

CHAPTER 7

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

The purpose of this chapter is firstly to summarize the content of the preceding thesis and secondly to provide conclusions and recommendations derived from the findings of the research for this thesis. The overall goal of this study as well as each objective, and the research question will be addressed.

As mentioned earlier, it is well known that dentistry is a very stressful profession and the researcher is of the opinion that some dentists consume alcohol to cope with the stress and strain of the dental profession. This way of coping may lead to adverse effects and alcohol dependency, even if it is only in very small percentages.

The findings of the quantitative phase, supported by the qualitative phase of this study, demonstrate that South African dentists do experience high levels of occupational stress and that dentists have ways to cope with this stress. South African dentists consume alcohol for a variety of reasons, of which socializing with alcohol is the most significant. This research demonstrates that when alcohol consumption of male dentists was compared with alcohol consumption of female dentists there was no statistically significant difference. However, this research demonstrates that a significant number of South African dentists (male and female) consume alcohol above the sensible limit of alcohol intake which the South African Food Based Dietary Guidelines on sensible drinking, consider to be no more than 2 standard drinks per day for women and 3 standard drinks per day for men. The quantitative phase of this study also demonstrates that there are South African dentists that actually use alcohol to cope with the stress of the dental profession, and the qualitative phase demonstrates that some of these

dentists have become dependent on alcohol. This study indicates that alcohol adverse effects are present, and that there are South African dentists who have experienced alcohol related problems. However, in the quantitative phase this was reported in very small percentages. The qualitative phase probed more in-depth into alcohol related problems, among South African dentists, and revealed that there are South African dentists who have experienced major problems as a result of alcohol use.

7.2 Summary of the research methodology

The specific goal for this study was to explore alcohol consumption related to occupational stress and anxiety among South African dentists, and to identify alcohol related problems as a result of this way of coping.

Table 1 illustrates the research process followed in this study.

Table 1: The research process followed in this study.

Type of research: Applied		
Approach: Cresswell's dominant less dominant (triangulation) approach		
	Quantitative (dominant)	Qualitative (less dominant)
Design	Descriptive (survey) design	Collective case study
Respondents	Dentists practising in the Tshwane (Pretoria), Krugersdorp and Johannesburg metropolitan areas	Dentists that had treatment for alcohol dependency or who were self characterized as heavy alcohol users
Data collection	Questionnaires	Semi-structured interviews
Sampling	Probability	Non-probability
Sampling technique	Simple random sampling	Purposive sampling
Data analysis technique	Frequencies / percentages in table and figure form	Transcribed interviews with quotes, categories, themes, and sub themes

7.2.1 The selection of a researchable topic

The researcher is of the opinion that the specific research was not only researchable but also necessary because of his findings in the literature search. The only study related to the topic in South Africa, that the researcher could find, was a study conducted in 1996 in the Department of Psychology at the University of Stellenbosch which investigated stress and coping with stress among South African dentists. A substantial amount of research regarding stress and alcohol consumption, among dentists, is internationally available. However, Kenna and Wood (2004: 107-16) supported the findings of Hanks and Bissel in 1991, that little meaningful data are available on alcohol consumption among dentists in general, and they found that prevalence studies of substance use and abuse rarely included dentists.

7.2.2 Goal of the research

The researcher defines the goal of this study as follows: “To explore alcohol consumption related to occupational stress and anxiety among South African dentists, and to identify adverse effects as a result of this way of coping with occupational stress (Compiling a general profile on alcohol consumption among South African dentists).

7.2.3 Objectives

The researcher identified the following objectives for this study.

Objective 1: To explore occupational stress and anxiety among South African dentists and measures they take to cope with occupational stress and anxiety.

This objective was addressed by means of a literature study in chapter 3. Knowledge was gained from the literature study regarding occupational stress

and anxiety among South African dentists and measures they take to cope with occupational stress. This chapter discussed stress, burnout and factors that cause burnout, factors in the dental profession that cause occupational stress, such as economic stressors, practice management and stress, job satisfaction and stress, dental procedures and stress, overall stress., age and stress, working environment and stress, personality (individual aspects) and stress, general health and stress, and management of stress.

This objective was also partly met by exploring these factors in both the quantitative and qualitative phases of the study.

Objective 2: To explore alcohol consumption and alcohol-related problems among South African dentists.

This objective was achieved in the quantitative and qualitative phases of this study. A literature review was done on alcohol consumption and alcohol related problems among dentists. In chapter 2 the following were discussed : the many facets of alcohol use, abuse and dependency in general, not only as it relates to a dentist, as well as models, theories and classifications of addiction. In chapter 4 alcohol consumption and alcohol related problems among dentists were explored and the researcher found that not much literature is available on this topic among South African dentists.

The criteria used to measure alcohol consumption among the respondents in the quantitative study were: had 5 or more drinks at least on one occasion per month in the last year, had 5 or more drinks at least on 5 occasions per month in the last year, the number of weekend days (Friday –Sunday) they drink alcohol on average, the number of alcoholic drinks they drink on average on a weekend day (Friday to Sunday), the number of weekdays (Monday-Thursday) they drink alcohol on average, the number of alcoholic drinks they drink on average on a weekday (Monday – Thursday), and whether they consider themselves as a non-

drinker, a light-social drinker, a heavy-social drinker, a problematic drinker or an alcohol dependent. Reasons why the respondents consume alcohol and adverse affects of alcohol use were addressed. Rich data with regard to alcohol consumption and alcohol-related problems among South African dentists were acquired in the qualitative study.

Objective 3: To explore among South African dentists alcohol use, abuse, and dependency related to occupational stress and anxiety.

The researcher did an in-depth literature search and addressed alcohol use, abuse and dependency related to occupational stress and anxiety among dentists (chapter 2 and chapter 4). In chapter 2 the researcher addresses literature on etiological factors relating to alcoholism, behavioural, psychological, and physical effects of alcohol use or abuse, as well as alcohol related disabilities linked to nutritional and pharmacological aspects of alcohol use. In chapter 4, the researcher addresses literature on alcohol consumption among dentists and alcohol related problems among dentists. The quantitative and qualitative phase of this study investigated this phenomenon among South African dentists. The qualitative phase indicated that alcohol use, among dentists, to relieve occupational stress may lead to alcohol dependency.

Objective 4: To compile a profile on alcohol consumption among South African dentists.

The purpose of the above mentioned objective was to enable the researcher to compile a profile on alcohol consumption among South African dentists. The researcher provided this in the quantitative and qualitative phases of the study. In the quantitative phase probability sampling showed general findings of dentists representative of the Gauteng province of South Africa. In the qualitative phase non-probability sampling showed the live-world of an alcohol dependent dentist. The researcher did not compile a specific profile, but sees this whole thesis as

the profile on alcohol consumption among South African dentists linked to the stress of the dental profession.

Objective 5: To make recommendations for dealing with alcohol dependency amongst dentists.

The recommendations made by the respondents in the quantitative, as well as the qualitative studies, were presented in order to help with the prevention and treatment of alcohol dependency among dentists. Later on in this chapter, the researcher makes specific recommendations.

7.2.4 Research questions

The researcher is of the opinion that some South African dentists, even if it is in small numbers, consume alcohol to relieve the stress and strain as a result of their profession. In this study, the researcher sought to answer the following questions:

Question 1: What factors in the dental profession cause occupational stress and anxiety in South African dentists?

The researcher desired answers to this question because the in-depth literature search revealed that there are many stress factors among dentists. The quantitative phase of this study revealed that South African dentists experience high stress levels which include more intense, and less intense stressors. The more intense stressors were: demands and expectations of patients, irregular long working hours, management and business demands, financial issues, emotional and physical exhaustion, balance between professional and family life, minimal time for family and personal recreation because of the profession, the fear of legal action, and time management. The less intense stressors were: working in close physical range of the patient (invasion of your personal space),

no built in social psychological support system in the profession, fear of risk of HIV and other infections, safety issues, e.g. physical injury, fear of loss of patients to other dentists, and fear of dental technologists' work not being on time or up to standard. The researcher also found that there was no significant difference between the stress levels of dentists in private practice and stress levels of dentists in other sectors, such as the health service and lecturers at dental schools.

The qualitative study reinforced the quantitative findings because the respondents, who had undergone treatment for alcohol dependency experienced anxiety and high levels of occupational stress, such as time schedules, patients with high expectations, and difficult patients. The qualitative study also indicated that even the academic world, being a lecturer at a dental school, can be extremely stressful. These stressors contributed to their alcohol consumption, which resulted in alcohol dependency.

Question 2: What measures do South African dentists apply to cope with occupational stress and anxiety?

The researcher desired answers to this question because the literature search revealed that dentists utilize a variety of ways to cope with the stress derived from their occupation. However, the literature also revealed that some dentists do nothing to cope with occupational stress and some dentists use alcohol as a coping mechanism, that could result in adverse affects, as a result of this way of coping. From the quantitative study, the researcher came to the conclusion that some South African dentists consume alcohol as a stress relieving mechanism and there is a small percentage of South African dentists that have encountered problems as a result of this. In this study, it was found that the majority (70.13%) of the respondents do physical exercise to reduce their stress levels. Other stress relieving methods that were reported are, music, movies / Videos / DVD, socializing with friends, smoking, emotional outbursts, hobbies, and undergoing

counseling as a way of stress relief. However, 16.88% of the dentists reported that they actually use alcohol to reduce their stress levels.

The qualitative phase of this study reinforced the quantitative phase concerning coping mechanisms. One alcoholic respondent returned to dentistry after rehabilitation, but changed his/her working conditions, in order to cope, due to the stress related to the dental profession.

Question 3: To what extent do South African dentists consume alcohol to cope with occupational stress and anxiety?

The researcher desired answers to this question because he is of the opinion that some South African dentists use alcohol to cope with the stress of their profession. The literature confirms this, and the quantitative and qualitative findings of this study indicated that there are South African dentists who consume alcohol as a stress relieving mechanism. However, in the quantitative phase of this study, this phenomenon was reported in small quantities.

In the quantitative phase of this study, it was found that 32.47% of the respondents are heavy episodic alcohol users and 12.99% are heavy alcohol users. What is concerning is that 7.79% of the respondents reported that they drink every day of the weekdays (Monday – Thursday) and the amount they drink ranges between 3-4 and 7-11 drinks on such a drinking day. Also concerning is that 20.78% of the respondents drink 3-4 drinks on a weekend day and 9 (11.68%) drink 5-11 drinks on a weekend drinking day that is above the sensible limit of drinking. The South African Food Based Dietary Guidelines on sensible drinking is no more than 2 standard drinks per day for women and 3 standard drinks per day for men.

The majority of the respondents in this sample of South African dentists consider themselves as non-drinkers (27.27%) and light-social drinkers (61.04%).

However, none see themselves as a problematic drinker and 1.3% see him/herself as an alcohol dependent. When alcohol consumption of male dentists was compared with alcohol consumption of female dentists, there was no significant difference ($p = 0.1632$, thus > 0.05).

The low stressed dentists were categorized as those who reported 0-4 areas of stress and the high stressed dentists were those who reported 5-14 areas of stress. There is a statistically significant difference between the dentists with less areas of stress (low stressed dentists) and those who reported more stress areas (high stressed dentists) with regard to their alcohol consumption ($p = 0.0026$, thus < 0.05). In this study, the dentists that reported less areas of stress consumed more alcohol than the dentists who reported more areas of stress. This can be attributed to the fact that a great number of the dentists reported that they perceive high stress levels, but do not use alcohol, or they only use alcohol as a way of socializing. However, a significant number of the respondents actually used alcohol as a coping mechanism.

One respondent of the qualitative phase of this study, indicated that alcohol use to relieve the stress derived from the dental profession, contributed to his/her alcohol dependency.

Question 4: To what extent has alcohol consumption caused alcohol-related problems among South African dentists?

The researcher desired answers to this question because he is of the opinion that, as for the general population, alcohol use in excessive quantities may lead to adverse effects. Dentists who use alcohol, for what ever reason, can also encounter alcohol related problems, and the literature confirmed this. The quantitative phase of this study concluded that a small number of the respondents encountered alcohol related problems. However, the qualitative phase clearly indicated that one respondent actually became alcohol dependent

because he/she used alcohol to cope with the stress and strain of his/her profession.

The quantitative phase of this study indicated that the majority of the respondents (67.53%) reported that the use of alcohol has not affected their work as a dentist in any way. However, small percentages (<5%) of the respondents reported that alcohol use has affected their work as a dentist as follows: getting behind in work due to alcohol consumption, calling in sick or late due to alcohol consumption, cannot get along with people due to alcohol consumption, neglect their work due to alcohol consumption, cancel patients due to alcohol consumption, and provide less than their best patient care due to alcohol consumption.

Small percentages (<11%) reported that: they worry at times that they may be using too much alcohol or too often, have shown bad behaviour due to alcohol use, neglect to do daily routine tasks, such as shopping due to alcohol use and neglect their personal appearance (clothing, shaving etc) due to alcohol use. What is interesting is that 6.49% of the respondents were even involved in a motor car or any other accident due to their alcohol consumption, and that 2.60% have been convicted in a court of law for something that they did under the influence of alcohol. In this study, none of the respondents had seriously considered suicide because of their alcohol drinking habit..

In this study, it was found that alcohol did not have a significant influence on the functioning in the respondents' personal lives in respect of relationships with their family, marriage, sex life, social life, sport, religion, and finances. However, small percentages (<10%) reported that alcohol use has affected their personal lives somehow.

None of the respondents reported that they have been diagnosed with alcohol related diseases. However, three (3.90%) of the respondents reported that they have been advised to stop their alcohol drinking habits because it is affecting

their health. Only a very small percentage (1.30%) of the respondents have seen a psychiatrist, psychologist, counselor or social worker due to psychosocial problems resulting from alcohol consumption, and only one respondent (1.30%) reported that he/she has been reported to the Medical and Dental Professions' Board of the HPCSA due to his/her alcohol drinking habits and had been admitted to a rehabilitation facility for alcohol abuse.

From the qualitative phase of this study, it is clear that the respondents experienced major problems as a result of their alcohol abuse. Although some of the respondents of the qualitative phase of this study did not necessarily use alcohol to relieve the stress of the dental profession, the consequences for the respondents were basically the same. They all became alcohol dependent and had to receive treatment for alcohol dependency.

Question 5: How can these identified occupational stress and anxiety factors present among South African dentists and the use of alcohol to cope, as well as the adverse side effects of this way to cope, be utilized to recommend intervention models for alcohol abuse and dependency specifically among dentists?

The researcher desired answers to this question because his main objective with this study was to compile a general profile on alcohol consumption, among South African dentists, linked to the stress and strain of the dental profession. (This study represents the profile). The recommendations made by the respondents in the quantitative as well as the qualitative phases of the study can be taken into consideration when developing new intervention models and refining existing intervention models for treatment and rehabilitation of dentists addicted to alcohol, or when the indications are there that a dentist is developing alcohol dependency problems. In this chapter recommendations of what should be incorporated into the dental curricula at dental schools, and stress relieving mechanisms were made.

7.3 Planning phase

The research methodology was finalized and the research proposal was submitted and approved by the Research Proposal and Ethics Committee of the Faculty of Humanities, University of Pretoria.

The researcher conducted a literature study as part of his objectives, in order to assess the research findings against the background of existing literature. He utilized a variety of sources, including scientific books, articles, the internet, HPCSA guidelines and reports. This literature study was very meaningful and confirmed the need for more knowledge on alcohol consumption among South African dentists, linked to the stress and strain of their profession, and the adverse effects of this way of coping.

The researcher made use of the quantitative-descriptive survey design for the dominant quantitative approach and the qualitative collective case study for the less dominant qualitative approach.

For the quantitative data collection, the researcher used a questionnaire. By utilizing this design a large percentage of respondents could be involved and a large number of facts could be explored. For the qualitative data collection, the researcher utilized a semi-structured interview schedule to obtain more in-depth data concerning the subject with a small group of respondents. The researcher obtained the necessary informed consent in both the quantitative and qualitative studies.

The sampling technique proved to be appropriate. For the quantitative study the researcher originally planned a probability sample of dentists practising in the Tshwane (Pretoria) metropolitan area of the Gauteng province of South Africa, but later extended it to the geographical area of the Krugersdorp and Johannesburg metropolitan areas of the Gauteng province, due to a lack of

response. For the qualitative study, the researcher purposively selected five dentists (respondents), who had treatment for alcohol abuse, or who were self-characterized as heavy alcohol users. Unfortunately two of the respondents of the qualitative study died before they could be interviewed. Due to ethical reasons and the sensitivity of the topic, no other respondents could be found.

7.4 Implementation phase

The quantitative part of the study was implemented during July – September 2007. One hundred and ten (110) questionnaires were hand delivered to dentists practising in the Tshwane (Pretoria), and later extended to the Krugersdorp and Johannesburg metropolitan areas with a response rate of 70%. The interviews for the qualitative study were done during November 2007 at a place that was suitable for the respondents.

7.5 Interpretation phase

The quantitative data were collected by means of questionnaires, and were presented and interpreted by means of frequencies and percentages (descriptive statistics). The data processing and statistical analysis was done by the Department of Statistics, University of Pretoria. The more significant data are represented by means of tables and graphs. The questionnaire consisted of questions that explored the biographical and background information of the respondents. The questionnaire also explored stress, coping with stress, history of alcohol use/abuse and dysfunction as a result of alcohol use/abuse among these respondents. Finally, a section that explored the perception of dentists on alcohol use, linked to the stress and strain of the dental profession, was explored.

The qualitative data analysis was done according to the data analysis procedure as described by Cresswell (1994: 153) where he says that the process of qualitative data analysis is “eclectic,” in other words, there is no right way.

Interviews were tape-recorded and then later transcribed according to categories that were divided into themes. The researcher presented data in text and tabular form and verbatim quotes from the interviews to support the findings and then verified these with the literature.

7.6 Conclusions

The following conclusions regarding stress factors in the dental profession linked to alcohol consumption as a stress relieving mechanism, and the adverse effects of this way of coping, are drawn from the literature study and the quantitative and qualitative empirical findings.

7.6.1 Dentistry as a stressful profession

The literature suggests that dentists experience high levels of occupational stress and this stress already starts at dental school. From this study (quantitative and qualitative phases), it is clear that there are factors in the dental profession that cause South African dentists stress, and this stress already starts at dental school during their dental training. Stress factors, as a dental student, among this group of South African dentists included demanding dental studies, depression / mood disorder as a result of dental studies, overall stress related to the field of study (dentistry), long working and study hours, and emotional experiences related to dental training.

From this study, it is clear that there are more intense, and less intense stressors among South African dentists.

The more intense stressors are: demands and expectations of patients, irregular long working hours, management and business demands, financial issues, emotional and physical exhaustion, balance between professional and family life,

minimal time for family and personal recreation because of the profession, the fear of legal action, and time management.

The less intense stressors are: working in close physical range of the patient (invasion of your personal space), no built in social psychological support system in the profession, fear of risk of HIV and other infections, safety issues, e.g. physical injury, fear of loss of patients to other dentists, and fear of the work of dental technologists not being on time or up to standard. From the qualitative phase, it was clear that the respondents, who have had treatment for alcohol dependency, experienced anxiety and high levels of occupational stress due to time schedules, patients with high expectations, and difficult patients.

The researcher found that there was no significant statistical difference between the stress levels of dentists in private practice and stress levels of dentists in other sectors, such as the health service and academia, thus the type of employment did not contribute to the stress levels of dentists.

The qualitative study indicated that occupational stress was one of the reasons why some of the respondents became alcohol dependent. Thus, from this study it was found that dentistry is a stressful profession.

7.6.2 Stress relieving methods used by dentists

The literature study revealed that there are a variety of ways that dentists utilize to relieve stress resulting from their profession. However, the literature also suggests that some dentists use unhealthy ways, such as the use of alcohol to relieve their stress. In this study, it was found that the majority of the respondents do use positive or healthy ways of relieving stress levels, such as physical exercise to reduce their stress levels, socializing with friends and practised hobbies to reduce their stress levels . Taking in account that some of the respondents reported that they only use alcohol to socialize, it can be assumed

that some of these dentists consume alcohol as part of socializing with friends. However, a significant number of the dentists reported that they actually use unhealthy ways, such as alcohol to reduce their stress levels. Other stress relieving methods that were reported were: eating, listening to music, watching movies, videos and DVD's, smoking, and emotional outbursts. A very small percentage of the respondents reported that they use other chemical substances, receive counseling, talk to family and friends about stress, hunting, fishing and shooting competitions, read books / magazines, having sex, video games, over-exercise, visiting the theatre and art galleries, shopping, sleeping, relax with family (family outings), gardening, regular holidays, and religion to relieve their stress levels.

Thus, from this study, the majority of measures to relieve stress were healthy ways, and a minority admitted to practising unhealthy ways.

7.6.3 Quantity and frequency of alcohol consumption

From the literature it was found that dentists consume more alcohol than other health care workers. However, the literature study also made it clear that when compared to the general population health care workers consume less alcohol.

The quantitative phase indicated that a minority of the respondents drink every day of the weekdays (Monday – Thursday) and the amount they drink ranges between 3-4 and 7-11 drinks on such a drinking day. Also of concern is that 20.78% of the respondents drink 3-4 drink on a weekend day and nine (11.68%) drink 5-11 drinks on a weekend drinking day, which is above the sensible limit of drinking.

From the qualitative phase of this study, it is clear that the respondents who had treatment for alcohol dependency consumed huge amounts of alcohol prior to treatment.

7.6.4 Adverse effects of alcohol consumption

The literature search revealed major and minor dysfunctions as a result of alcohol use amongst dentists, and that alcohol related problems among dentists have been reported significantly.

The quantitative phase of this study revealed that the majority of the respondents reported that the use of alcohol had not affected their work as a dentist in any way. However, small percentages (less than 3%) of the respondents reported that alcohol use had affected their work as a dentist as follows: get behind in work due to alcohol consumption, call in sick or late due to alcohol consumption, can't get along with people due to alcohol consumption, neglect their work due to alcohol consumption, cancel patients due to alcohol consumption, and provide less than their best patient care due to alcohol consumption.

In this study, it was found that there are some South African dentists that worry at times that they may be using too much alcohol or too often, neglecting to do daily routine tasks, such as shopping, and neglecting their personal appearance (e.g. clothing and shaving) due to alcohol use. What is interesting is that a small number of the respondents were involved in a motor car accident due to their alcohol consumption, and that a small percentage have been convicted in a court of law for something that they did under the influence of alcohol.

In this study, it was found that alcohol did not have a significant influence on the functioning in the respondents' personal life in respect of relationships with their family, marriage, sex life, social life, sport, religion, and finances. However, small percentages (less than 10%) reported that alcohol did have an influence on these aspects of relationships.

None of the respondents reported that they have been diagnosed with alcohol related diseases. Only one respondent has seen a psychiatrist, psychologist,

counselor or social worker due to psychosocial problems resulting from alcohol consumption, and only one respondent reported that he/she has been reported to the Medical and Dental Professions' Board of HPCSA due to his/her alcohol drinking habits and has been admitted to a rehabilitation facility for alcohol abuse. However, a very small percentage of the respondents reported that they have been advised to stop their alcohol drinking habits because it is affecting their health.

From the qualitative phase of this study, it is clear that the respondents experienced major problems as a result of their alcohol abuse. Although some of the dentists of the qualitative phase of this study did not necessarily use alcohol only to relieve the stress of the dental profession, the consequences for the respondents were basically the same. They all became alcohol dependent and had to receive treatment for alcohol dependency.

Thus there were signs of adverse effects of alcohol amongst a minority of the respondents in the quantitative phase, and all in the qualitative phase of the study.

7.6.5 General beliefs

To substantiate the answers to the research questions, the researcher incorporated the opinion of the respondents regarding their perspective on alcohol use, linked to the stress and strain of the dental profession by other dentists, and came to the following conclusions:

The majority of respondents that responded did not link their own alcohol consumption to the stress and strain of their profession. Rather, they had a different view when it comes to alcohol consumption, linked to the stress and strain of the dental profession, from other dentists. A significant number of the respondents reported that:



- Dental students consume alcohol to relieve the stress and strain of the dental curriculum.
- They believe that the habit of alcohol use among dentists begins early in their career at dental school.
- They believe that some dentists consume alcohol to relieve the stress of keeping to difficult appointment schedules.
- They believe that some dentists consume alcohol to relieve the stress of financial pressures.
- They believe that some dentists consume alcohol to relieve the stress of staff related problems.
- They believe that some dentists consume alcohol to relieve the stress of practice management in general.
- They believe that dentists who experience high social anxiety, deliberately take alcohol to cope with their social fears.
- They believe that dentists experience more occupational stress than the other health professionals.
- They believe that dentists consume more alcohol than other health professionals.
- They believe that personal factors may be much stronger predictors for hazardous alcohol consumption among dentists than practising dentistry as such.
- That dentists sometimes deliberately stay away from their practices because they are scared that it will be noticed that they had been drinking.
- They are of the opinion that some dentists have been reported to the HPCSA because of alcohol use.
- They are of the opinion that some dentists perform dental procedures under the influence of alcohol.
- They are of the opinion that some dentists use tranquilizers, such as the benzodiazepines to be able to cope with the stress and strain of dentistry because the signs of alcohol use are obvious.

7.6.6 Training of dentists

The majority of the respondents mentioned stress during their training at university, and this should be taken into consideration during curriculum planning. The dental students need more support services since they are not sufficiently trained in communication skills, people skills, management skills and coping skills.

7.7 Recommendations

Based on the above conclusions, the following recommendations are proposed. These recommendations are derived from the quantitative and qualitative phases of this study. The findings of this study emphasized the fact that dental students should be made more aware of the stress factors in the dental profession, and how to cope with them in a healthy manner. Modules should be included in dental curricula to address these factors. The literature review revealed that dentistry is a rewarding but demanding profession and the well being of dentists depends largely on how they balance these rewards and demands.

7.7.1 Dental curricula

The literature clearly states that the prevention of chemical dependency, among dentists, should start at dental school because chemical dependency can be prevented if it is recognized early enough.

The following recommendations are derived from the quantitative study:

The following aspects should be included in the dental curricula:

- Advanced practice management modules which include financial management, time and stress management modules;
- Self awareness, life skills and communication modules;
- Modules on how to deal with patient expectations;
- Dental students must spend time in a private practice as part of community outreach programmes;
- A module on substance abuse and the harmful effect of it;
- Counselling facilities for dental students must be available;
- Patient interaction: Teach students that invading another's personal space may be stressful.

From the qualitative phase, the following recommendations emerged as reinforcement of the quantitative phase with regard to: recommendations of what should be included in dental curricula to prepare students to manage stress in dental practice.

- More training in dental ethics.
- Socializing skills. Socializing does not mean that you must use alcohol.
- Make dental students aware that they must not seek alternatives, such as alcohol or medication to cope with stress related to the profession.
- Teach dental students to see dental patients as humans and treat them holistically.
- Rehabilitated alcoholic dentists should visit dental schools and inform dental students of the consequences of alcohol as a coping mechanism for stress.
- The role of the HPCSA as a support system for dentists.

7.7.2 Managing and alleviating stress

From the literature study it is clear that dentistry is a very stressful profession and individual differences among dentists determine to a large degree what is experienced as work stress. However, stress-control is necessary to make a dental practice successful.

From the quantitative phase of this study, among South African dentists, the following recommendations to manage or alleviate stress emerged.

- Dentists must socialize more but not necessarily with alcohol;
- It is important to identify stress factors and deal with them positively and promptly;
- Take time off and reduce working hours to do enjoyable things;
- Physical training, sport and exercise is important for physical well being;
- Practise recreational activities and hobbies to balance life style;
- It is important to have realistic expectations;
- Refer difficult dental procedures to a specialist to reduce occupational stress – Share responsibilities;
- Manage your staff efficiently and plan your day by day routine realistically;
- Do the financial planning of your practice accurately;
- Dentistry must not be your only source of income – Have additional means of income;
- Create or join colleague support groups to discuss occupational stress that is common to all;
- Make use of financial experts, as dentists are not trained in this field;
- Implement proper time and practice management;
- Delegate certain responsibilities to other staff members – Don't try and do everything yourself;
- Patient booking must be realistic, and one should never overbook yourself;

- Remuneration must come from quality dental work not from mass work – loads;
- Dentists must encourage medical aids for better and faster payments;
- Rather contract fees out with no medical aid payments, but only direct cash payments;
- Dentists must learn to develop a positive attitude towards life;
- Religion – Believe in a higher power that will assist you;
- Seek professional help when needed and go for counselling;
- If dentistry is too stressful, consider another way to generate income;
- Consider to practise in a group practice or practise with a partner (associate) to alleviate stress;
- Have a healthy life-style in general with the correct nutritional intake, sleep and exercise;
- Dentists must lower their financial expectations;
- Dentists must not be in competition with their colleagues;
- A dental practice must be planned like any other business.

From the qualitative phase of this study the following recommendations emerged as reinforcement of the quantitative phase with regard to: recommendations for dentists to manage or alleviate stress better.

- Socialize more during free time, but not necessarily with alcohol, there are many other healthier ways.
- Try to remain calm in difficult situations by making the practice environment as comfortable as possible.
- Take your time in doing quality not quantity jobs.
- Plan your available time carefully, don't squeeze patients in for financial reasons because more patients mean more money. This causes additional stress that may lead to alcohol use as a coping mechanism.

- Dentists must follow all the guidelines for stress management. Financial pressure in the sense of overspending creates a lot of stress. Don't overload yourself with work, create time for yourself and your family

7.7.3 Dental practice

From the literature search emerged the fact that stress is endemic and epidemic in today's fast-paced world and dentists are not immune to stress. Subsequently a list of recommendations made by the respondents in general follow:

- Dentists must develop time management strategies;
- Dentists may use alcohol to socialize – Not to drink their stress away;
- Dentist must arrange team building sessions with their staff members;
- Staff members in a dental practice must develop problem solving skills;
- Dentists must move away from the culture that it is “cool” to drink;
- Dentists must deal effectively with medical aids and should appoint support staff;
- Dentists must treat their practices as any other business and manage it properly;
- Dentists must consider having hobbies to relieve their stress levels;
- Arrange regular meetings with staff members so that problems can be discussed;
- Dentists must know that stress is part of life and they must learn to cope with it;
- Occupational stress begins at dental school but increases in a dental practice;
- One of the respondents recommended that alcohol should be banned in South Africa, it causes harm, death and disintegration of families;
- Dentists in private practice should consider work in partnerships;
- The reality of dentistry must be spelt out to students in their 1st year;
- Dentists must communicate more regularly with their colleagues;

- Dentists must be engaged in a good exercise programme;
- Test a student for stress tolerance before selecting him into dental school;
- Dentists must be made aware of changes in fees and structures by the medical aids;
- A dentist must love what he does, his profession and his patients;
- Dentists should not overload themselves for the sake of money;
- Contract out and do not charge medical aid fees for procedures;
- Alcohol must not be allowed at continuous professional development courses.

7.7.4 Specific recommendations

From this study, the researcher makes the following recommendations.

This research enabled the researcher (being a dentist himself) to obtain answers to all of the research questions he formulated for this research. Taking these answers into account, the researcher makes the following recommendations.

- Dental students should be selected more carefully, prior to admission, in terms of their stress management abilities.
- Modules on stress, and stress management, specifically aimed at dentists, should be included in the curricula at dental schools.
- Modules on people skills, life-skills, communication skills and dealing with patients holistically should be included in the curricula at dental schools
- Modules on management of a private practice, financial management and personnel management should be included in curricula at dental schools.
- As part of the psychology course, dental students should be made aware of the consequences of substance use/abuse as a coping mechanism.
- Dental students should, as part of the fulfilment of their clinical quota, spend time in a private dental practice.

- The HPCSA should include stress management courses, specifically aimed at dentists, in their compulsory CPD programme. In such courses, it can be explained to dentists that they are human and what is applicable to the rest of the population is also applicable to them. Unhealthy coping mechanisms, such as the use of alcohol to cope, may lead to devastating consequences.
- Rehabilitation centres for alcohol dependency, as well as other institutions involved in the treatment and prevention of substance abuse, should develop intervention and treatment programmes specifically aimed at dentists with an alcohol dependency problem. These programmes can also be used where there are indications that a dentist is developing an alcohol dependency problem.

The content of this thesis reflects a general profile on alcohol consumption, and the adverse effects of alcohol consumption as a coping mechanism, among dentists, and can assist in these recommendations.

7.8 Closing remarks

From this study among South African dentists it is clear that the dentists included in this study experience occupational stress levels and that there are dentists that consume alcohol to a more or lesser degree. What was significantly found in this study, is the fact that the majority of dentists, that consume alcohol, do it for socialization reasons only. However, there are South African dentists that consume alcohol to escape the stress and strain of the dental profession. This study has also indicated that there are dentists that develop an alcohol dependency problem as a result of the stress and strain of their profession.

The above mentioned recommendations for dentists to manage or alleviate stress better, comes directly from the respondents who have experienced these stressors themselves. The researcher primarily aimed to construct a profile on

alcohol consumption among South African dentists, seen from a dentist's perspective, in order for this information to be utilized by institutions, such as dental schools and rehabilitation facilities. The findings of this study can be utilized by rehabilitation facilities to develop more scientific intervention models for alcohol abuse and dependency, specifically among dentists. Furthermore, this information can be utilized by dental training schools in their practice management and stress management modules. This information can also be utilized by the HPCSA to give them a better understanding of stress factors and coping mechanisms among South African dentists and to recommend CPD courses in this regard. This information can further be utilized to enhance the personal well-being of dentists.