Either you Break or Brighten up: Exploring Dental
Professionals' Experiences of Dealing with Emotional
Distress during Dental Practice.
          A Qualitative Description.

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ABSTRACT

Purpose: The study purpose was to provide qualitative description of distress, its manifestations and role of resilience as perceived by practicing dentists in the Kingdom of Saudi Arabia (KSA). The goal was to provide fresh insights into the topic of distress and required coping skills in order to inform the development of future stress management programs.

Methodology: This study was designed qualitatively to determine the causes and impacts of stress among practicing dentists in KSA. Purposive sampling of dentists having not less than 5 years of practice and an average of 54 working hours per week (SD= 6) was done based on convenience approach. Twelve semi structured individual interviews with the help of an interview guide, were conducted and audiotaped to collect the data. After analysis of descriptive data, a coding scheme with four categories was generated by continuous adjustments. The categories originated as; stressful situations, impacts of distress, coping strategies and need of future interventions, were then applied to every single interview. This had identified many codes/themes and sub codes/subthemes related to the topic. The codes emerged were also double checked with the supervisor to have an inter-coder agreement. The participants were contacted again to validate the given information in the transcribed interview to increase the credibility of the study.

Findings: Work load, different kind of patients and financial pressure were reported as major cause of distress for dentists during practice. The cognitive reactions to distress came out to be some physical and many emotional disturbances affecting both the professional and family lives of dentists.

Regarding the experiences to cope, they implemented personal strategies to be resilient instead of compromising the quality of care they deliver. Also, they emphasized on the need of following interventions; Continued dental education with training courses to improve resilience amongst dentists and modified dental curriculum for dental students to face positively, the distressful situations in future practical part of their profession.

Unique contribution to theory, practice and policy: This study provided deep understandings of already developed concepts regarding stress and coping. The study findings proposed that individuals should focus on delivering high quality care by utilizing positive stress coping strategies. They should learn to adopt strategies that are easily accessible and sustainable within the context of a busy dental practice. Interventions to improve skills like motivation, self-determination and decision making should be implemented. Thus the study calls for imperative steps to be taken by stakeholders in dental institutes and at dental practices.

Keywords: *distress, emotional distress AND dentists, quality oral care, stress AND coping mechanisms, dentist AND resilience*

1.0 INTRODUCTION

1.1 Back Ground

Dentistry is reported as highly stressed profession due to work environment with increased demands of expertise and effectiveness (Hancocks, 2014; Gorter, Eijkman &Hoogstraten, 2000).Handling highly demanding patients, having time constraints and financial pressure makes the job of dentists very sensitive and intense (Ahola & Hakanen, 2007; Alzahem et al., 2011; Bickford, 2005). These factors make them suffer from emotional exhaustion resulting in reduced personal and professional accomplishments (Pohlmann et al., 2005).

Due to work pressure of reaching success in short time and competing strong financial market, dentists face distress at their practice. These circumstances affect negatively on the performance of the dentist with adverse impacts on the quality of care being provided to the patients. This created a need to study in depth, the factors provoking distress and the measures to combat it through enhanced resiliency.

The common perception of stress is an adverse response to any challenging situation which is detrimental to health and psychology (Orzechowska et al., 2013). Emotional distress occurs with an unpleasant feeling in a challenging situation due to inability to cope (Corley et al., 2005). There is natural tendency in an individual to return back to normal when the stress is relieved known as resilience (Smith et al., 2008).It depends upon the coping abilities which can be positive or negative in the state of distress.

The distress amongst dentists is found to be started from their education level. Dental education is perceived to be highly demanding which requires proficiencies in both theoretical knowledge and practical competencies (Polychronopoulou & Divaris, 2005; Rajab, 2001).

1.2 Statement of the Problem

Apart from various physical and mental impacts, stressful situations also result in loss of efficiency with adverse impacts on the quality of care (Sparks, Faragher & Cooper, 2001). This might be the result of ineffective coping strategies practised by dentists in the state of distress (Lindholm, 2006; Laschinger et al., 2004). This study is, therefore, planned to have fresh insights in to the phenomenon and to notify the development of future stress management programmes through perceptions of practising dentists in KSA.

Many studies have provided the impacts of distress on professionals and highlighted active strategies to cope with the stressful situations (Abdul jabbar, 2008; Jain & Bansal, 2012). Previous studies on the topic lack theoretical underpinning of interventions required to build resilience amongst dentists in KSA (Al-Sowygh, 2013; Ousehal, Lazrak & Hassani 2011).

Many studies previously tried to assess the strategies used by dentist in the state of stress and (Awa, Plaumann & Walter, 2010; Wiederhold, et al., 2018. But without proper implementation of interventions, the quality of care provided by dentists is on the edge to be compromised (Basson, Nel & Bhat, 2015). The preliminary studies emphasized the need of getting an insight regarding dentists coping strategies and health outcomes in relation to distress.

The purpose of this study was to explore the experiences of practising dentists in dealing with stress with an in depth, holistic approach. This qualitative study is planned to analyze the factors for stress and coping, acting as coordinators or barriers to dentists' clinical practice. It aimed to ascertain the existence of stressors causing physical and emotional disturbances amongst dentists and role of resilience to mitigate the harmful impacts of distress. Also the goal was to deepen the understandings and to identify potential future interventions to promote patient safety with increased quality care (Monrouxe et al., 2015).

1.3 Aim and Objectives of the Study

This study was planned to have fresh insights in to the phenomenon and to notify the development of future stress management programmes through perceptions of practising dentists in KSA. The aim of the study was to explore the experiences of practising dentists in KSA to have an in depth understanding of stress, coping and impacts on quality of care with following objectives;

- To examine the conditions or factors relevant to emotional distress affecting quality of care being provided to dental patients.
- To explore dentists' experiences of various coping strategies during that state.
- To notify the development of future stress management interventions for dentists in KSA.

2.0 LITERATURE REVIEW

2.1 Theoretical Framework

Three theoretical foundations were used as a base for this study; keeping in mind the philosophical underpinnings of qualitative research and considering the limitations of a single theoretical approach (Khankeh et al., 2015).The combination of constructs from following list of three theoretical perspectives in an integrated conceptual framework were used as guide for conducting this study.
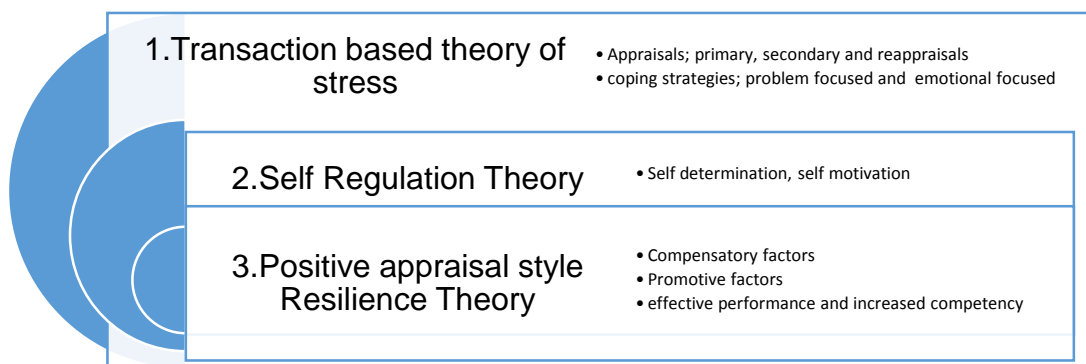

Figure 1. Conceptual framework based on three theories.

This conceptual model incorporates patient care risk paradigm and dentists' coping perspectives when they are emotionally distressed. This is further pillared by *Resilience theory* which states that an individual becomes resilient when he understands that he is the only one who has power to withstand the stressful conditions (Zimmerman, 2013). It is the cognitive system including;

perception, expectation, schema formation and reaction, that guides the individual behaviour for self-motivation and self-determination in adverse circumstances (Leventhal & Ian, 2012).A cognitive schema is built based on information about what to expect in a stressful condition and ability to self-regulate one's own behaviour.

2.2 Empirical Review

Stress occurs when there is inconsistency between the requirements of the situation and the individual's capabilities (Pouradeli, 2016).). Researchers have reported dentistry as a hard and stressful profession (Gorter, Eijkman & Hoogstraten, 2000; Tyssen &Vaglum, 2002). This is reported to be due to highly competitive field requiring dentists to reach the peak of success in short span of time. Also dentistry is perceived to be difficult cognitively so work life imbalances affect mental health of dentists (Seidberg & Sullivan, 2004).

A qualitative study by Humphris and Cooper (1998) found the main cause of stress at work is financial pressure accompanied with high number of patients and their demands. Gorter et al. (1998) further investigated the factors provoking burnout in Dutch dentists. Their study called the attention for the need of career planning to avoid burnout due to lack of career perspective. Other undermining factors which put dentists at greater risk of stress are lack of support, poor management, time constraints and low working capacity (Kemp & Edwards, 2014).

These studies plus the descriptive study by Moore and Brodsgaard (2001) tried ranking the prevalent factors of stress perceived by dentists starting from financial pressures, work pressures, uncooperative and demanding patients, and unfavourable working conditions. Financial issues, time strain and lack of support are the stress provoking factors faced by dental graduates. Many international studies were also conducted to research over the causes of stress in dental students (AlOmaari, 2005; Morse & Dravo, 2007; Sofola & Jeboda, 2006).

These studies highlighted the demanding nature of dentistry which involves clinical trainings and preclinical studies. Newbury-Birch et al (2002) conducted a longitudinal study to assess stress in same intervals between dental students and medical students. The study concluded that clinical requirements with stress of dental licensing exams contribute to high level of distress among dental students. Although, a plethora of studies to examine impacts of stress on dentists wellbeing are present in literature (Bhugra, Bhui, & Gupta, 2008; Denton, Newton, & Bower, 2008) but as mentioned by Fox (2010) stress affecting clinical decision making skills of dentists is considered to be novel area for research.

Many studies informed the impact of distress in the form of compromised quality care, errors in treatment plans and cynical behaviour (Shanafelt et al., 2010; Tsutsumi et al., 2007). A cross sectional study on dentists by Ahola and Hakanen (2007) gave a significant evident on excessive work load causing burnout leading to psychiatric problems and emotional distress. Family life deteriorates and mental health gets worse with higher level of distress. This was in line with previous evidences in research regarding negative impacts of distress (Denton et al., 2008; Dyrbye et al., 2005).They found job dissatisfaction, physical and mental ill being, poor patient care and low esteem as the adverse effects of distress. Brown et al. (2010) and Hill et al. (2010) surveyed dentists in the UK mentioning anxiety and depression at work to be the reason of emotional ill being.

Literature reveals studies claiming high prevalence of suicide amongst dentists (Galan et al., 2014; Jones, Cotter & Birch, 2016). Suicides results in the state of crisis with loss of abilities to cope various stresses of life like financial collapses or health impairments. Emotional distress in the form of depression was found to be the main provoking factor for suicidal attempts (Domínguez-García & Fernández-Berrocal (2018). Dentists fall in to this marginalized group of people who are vulnerable to this suicidal state due to socioeconomic stress (Meltzer 2008; Hawton, 2011).

Resilience is the coping ability which results in Dentists' enhanced decision making skills and improved quality care (Daly et al., 2013). High level of self- esteem increases the cognitive response of an individual to deal positively with any unexpected situation. Low level of self-esteem demoralizes the individual making him/her incapable to deal the challenging situations (Balgiu, 2017).

Similarly, results of a postal survey amongst 500 dentists in UK by highlighted high levels of burn out and low work performance (Denton et al., 2008).Chapman et al. (2017) evaluated a CPD package for dentists, which included a workshop for 3 hours to enhance coping skills, build resilience and improve decision making skills. They found reduced level of stress with enhanced wellbeing of dentists at 6th week. Change was sustained only for 6 months which demands further development of interventions.

2.2.1 Need for this Provision

Previously many studies have examined the relation between distress and its impacts on physical and emotional wellbeing of dentists (Bhugra et al., 2008; Denton et al., 2008). However, there was lack of research on stress affecting clinical performance of dentists, lowering the care quality. Newton et al. (2002) stated that stress is constantly inhabited in dental practice because of lack of awareness and less understanding of the phenomenon itself. Plessas et al. (2018) had a systematic review on impacts of stress on dentist clinical performance but the pitfall related to this and other studies found was that they had not reflected real life experiences. Thus a gap was identified as no empirical studies were found exploring the phenomenon by evaluating dentists' clinical performance under stress.

The disastrous effects of distress on the health professional career needs to addressed as it lowers the morale and hampers clinical care to patients (Allen et al., 2013). Rada and Johnson-Leong (2004) emphasized on reviewing emotional distress and its impacts to develop effective and preventive strategies. Pouradeli et al. (2016) highlighted the need to learn the sources of stress and existing coping strategies before any future intervention could be planned to relieve it. Few surveys reported that 68.4% dentists suffer both physically and psychologically from stress in UK, 59.7% in Denmark and 58.9% in Iran (Myers &Myers, 2004; Pouradeli et al., 2016). However the impacts of distress on quality care is explored by few studies.

Therefore a need is identified to develop the concepts regarding stress and its impacts on quality of care and to search for effective coping plans for dentists (Luther et al., 2000). Some qualitative studies by Radcliffe and Lester (2003) and Murphy et al. (2009) are conducted on stress and its management amongst medical students but number is scarce when we talk about

stress amongst dental practitioners in KSA. Literature provides no evidence of studies with sustainable interventions to control stress amongst dentists in KSA (Gilmoure et al., 2005).

Grant and Kinman (2014) also stressed on having an insight to facets underpinning resilience for developing future stress management interventions .This study was, therefore, planned to stem the gap between increased stress levels and the required skills to cope by the dentists in KSA. Literature shows no empirical studies evaluating impacts of stress on real life dentists' performance in KSA. Most of the studies are performed outside KSA and few in KSA but targeting dental students instead of practicing dentists. Also the studies found were mostly quantitative in nature and to the best of author's knowledge this is first qualitative study being conducted on practicing dentists in Buraydah, KSA.

3.0 RESEARCH METHODOLOGY

3.1 Ethical Consideration

The researcher sought for the code of conducts from the dental primary care center in Buraydah, KSA to get the official permission for this research. An email with the proposal attached was sent to their official address with a request for letter of authorization to conduct this research.. Then the approval was gained from the University's ethical committee. This research was classified as low risk study with no potential harm to the participants at any level. Potential benefits of the study for whole dental community and role of researcher was debriefed to the participants.

3.2 Materials and Methods

3.2.1 Study Design

Qualitative design for this study seemed best fit to answer 'whats' and 'hows' of research questions. Qualitative approach provides in depth understandings of complex phenomena and aims at developing concepts by empirically evaluating individual's perceptions (Al-Busaidi, 2008).

3.2.2 Settings and Sampling

Three primary, top rated dental care centers belonging to one owner in Buraydah, KSA, were selected to conduct this study. The participants worked in these dental centers so study place was in their access. This researcher was, therefore, able to explore the research questions within the context where emotional distress has occurred (Flick, Von Kardorff & Steinke, 2004).

Purposeful sampling technique was used to recruit dentists having the potential to provide in depth data about the study questions. Suen, Huang and Lee (2014) indicated that this technique requires the researcher to select potential subjects who can provide rich data based on the study purpose. The researcher continued till the textured data with rich understanding of the phenomena under study was gained. The aim of the study was to conduct 10-15 interviews and researcher managed to get enough data in 12 interviews lasting between 30-40 minutes.

Inclusion criterion for participating in the study was private practicing dentists with working experience of not less than five years with in the same city of KSA. Homogenous sample by

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focusing on one specialty of health care providers helps increase the credibility of the study (Mankaka, Waeber & Gachoud, 2014).

3.2.3 Participants

Seven male dentists and five female dentists with age range of 35-50 (SD=5.97) participated in this study shown in table 1.They were all foreigners working in KSA, belonging to different nationalities with English not being their mother tongue. All of them were full time employees with an average of 8 hours per day (SD=1) working shifts and varied numbers of patient appointments. All of them were entitled to annual vacations ranging from 21-30 days. Five of them worked as general dental practitioners with a bachelor degree, four were dental specialists with post-graduation and three were consultants in dentistry. None of the volunteers declined to participate and they showed awareness to the constructs "Distress" and "Resilience".

Table 1

Demographic characteristics of the participants

Gender	MALES	FEMALES
No of participants	7	5
Ages	38-50 years old	35-40 years old
Duty hours	8-10 hours	8 hours
Experience	10-20 years	7-16 years
Nationality	Non- Saudis (mixed nationalities like Pakistanis, Syrians, Egyptians and Sudanese)	

3.3 Data Collection

Semi structured individual interviews were planned for data collection as participants might be reluctant to share their experiences of stress openly. Semi structured Interview questions were designed to unfold meanings to participants' experiences and probing questions were added to clarify responses and to identify reversible factors for improving health care (Wright, Holcombe,

& Salmon, 2004). Researcher planned individual interviews for getting rich information from the voice of participants through their perceptions (Hatch, 2002).

To reach out to ambiguities and to remove any pitfalls, researcher conducted pilot interviews with two senior dentists in that social setting. They were asked to evaluate the question by giving any suggestions to improve. Minor adjustments were then made to interview questions. Discussion with supervisor also helped in formulation of interview questions which reduced the researcher biasness. The study took almost 6 months to be completed.

Although the strategy to do data analysis was planned initially, researcher however followed the guidelines by Braun and Clarke (2006) of collecting the data first and then coding it via thematic analysis.

Formal invitations were then sent through email to the participants and individual interviews were scheduled in one quiet room available at their work place. The instructions were given to the manager for no possible disturbances during the interview. DiCicco-Bloom and Crabtree (2006) advised to investigate the research questions in an interview through the help of a guide; therefore, researcher used an interview guide with open ended questions to explore during interviews. The interview was conducted in English as all the participants studied dentistry in English. Grammatical mistakes were adjusted while the interviews were being transcribed verbatim.

Researcher encouraged the participants to talk freely by affirming responses and by acknowledging their points of view. They were recorded in a 'sound app' of smartphone with a backup in PC word processing Programme secured with strong password. Anonymity was guaranteed by replacing their names with pseudonyms which can provide flexibility to manipulate the data. After the actual interview was conducted, participant was told that he or she would be contacted again to validate the given information in the transcribed interview by the researcher. Thomas (2017) notified that participants can help in data triangulation by checking the transcribed verbatim and also the analysed results.

Participants were encouraged to answer honestly so the system of the context can be changed (Schwappach & Boluarte, 2009). They were motivated before the study by having a smart talk about the benefits of the study for their personal and professional lives. Also the researcher tried to provide a relaxed atmosphere and made the participants clear that the interview will be a discussion rather than interrogation.

3.4 Data Analysis

For data analysis themes were developed from the meanings participants gave to their lived experiences with emotional distress. After all the interviews were transcribed verbatim, they were thoroughly overviewed for precision. This is done by comparing the transcriptions to hand notes and listening to audio recordings concurrently while reading the transcripts. Researcher shared the transcripts with the participants and only one dentist came with some correction regarding the meaning of resilience and clinical reasoning.

As proposed by Gales et al. (2013) data analysis planned in two stages to categorize the data. Data synthesis was started by selecting statements and writing comments on selected data to generate initial frame work of categories. All the emerged categories were refined into the

framework of final themes and subthemes in the second phase. Discussion was done with supervisor to resolve any disagreements and to add rigour and triangulation. Manual or conventional way of creating themes without the help of any software was used by the researcher using inductive and deductive approach (Kondracki, Wellman, Amundson, 2002).

Considering coding as an open process, researcher read individual transcript creating codes, revising, renaming, adjusting and creating sub codes. All the transcripts were overlooked to select any potentially interesting and applicable information. This is done by writing comments on selected data to get an overview of how many times a response containing the certain information was given. All the similar chunks with common meanings were grouped and identified by the researcher in terms of codes.

Researcher then picked the relevant topics from the gained information and arranged them in to themes and subthemes according to their meanings. Many codes were discarded at this time and the code from the group most relevant to portray the theme, incorporating same responses was used. The coded schemes were then merged into one scheme employing the deductive approach. The coding schemes finalized in this way were grouped in four coding categories; stressful situations, impacts of distress, coping strategies and need of future interventions (Skinner et al., 2003).

Researcher in the end compared the information belonging to same themes and subthemes to ensure the similarity in views For accurate and useful description of the data themes were reviewed to be modified or renamed. Required changes were implemented with the help of discussion with the supervisor. Also the participants were handed over the results to validate the meanings as presumed by the researcher. Ultimately using an inductive approach general statements were derived from individual interviews.

Challenge here was to consider the right account for researcher's reflective writing. For this, researcher used Gibb's reflective model proposed by Kinsella (2001) as supportive tool to constrain creativity. Researcher continuously made critical reflection of his own thoughts and actions in the study context to avoid skewedness or biases. Inter coder agreement between researcher and outside coder (supervisor), field notes and audio recording were used to check the reliability of collected and analysed data (Creswell, 2014; Silverman, 2003). Whereas to ensure validity; triangulation, bracketing, member checking with the participants were taken in to account by the researcher.

4.0 PRESENTATION OF FINDINGS, ANALYSIS AND INTERPRETATION

To better illustrate the results, Table 3 is presented with the coding schemes originated after the interviews were transcribed. In this way overall views of the participants were categorized .The coding scheme is presented in terms of coding categories, codes, explanation with example quotes. The four code groups are "stressful situations", "Impacts", "resilience" and "future interventions needed". Some codes were adjusted during the coding process like *colleague/ patient relationship* which could be sub coded under "disturbances" or "environment" and eventually used under "disturbances". The information gained from the quotes helped in developing codes in table 2.

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Table 2

Coding categories

Table 2a

Codes regarding Stressful Situations

<u>CODING CATEGORY #1</u>   **STRESSFUL SITUATIONS**

CODES/THEMES	SUB CODES	EXPLANATION	QUOTES
	Uneducated	Patients don't understand.	"They don't understand what you mean by; take the medicine, brush your teeth, take care of your teeth."
PATIENTS	Complaining	Patients not getting satisfied.	"Patient always have negative idea about dentist that dentist love money more, they don't care."
	Demanding	Wants100% result/ wants to be treated as shown in social media.	"To talk about personality of Saudi patients, they are demanding and very problematic."

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	Working conditions	Clinic not facilitated.	"Sometimes when you are working in clinics that are unsatisfactory for you like dental chair, the air conditioner."
ENVIRONMENT	Uncooperative managers	They don't care and want good income.	He don't care about you, he don't care about what you face every day."
			"Manager want just money, manager wants patients always happy."
	Unqualified assistants	Assistants need trainings.	"Unqualified assistants making more stress for us, they don't know everything about dentistry."
	Time pressures	Many appointments in a day.	"Patient must enter, put yourself in special time or narrow time and you must finish your treatment in this time."

WORK LOAD	Financial pressures	Have to show good income.	"Now if you are working in private clinic or you have owner of clinic also you have burden of income."
	Strict rules in KSA	Rules favored towards patients.	M.O.H rules are very strict, even common complications can cause great problem for you. You will then be forbidden staff."
DISTURBANCES	Relation with Colleagues	Un cooperative and competitive.	"So the relation is not nice, always competing for more patients, more income."
	Relation with Patients	Argumentative	"Like some patients have much knowledge about treatment, yeah they argue with you."
	Reception	Calling again and	"The people in the environment, they are also contributing towards stress,

| | again. | | especially the receptionists." |

Table 2b

The Impacts of Stress

CODING CATEGORY#2   **IMPACTS OF STRESS**

CODES/THEMES	SUB CODES	EXPLANATION	QUOTES
	Bad posture	Body pains/ neck and back pain.	"We have backache, we have headache and abdominal upset sometimes."
PHYSICAL	Lack of productivity	- Effects on treatment - Can't concentrate much	"If you have stress of your work, you can't perform properly." "It affects the concentration of the dentist; high quality of work is not delivered."
	Depression	Feel tired/ irritated and anxious.	"we get the tension so maybe we'll get diseases like hypertension, like diabetes, like depression."
	Lack of patience	Tolerance level decreases.	"I don't have patience to explain a lot, talk in a nice way. Iam being firm."
EMOTIONAL	Bad moods	Affects job and family.	"[…] bad mood we cannot do good job, also affect our family."
	Job Dissatisfaction	Wants to quit job.	"At the moment, I am thinking about I'm not going to do dentistry anymore."

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	Eating too much	Starts eating much.	"I will eat a lot of chocolates, that's why getting fat."
LACK OF SELF CARE	Lack of time	Family gets ignored.	As I told no family time no friends, no social activities, no fun."
	Isolation	Wants to stay alone.	"You want to stay alone for a long time, you don't like anyone to talk."

Table 2c

Ways for Being Resilient

COPING CATEGORY#3   **BEING RESILIENT**

CODES/THEMES	SUB CODES	EXPLANATION	QUOTES
CIRCUMSTANCES	Managing work load	Reducing appointments.	"Patient number should be reduced, this is first thing to do."
	Taking rest	Take breaks between appointments.	"So, I try to not work a lot of working hours or you may like daily stops or breaks in between large visits."
MANAGING PATIENT	Empathetic listening	Smart talk.	"By being very calm ok, hearing too much."
	Show confidence	Take the decision.	"To accept or not accept, it's my decision, yeah, I work by stress or relax." accept, it's my decision
	Music	Listening to music/dancing.	"Just dancing, listening to music."

SHORT TERM PLANNING	Long drives	Going for long drive.	"I just drive with my car staying for 30 minutes one hour just driving, listening to music."
	Eating chocolates	Taking a treat.	Chocolate also, yes chocolate is a big stress reliever."
	Friends/family	Talking to some member.	"If you don't have supportive husband, supportive family then I think you will go to madness really."
SUPPORT	Assistants	Talking to assistants.	"She can talk with me, she would make relax."
	Colleagues	- talking to colleague	"I have my colleague, so I call and we talk about this matter together."
		- Sharing experiences	"You must learn from the experience of you friends your colleagues."
	Vacations	Taking long vacations.	"I take every six months vacations, okay to relax myself."
LONG TERM PLANNING	Sports	Going for gym/walking.	"I advise dentists to practice some sports even walking."
	Isolation	Isolating you from work place.	"Even though you will not go travelling abroad you can collect your items and complete isolation from everyone."

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Table 2d

Need of Future Interventions to Make Dentists More Resilient

<u>CODING CATEGORY#4</u>   **FUTURE INTERVENTIONS**

CODES/THEMES	SUB CODES	EXPLANATION	QUOTES
	Reformed dental curriculum	Additional chapters	"Psychology should be added in the subject of dentistry which would help."
DENTAL STUDENTS	Mentorship	Teachers sharing experiences.	"Must be delivered in school that this profession is highly demanding profession."
	Crash courses /workshops	To train them to be resilient.	"I think training for them is very good, not only in scientific things, even emotional."
DENTISTS	Meetings/ Get together	To share their experiences.	"Many dentists they have more experience yes for sure you can meet another dentist and share experience."
			"One I think you must learn from the experience of our friends, your colleagues."

The first two interview questions; **"Do you think working as dental professional has some stress?"** and **"Have you ever experienced stress?"** is answered affirmatively by all the participants. When asked about the conditions or factors relevant to emotional distress the coding categories originated as "patients", "environment", "workload" and "Disturbances".
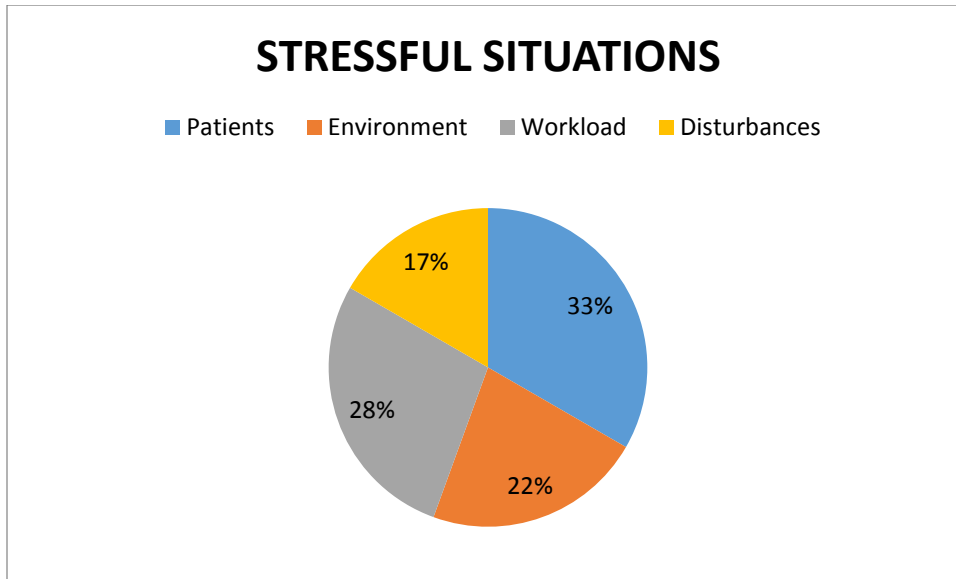
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STRESSFUL SITUATIONS

Figure **2.** Pie chart showing codes emerged under stressful situations according to frequency

According to the pie chart, patients were reported as a source of stress by 33% of sample followed by workload 28%, environment 22% and disturbances 17%.

Patients were found to be the greatest source of stress as informed by almost all the participants. Therefore, the first theme generated was named as "Patients". There were three sub codes found under the theme "Patients" as; "*un- educated", "complaining" and "demanding"*. Almost all the participants reflected on this as the first factor causing distress for them.

"*They are very stressing when they are not educated, being ignorant in dental treatment, when you are explaining what you're going to do, and you find a patient who doesn't understand*". Another participant reflected, "*Patient problem Okay, we have different type of patients come in every day for our clinic there is difficult patients and there is the one demanding patient and there is anxious patients.*"

Three participants pointed out that previous dental history of the patient is a factor making him more demanding. Two of them mentioned about language barrier in the country as the perceived cause of stress from patients. "*Okay, they don't understand language is the main problem, either the patient or the management there are few who understand the language but there are many who don't.*"

The second theme "Environment" resulted in 5 subthemes; "*working conditions", "uncooperative managers", "unqualified assistants", "disturbances" and "lack of appreciation". "Yeah, bad work environment […] I mean, if you are working in a clinic and the clinic, it's not a friendly environment, or doesn't make the dentist feel comfortable inside this clinic."* The participants also mentioned about the "Disturbances" they have due to conflicts with colleagues and patients and interference of reception in the work.

The third code under this category came out to be "Workload" with 3 sub codes; *"time pressure", "financial pressure", "strict rules in KSA"*. Financial pressure is the most frequently used code. Two participants related their experience of workload with time pressure. One participant expressed work pressure in relation to demands by managers as follows;

"You have appointments, and then you will find the manager he's calling and you have to take this patient, I don't have time for him […]. This is very stressing plus disturbing." Almost all the participants experienced distress due to rules in KSA which are favouring patients more than dentists. Furthermore all these conditions perceived as a cause for distress are accelerating each other.

4.1 Stress Manifestations

Answer to next question **"How do dentists perceive stress?"** was categorized into "physical" and "emotional" impacts plus "lack of self -care". *"Back and neck pains"* described by the participants were coded under "bad posture*"*. One participant portrayed physical strain from bad posture as; *"Physical strain, this mean skeletomuscular pain, some time here from position of dental chair we have backache, we have headache, we have abdominal upset some time."*
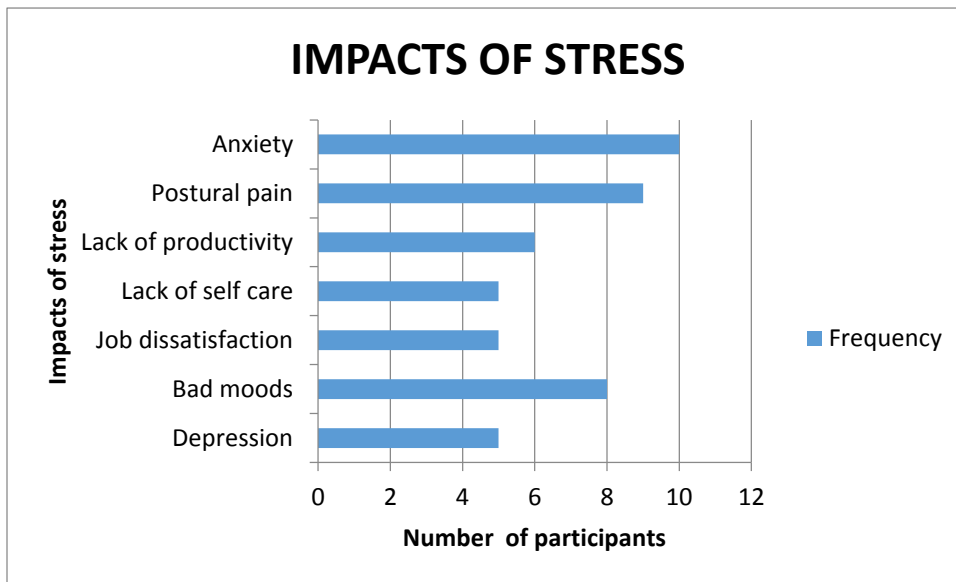

Figure 3. Various impacts of stress reported by the participants

According to frequency, *anxiety* reported by almost all participants followed by *pain* and *bad moods*. *Lack of productivity* is informed by few though all females talked about *depression* and *lack of self-care.*

In terms of cognitive performance, three participants mentioned about "lack of productivity" and "bad mood" affecting their practice or the next patient, though they always try to be resilient. Females mentioned about being more emotionally distressed causing them "depression" and one of the female participant told about the disease named fibromyalgia she got from continuous

emotional distress. *"I went to an immunity doctor. He told me that you're suffering from diseases called fibromyalgia. And the main cause and the most probably, it's because of stress."*

Another cognition is getting fed up of the job and thinking of quitting or having a carrier shift which is coded as "job dissatisfaction." "*Every morning you open your eyes to, is this is a kind of life I want to live? Sometimes you feel yourself I don't like to go to work today or every day. Yeah, I want to stop this profession. I want to make a career shift."* This goes along with change in behaviour where participants, when distressed, start "*eating more*" and "*get isolated*" from others.

They mentioned also of having no *time for self and family* so all this is coded under "Lack of self-care." "*I may go back home and I was very tired to the getting in contact with my family or even go out to dinner with my girlfriends and my BFF*." One male participant mentioned sleep as his stress reliever "*Okay, okay. I do nothing. I just eat, sleep. Okay, so as I told you, I go to home. I'm like a dead person."*

4.2 Being Resilient

The next question was on sharing their experiences of being resilient in the state of distress. "How dentists show resilience in the state of distress?"

Participants answered this question by conveying the strategies they use in state of distress. Resilience is the ability to appraise stress positively and it increases the individuals' cognitive decision making skills (Staal et al., 2008). Gender differences were not found in this study for coping stress might be due to limited study sample.

Male Participants were found to be interested in the use of problem focused strategies while females reported availing emotion focused strategies. Problem focused strategies are those kinds of plans used to deal with the stressor itself while emotion focused strategies combats the negative emotional responses when the stressful situation is out of control (Lazarus & Folkman, 1984).
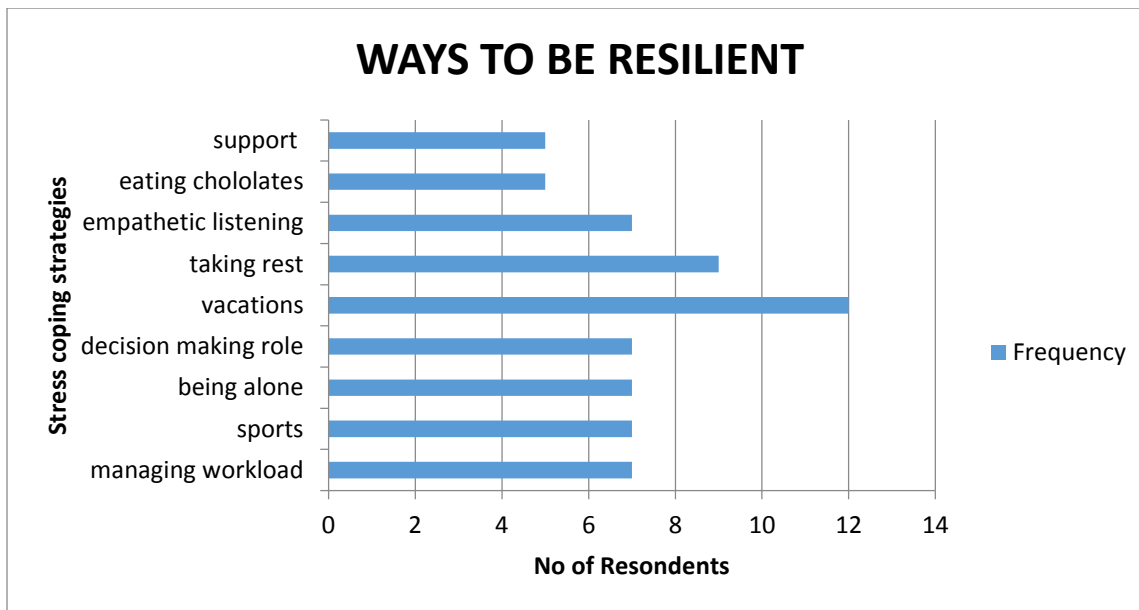
Figure 4. The participants' ways to cope stress

In this figure *"Vacations"* .were found to be long term agreed coping strategy by all 12 of them followed by *"taking breaks"* between the appointments. *"Managing work load"*, *"sports"*, *"isolation"* and *"decision making role"* was reported the coping strategies used by seven participants. Few mentioned about taking *"support"* and *"eating chocolates"* as their stress relievers.

The strategy reported by the participants for *"managing workload"* is to reduce the number of patients in a day. *"If you plan to make for some patient long procedures, try to make it short procedure. You inform the patient to come for next visit its better, is good like this."* Female participants emphasized on giving time to patients by listening and having a small pre-treatment talk which can *"manage patient relations"* well. Also they stressed on *"taking rest/breaks"* between appointments to make them relax and ready to welcome new patient with positive energy.

Some of the participants stress on the importance of talking to family, friend or even an assistant which was coded as "support". All male participants highlighted the importance of *"sports"* to have greater control of the stressful situations. *"Talking to somebody who is close to me talking and go to sport sometimes gym, gym, I like go sports. When I go there I just relax."*

The quotes by females mentioning *"long drives"*, *"listening to music* "and *"eating chocolates"* as stress relievers were sub coded under short term resiliency. Female participants claimed to be have more emotional distress as they have to take care of the family too. They depicted how it affects their personal life *"Sometimes when you find yourself having a problem with your patient, okay this comes impact this is unconsciously you will it will have impact on your relation to your children and your husband."* 0ut of 5, 3 females have disclosed that they are taking daily medications such as muscle relaxants and pain killers to be fit for work.

The permanent solution to get away from distress mentioned by all the participants is going for *vacations* and specifically expressed by males is to *be alone*. *"So, I try to not working a lot of working hours or you make like daily stops or like breaks in between larger visits. This is for the short term and for the long term I need to have a vacation in like every two or three months."* Another participant stated *"There should be no one [...] Okay. I don't want anyone to disturb me. If I want to be relaxed, I need to be alone."*

The findings of the present study regarding positive and negative perceptions of stress amongst dentists can be correlated to *stress mindset theory* by Crum et al. (2017). This theory states that "it is all a mindset how stress results in enhancement or debilitation of performance." Resilience is also enlightened through *broaden and build theory* of positive emotions by Fredrickson (2001). Perceiving stress as a challenging situation will result in enhanced performance while in abilities to cope with stress shatter the mind of the dentists making them physically and mentally unstable.
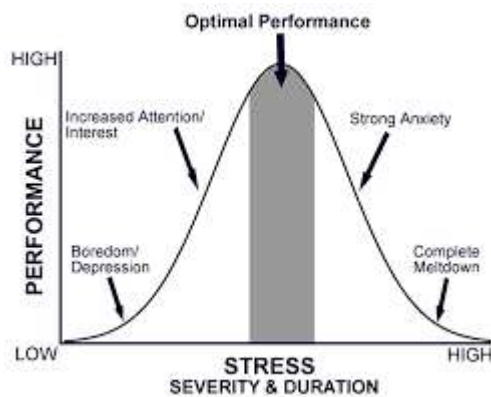

Figure 5. Stress and performance curve by Bradberry (2014).

This figure shows that some level of stress is essential to activate the brain and perform some challenging tasks .This stress is harmless unless it becomes persistent and rises above the tolerance level.

4.3 Suggestions for Future Interventions

When asked about the need of future interventions to make the dentists resilient, few participants mentioned about preparing them from the start from dental students first. They proposed introducing some topics related to resiliency and stress in dental curriculum. As quoted by a participant *"psychology should be in the in the subject of dentistry which would help a lot so this should be added in the courses even chapters." so* adding chapters on psychology and also *teachers sharing their experiences* will help the students to be prepared for this highly demanding profession. *"They should prepare doctors during school, after school, you are going to enter to the tough life."*

On the other hand, arranging "*workshops/courses*" to train and "*meetings*" to share experiences were sub coded under preparing dentist to be more resilient.

"*For these workshops, [...] will talk about workshops, they should bring someone qualified, someone who really has experience.*"

"*Yes, many dentists they have more experience, yes for sure you can meet another dentist and share experience, get dinner with each other [...]. It makes stress relief for sure.*"

Continuous learning from each other experiences and the views of the participants to separate professional life from personal life showed their choice to be resilient instead of getting lost in the state of distress. "*Yeah, this is one I think for you must learn from also the experience of your friends, your colleagues and this is a very important. Make time for your clinic and making time for your family.*" This resiliency is helping them not to compromise on their work although they do get physically and emotionally disturbed. They mentioned about emotional disturbances as a reaction to stress also giving them a mood change. "*It's not easy [...] It makes me like it is exploding in the night.*"

Lastly, the participants advised others to acknowledge this profession of dentistry as a highly demanding profession from the start when in dental school instead of dreaming it as a money making field. "*The pink dreams you have when you were young that this medical field will be like a gold digging profession. And it is not and you will find this it is not a gold digging profession it's a very hard profession.*"

So for the main research question **"What are the effects of emotional distress amongst dental professionals in KSA on the quality of care they provide?"** almost all the participants, except one, answered that their emotional distress is not compromising their practice or the quality of care they provide. However few of them commented on situations where anxiety prompted modification of their treatment plans and some mood changes. "*I have the power to control this [...] It's just to keep doing what I used to make me relieve the stress.*"

These replies might be due to reluctance to disclose their competencies owing to the fact that this will have a bad impact on their reputation (Paulhus, 1984). Another cause could be lack of appreciation to them by their managements. It also might be possible that participants understood the phrase "distress affecting quality of care" in idiosyncratic way. Participants mentioned about strict rules in KSA favouring patients, is also a stress provoking factor and so they should learn how to protect themselves from unseen circumstances. The doctors working in KSA are mostly foreigners and more rights are given to the local patients from the government. If the patient complains in ministry of health, KSA, there could be a penalty for the dentists in terms of paying fine in the form of money, or a ban on travelling. In worst scenario the patient can sue the dentist and dentist would be blacklisted in Gulf countries and is ultimately deported.

"*And to avoid us a risk, to avoid also stress every single day getting to know how to learn, how to protect your self is very important.*"

Another cause of professional decline of dentists leading to personal impairments is self-medication. Dentists feel shame and consider it a stigma to seek support in the state of distress due to fear of leaking confidentiality and legal affairs (Brooks, 2013; Chipchase et al., 2012). Participants reported the same in this study that to alleviate their psychological distress, dentists

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prefer self-medications instead of taking support. Lastly, participants suggested long term follow up evaluations of the existing interventions) to avoid complexity and to determine if the change through these interventions is sustainable.

4.4 Strengths and Limitations of the study

The study is confirmed by the literature and provided new insights in to dental education. It is also in relevance to the country of study and a strong starting point for further research on this topic in KSA. Participants formulated their answers by their free will and did not ask further questions showing their understanding. Thus the quality of research questions and their relevance to the topic was confirmed. Another strong point of this study is the motivated participants as they were involved in data cross check and were keen to know the results and development of the study. This study will help educators to build resilience in dental students through a problem based curriculum.

The small sample (N=12) shared same health profession and social economic status so the results cannot be generalized to all health professions plus study is limited to a small city of Saudi Arabia. But instead of being limitations, these challenges rather served direction for new research to understand the phenomenon more deeply. Firstly, sound rich data was derived through views of small sample in interviews. Secondly, the findings of this qualitative study are transferable to dentists in the similar context (Curtin & Fossey, 2007).

The study was cross sectional which might have not provided the full picture on stress and coping among practicing dentists. But as Cote andTurgeon (2005) stressed on the importance of critical appraisal in qualitative research, therefore, the researcher has evaluated this type of research by going through literature search for weeks. It is apparent in literature that researchers should be capable of analyzing the data properly and coding it competently (Chiovitti & Piran, 2003; Corbin & Strauss, 2008)). This was a challenge for novice researcher to research using vigorous techniques and skilled procedures for coding information appropriately. In this regard, researcher sought for guidance from the research supervisor and expert colleagues

4.4.1 Trustworthiness of data

The rigor can be found in the present study as each step of data analysis could be traced back to audio recordings and field notes to confirm the original study conventions. As told by Corbin and Strauss (2008) triangulation of data fabrication and analysis with multiple viewpoints of participant and co-researchers makes any study credible. Researcher in this study, therefore, contacted participants twice and supervisor many a times for ensuring relevancy of the data.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Summary of Findings

The assumed results from the study are as follows;

1. Stressors perceived as hindering dentists to work effectively could be avoided by their self-determination and personalized relaxation plans.
2. Dentistry by choice will enhance the quality of care provided, as the dentists could then treat the patients whole heartedly and competently.

3. Future interventions should focus on improving working conditions of dentists by creating healthy working environment and addressing the known impacts of stress.
4. Dentists' choice to be resilient in the state of distress can be augmented by conducting training in the form of crash courses, workshops, and conferences.
5. Changes in dental curriculum by adding few chapters on psychology and ways to enhance resiliency will help to enlighten up dentists in the state of distress.

5.2 Conclusion

To eliminate stress completely from the life of dental professionals is something next to impossible. But recognition of the causative factors and improved resilience can bring it to the level where its negative impacts can be avoided. The study puts emphasis on the need for sustained resilience for professional growth and fruitful career of practising dentists in KSA. Long term solution is to identify potential interventions through continuous probing and getting the feedbacks from dentists at every level of stress.

The present study concluded that professionals should be trained to overcome stress by improving their critical thinking and decision making skill. This could be made possible by implementing interventions in the form of continued training courses, changes in dental curricula and shared experiences by senior dentist and faculty.

Overall, the present study is directed towards the stressful nature of dentistry therefore interventions are needed to lessen the work stress of dentists and build resilience for practice. In this regard, de briefing individuals regarding causes and impacts of stress is an utmost and effective intervention in reducing stress level amongst dentists. To execute their role as a competent dental care provider with strong abilities to control stressful situations, future Interventions should be aimed to deal with the complexity of dental practice. They should be flexible to reduce the stress level and its impacts plus they should evaluate the resilience present in a dentist.

5.3 Recommendations

Considering the findings of the study, the following interventions to reduce the level of stress amongst dentists are offered;

1. SUPPORT: Patient safety and quality care can be promoted if there is support from the managers and communication amongst health professionals. Findings from this study suggest that dentists' clinical performance is not only impaired by their own experiences but also by the supportive structures of the management. To build a safe, healthy work place and to ensure that dentists have active help line and supportive connections within the profession, managers play a pivotal role.

2. CHANGE IN DENTAL CURRICULUM: Integration of chapters to enhance motivation, self-determination and resilience in dental students will prepare them to face challenges positively once in practice. A need for reform exists because of continued demanding nature of dentistry, its stressful environment and requirement of a culture of patient safety and high quality care

Training required for nurturing this narrative writing and reflective learning by providing compassionate supervision. There is evidence that some of these competencies are part of the curriculum but they don't focus specifically on building emotional resilience

3. _WORK LIFE BALANCE_: To reduce the effects of stress at work and to build resilience amongst dentists, resources should be made available by the employer. These resources could be in the form of interventions like; personal counseling, monitoring of dentists' work load and financial issues, developing CPD courses for them and arranging get together so they can share experiences. The clinical manager should be dentally qualified to address and understand the nuances of distressing issues. Professionals need a safe environment under supervision where they can discuss and reflect on their emotional work experiences

4. _HEALTHY COPING STRATEGIES_: As most of the dentists in this study experienced stress, they need to adopt healthy coping strategies by improving dentist patient relationship based on cognitive behavioral therapy by Aaron Beck proposed by Gaudiano (2008). The focus of the theory was to change and replace negative thoughts to reduce stress.

5. _SHARING EXPERIENCES_: Many a times dentist need to hear experiences from their seniors and colleagues which can help them to cope and manage stress. These times include a transition period from a dental student to dental practitioner where a new dentist can get support by the shared experiences of the mentor. These mentoring programmers can foster many of competencies under pinning resilience such as enhances reflective ability and problem solving skills. Decision making skill is an important aspect of resilience which can be enhanced by improving dentists' ability to cope within challenging states of stress.

5.3.1 Other Recommendations

To the knowledge of researcher this is the first qualitative study exploring distress amongst private practising dentists in Buraydah, KSA. However, to make it applicable to wider dental population it is recommended to enlarge the sample in future by including public practicing dentists as well. Findings of this study can be used to create questionnaire for exploring other dental professionals in the country. Further research should be considered by the educators to gain insight into the critical thinking and clinical decision making skills of dental students and graduates.

Future longitudinal studies are recommended to check for the sustainability of interventions to control emotional distress amongst dentists in KSA. Also, other countries should use similar methods of research to give deep insight on the relationship between emotional distress and quality of dental care. Stress management experiences of dentists may also be varied due to psychological and personal characteristics and this could be another strong area of future research.

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