. In order to validate generalisations, it is recommended that future studies embark on a national study of community service in South Africa, as this was limited to a provincial analysis.

The recommendations arising from the empirical study have been addressed.

7.3.3 Recommendations pertaining to the training, monitoring and development of community service doctors

With reference to the aims of the study (chap. 1, sec. 1.3), the following recommendations are made:

- (1) An attitude and paradigm shift is required in the medical profession. What is now popularly known as the “macho image” and the “conspiracy of silence” have both been labelled responsible for the legacy of maladapted coping styles associated with the practice of medicine (Ellis, 1996a; McCue, 1986; Sonneck & Wagner, 1996). Changing the “macho image” has to begin with medical doctors’ relinquishing the idealised image society has of them, in addition to them not confusing success with over-extension of one’s physical and mental capacities to the extent of exhaustion. Breaking the “conspiracy of silence” involves with medical doctors speaking out about factors that affect them or other colleagues, without the fear of damaging the superhuman stigma attached to the medical profession. Simply put, there is a need for doctors to start voicing their unacceptance of unacceptable conditions.

Moving way from fear and shame to a climate of openness and acceptance is key in allowing medical doctors to feel free to admit to the challenges and difficulties inherent in their work. Signs of burning out or struggling to cope must not be viewed as personal failure, but rather as a normal occurrence associated with the helping professions. Once this mind-set has been changed and once it becomes “legal” for doctors to express their discontentment and inability to cope with often-difficult situations, it will promote a healthy climate geared toward prevention and treatment of stress and burnout in the early stages. In this regard, the acknowledgement of the prevalence and escalation of drug and alcohol dependence, self-prescribing, psychological and physical illness, or a combination of these factors in physicians, were noted by the Health Professionals Council’s health committee in South Africa (Medigram, June 2000). The health committee

can be commended for their recent paradigm shift in their management of impaired health care professionals from a punitive to a rehabilitative role, focusing on a caring role and an educational approach to dealing with this issue. Industrial Psychology has an immediate role to play in designing, implementing and monitoring counselling, supporting and mentorship programmes that have been recommended by the committee.

- (2) Norvell et al (1987, p. 119), found that stress management programmes can be effectively implemented with health care professionals. Continued research is needed to demonstrate further the potential short-term and long-term benefits of stress management programmes for health care providers.

Intervention approaches must address a) personal development strategies, b) interpersonal strategies aimed at improving the relationships between individuals, and c) external strategies, focusing on the improvement of the environmental or organisational situation. Stress management interventions should be introduced and maintained from the training institution throughout the medical career lifespan.

Intervention programmes can make awareness possible on the following levels, according to De Wet (1998, p. 325): the existence of burnout, the factors contributing to burnout, the various manifestations of burnout at work and in the organisation, and the coping strategies available to counter this problem in a positive and salutogenic manner. Increasing awareness and discussion might also provide the basis for more in-depth investigations of how personality traits and coping patterns influence stress and stress resistance among physicians; this in turn could produce knowledge suggesting more specific intervention strategies for reducing the risk of burnout and other manifestations of impairment (McCranie & Brandsma, 1988, p. 35).

According to Kobasa (1979, p. 29), an existential psychotherapy approach is recommended to encourage the individuals capacity to cope by a) improving individual's perceptions and understanding of themselves and their complex environments and b) improving the ability of individuals to transform outlooks

and actions, so that individuals become highly aware of, and are able to influence stressful events in their lives

Community service doctors can be prepared via induction programmes in their first week of community service on how to anticipate the challenges of community service, especially in rural hospital (Reid, 2000, p. 25).

- (3) Altering the situational variables may have longer-term benefits in reducing stress and burnout. The following are a list of situational factors that are recommended to improve the experience of hospital work. In the short term, rotating between urban and rural hospitals can create flexible work patterns. In the longer term, the working conditions and conditions of service especially in the rural hospitals need to be addressed. Creating a need for job descriptions, reducing work overload, maintaining or enhancing aspects of the consultants' role, enhancing discretion and clinical autonomy over one's work and providing time and avenues for continuing professional development are some of the ways to increase personal competence in meeting demands of contemporary medicine.
- (4) A systematic program of HR planning from policy to practical introduction is suggested to improve the hospital work situation. According to Reid (2000, p. 2) "HR planning is a mechanism for deploying health workers according to need, on a rational and scientific basis. It is the process of estimating the number of persons and the kind of knowledge, skills and attitudes they need to achieve predetermined health targets and ultimately health status objectives". Industrial Psychology can play a role here in systematically determining who is needed, what is needed and where it is needed. This also involves clear guidelines that will serve as job descriptions to ensure that community service doctors are involved in areas of need. These should be developed in relation to norms for services offered by district and regional hospitals, in order to ensure equity (Reid, 2000, p. 25).
- (5) Intervention in the medical student curriculum should include burnout awareness, lifeskills, and interpersonal skills training, so that prevention

becomes the predominant way of managing burnout, as opposed to crises management. Also, universities should work closer with national policy makers to create alternative medical education that better prepares students to work in rural and under-served areas.

According to Benatar in Bateman (2001, p. 101), some schools of thought expressed their scepticism about the success of attendance rates for coping skills courses, because students are more geared to concentrating on subjects that will ensure a pass. In the light of this, it is recommended that these coping skills courses become accredited courses. In this way, students will begin to recognise the seriousness of the issue and this will also contribute to the much needed paradigm change required in the medical arena.

This prior training at medical school level is the first step in providing ongoing psychological support in the career of the medical doctor.

- (6) The literature was emphatic about the important role of social and professional support in mediating the effects of stress. Supervisory support was rated highly relevant in helping community service doctors cope with the impact of the work stressors (Reid, 2000). Further research needs to document the mediating role of social support in its various forms in the medical profession.

An assertive approach to job-related problems in the absence of a supportive relationship with one's supervisor and associated organisational resources may only lead to additional stressful incidents. This idea is consistent with the arguments presented by Pearlin and Schooler (1978), and (Leiter, 1991) that individual coping behaviours may be quite salient to addressing occupational stressors, but only if these coping efforts are supported by colleagues on the workgroup or department level. In short, "we do not think as if we are in control when we know we are not" (Leiter, 1991, p. 143). It is recommended that sociological concepts and models that focus on

organisational and social conditions may have a contribution to make here (Starrin et al, 1990).

Supervisory training programmes need to be introduced to equip supervisors with skills on developing junior staff both technically and individually. In addition to simply teaching self-control, coping techniques and altering aspects of the job, there is a need for the hospital managers to take initiative in providing positive, supportive structures through which medical doctors can grow and develop.

▪ **COMMENT**

The recommendation offered must be viewed as a start of a paradigm shift - in the minds of medical fraternity themselves and in society - that medical doctors are not superhumans playing god, but are normal people who are trying to do a job. This role-change will remove the unnecessary pressure on medical doctors who have been forced to adopt maladapted coping styles.

It is crucial for the health department to take seriously the effects of stress in their medical staff, as this not only benefits the caregiver and the recipients of the service, but also contributes to a climate of a healthy health care system.

It is hoped that the information from this study will help motivate the development of a comprehensive intervention strategy designed to eliminate or at least moderate the effect of high levels of stress in a profession thought to be extremely stressful. Industrial psychology can play a role in developing individuals and creating a more human – friendly work environment. It is in this spirit and with short and long-range goals in mind that the results of the present study are best understood.

In view of all that has been said and done in this study, the following words by Carroll and White (1982, p. 60) best summarises the future of stress, burnout and salutogenic functioning research:

Staff burnout must be viewed as stemming from the interaction of debilitating individual and environmental factors that together detract from a person's ability to do his or her work. Treatment and prevention must be approached from many directions and at various levels, involving many different disciplines and professions, in a co-ordinated and well-integrated fashion. Staff burnout simply stated is not an individual disease. Nor is it due only to negative, environmental conditions. It is an ecological dysfunction and must be dealt with as such.

This concludes the final step 9 of the empirical study.

7.4 CHAPTER SUMMARY

In this chapter, the conclusions and the limitations of the research were presented in relation to the literature review and empirical objectives. Finally, the chapter concluded with recommendations with regard to the literature review, empirical study and the training, monitoring and development of community service doctors in KwaZulu-Natal hospitals. With reference to the research methodology discussed in chapter 1, the general and specific objectives of this research have been addressed.

▪ REMARK

In this chapter, steps 7, 8 and 9 of the empirical study as depicted in chapter 1, section 1.7.2, phase 2 have been completed.

This research endeavour has been successful in achieving its main aim of reporting on stress, burnout and salutogenic functioning amongst community service doctors in KwaZulu-Natal Hospitals.