

Occupational Health Hazards of Modern Dental Practitioners

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Abstract – The study aimed to determine occupational health hazards of dental practitioners in the City of Batangas. The research utilized the descriptive survey research design, which required fact-finding and adequate interpretation of data. Data were gathered through questionnaires. The respondents of the study were dental practitioners from Batangas City who are around 142 at the time of the study. Data were tallied, tabulated, interpreted and analyzed through arithmetic mean. Based from the result, it was found out that Dentists were most likely injured by needles and sharp instruments and least likely got infected by blood-borne microorganisms. Most dentists agreed that the knowledge of the dentist during and about the treatment is the most important hazard to do the practice well and produce the best results for each procedure.

Keywords – patient-dentist relationship, stress, workplace

INTRODUCTION

Dentistry is one of the most demanding profession nowadays. It involves high degree of concentration and precision. Good vision, hearing, depth perception, ability to maintain occupational postures over long periods and skills are some of the qualities that a dentist must acquire. Any decrease or elimination of any of these qualities may affect the practitioner's performance and skills in the dental clinic. Despite all those advancements in this career many unwanted health problems still exist and continue to persist in the practice. Observations had found out that most of the dental professionals nowadays are exposed to several occupational hazards. Some of it include exposure to infections (including Human Immunodeficiency Virus and viral hepatitis); percutaneous exposure incidents, dental materials, radiation, and noise; musculoskeletal disorders; psychological problems and dermatitis; respiratory disorders; and eye insults. Dental practitioners should be well informed and educated regarding these risks to control and lessen the possible worst scenarios that can happen in the dental practice.

As professionals, dentists are exposed to various types of occupational hazards which intensify and over the years cause different conditions which can be very detrimental to their health and regarded as occupational illnesses [1]. In addition, the dentists strained posture brings about diseases of the muscular and skeletal system that affects certain group of muscles and joints. But not only that, but different body systems are also disrupted including the respiratory system from water droplet aerosols emitted from handpieces which may contain microorganisms. Impaired hearing from noise of suction, saliva ejectors, compressors, and different engines. Eye

strain from dental lighting and prolonged work in a limited surgical area [2].

An Italian multicenter study on infection hazards during dental practice reported that some Italian dental surgeries show high bio contamination. About Legionella (Aerobic, Gram-negative, non-spore forming, rod-shaped bacteria), the proportion of positive samples was 33.3% [3].

An India investigation among navy dentist revealed that 47% of them experienced an injury from a sharp instrument during the past six months and backaches was the commonest hazard in 70.6% of the personnel followed by occasional anxiety and wrist ache [4].

Another study carried out among dental professionals in Chandigarh, India reported that injury from "sharps" was the most common occupational hazard (77%) Of the other occupational problems job related stress (43.3%), musculo-skeletal problems (39.8%) and allergies (23.8%) from things in used in dental clinics were common [5].

Basically, for any infection control strategies, dentists should be aware of individual protective measures and appropriate sterilization or other high-level disinfection utilities. Strained posture at work disturbs the musculoskeletal alignment and leads to stooped spine. The stooped posture also involved certain groups of muscles and joints. This may lead to diseases of the musculoskeletal system. Continuous educating and appropriate intervention studies are needed to reduce the complication of these hazards. So, it is important for dentists to remain constantly up to date about measures on how to deal with newer strategies and dental materials and implicates the need for special medical care for this professional group.

This paper concludes that the environment and working conditions in the office and in the dental clinic has changed considerably on past years and continued to evolve because of new technologies and apparatus, development of modern dental materials, a new substance for disinfection and sterilizing stuff and the socio-economic changes. The aspects of evolution in dentistry imposes that with an established strategy and the methods of prevention and control that be radically updated to be radically and effective to a quick and continuous changes in the workplace. This is the fundamental requirement to achieve and sustain working conditions to a well-decent environment. However, the risk assessment and identification are the basis toward a management of safety and health.

The rationale is to control iatrogenic, nosocomial infections and potential occupational exposure of care providers to disease causing microbes. The purpose of conducting the survey regarding occupational hazards in dental practice is to know the possible causes of the transmission of disease and ways in preventing the transmission of disease-producing agents such as bacteria, viruses, and fungi from one patient to another, from dental practitioner and dental staff to patients, and from patients to dental practitioner or other dental staff. Aside from that it is aimed to impart a knowledge on how to prevent occupational hazards in the dental practice.

OBJECTIVES OF THE STUDY

The study aimed to assess the occupational health hazards of modern dental practitioners. More specifically, describe the profile of the respondents in terms of age, years of practice and working hours in their own clinics; determine the occupational hazards with regards to patient-dentist relationship and stress in the workplace; test the significant differences on the occupational hazards when grouped according to profile; and propose plan of action to lessen the hazards experienced in the workplace.

METHODS

Research Design

The researchers want to determine the Occupational Health Hazards of Modern Dental Practitioners in Batangas City. It includes a brief interview or discussions with some selected registered dentists in Batangas City. They used a questionnaire as their research instrument and each item is concerned about the source of these hazards like the work environment including the physical, chemical, mechanical, biological, and social aspects. It also addresses the method of practice with regards in age, gender and duration of work and their acquired specialization. From the data gathered, the researchers

tabulated, analyzed, and interpreted the data. Awareness regarding these occupational hazards can provide a safe environment for the dental practitioner and lessen the hazard experience for the workplace.

Participants of the Study

To be able to differentiate the former and modern dentistry in terms of their duration of work, method of practice and their occupational hazard. From the population of all the 143 registered dentists in Batangas City, the researchers were able to determine their existence of work during previous and current dental practice.

Instrument

The instrument for this study was based on collected data and information from a statistically significant number of dental clinics through a questionnaire. The first draft of the questionnaire was shown to the adviser for comments and suggestions. Such comments, suggestions and revisions of the questionnaires were improved in the original draft. The questionnaire was specifically designed for this study to obtain information about procedures used for the disposal of waste from dental practices and safety measures adopted by dentists. It covered socio-economic characters of the dentists in addition to questions about their waste handling attitudes and practices.

Procedure

The researchers went to the clinics of the respondents and approached them to give the questionnaire. The responses were tabulated, analyzed, and interpreted. The data obtained would serve as a basis of statistical treatment. The researchers distributed the questionnaires to registered practicing dentists of Batangas City Dental Chapter. Distribution of questionnaires were given during the researcher's free time. Within a span of a month, the questionnaires were distributed and answered by the dentists. 75% of the questionnaires that were distributed were retrieved and tallied while the remaining 25% were not retrieved by the researchers.

Data Analysis

The needed data were tallied, encoded, and analyzed using different statistical tools. These include frequency distribution, weighted mean, independent sample T-test and Analysis of Variance (ANOVA) which were used based on the objectives of the study. In addition, the data were treated using a statistical software, PASW version 18 to further interpret the results of the study.

Ethical Consideration

The participants understood the purpose and wilfully agreed to answer the questions about the survey. They signed and participated in the informed consent providing sufficient information and assurances about taking part to allow individuals to understand the implications of participation and to reach a fully informed, considered and freely given decision about whether to do so, without the exercise of any pressure or coercion.

RESULTS AND DISCUSSIONS

Table 1. Percentage Distribution of the Respondents' Profile

Profile Variables	Frequency	Percentage
Age		
20-30	48	33.6
31-40	40	28.0
41-50	23	16.1
51-60	32	22.4
Sex		
Female	95	66.4
Male	47	32.9
Year of practice		
1-5	42	29.4
6-10	23	16.1
11-15	29	20.3
16-20	17	11.9
21-25	22	15.4
26-more	10	7.0
Type of working institution		
Government	9	6.3
Private	134	92.44
Working Hours (a day):		
3-4 Hours	5	3.5
4-5 Hours	12	8.4
5-6 Hours	17	11.9
6-8 onwards	109	76.2

Table 1 presents the Percentage Distribution of the Respondents' Profile. Data shows that 33.6 percent have ages that ranged from 20-30. There were 28 percent whose ages ranged from 31-40, 16.1 percent ranged from 41-50 and 22.4 % ranged from 51-60. It is gathered that majority of the dentists are younger. This may be since older dentists tend to retire early and experiences strains on their body and they prefer to stop practicing at an earlier age.

Females outnumbered the males. The result indicated that 95 of the respondents were females and 47 are males.

This implies that majority of practicing dentists in Batangas City are females. It may be since Females are more into oral health, oral hygiene, and aesthetics. Because replication is required for scientific progress, papers submitted for publication must provide sufficient information to allow readers to perform similar experiments or calculations and use the reported results. Although not everything need be disclosed, a paper must contain new, useable, and fully described information.

As gleaned out from the table; about 29.4 percent of dentist have been practicing for one to five years, then followed by 20.3 percent practicing for 11-15 years, followed by 16.1 percent practicing for six to ten years, then 15.4 percent practicing for 21-25 years and lastly seven percent of the respondents were practicing for more than 26 years. These data shows that majority of the dentist practicing in Batangas City are the new one, recently licensed dentist which may be due to the fact of increasing interest in the dental field due to monetary earnings that comes with it. Data also shows that the least percentage of practicing dentist were those that have been practicing for more than 26 years which may be since they prefer to retire at an earlier age and that someone will be taking over their clinic like a child who preferred to follow their legacy.

Out of 142 respondents, majority preferred working in a private clinic with 92.44 percent while 6.3 percent preferred working for the government. This can be mainly due to having the freedom to work for your desired hours, having the freedom to manage your time and working under your own rules and regulations unlike having to work for the government wherein you have a fixed schedule to work with. Meanwhile, 109 preferred to work for 6-8 hours onwards, and the least preferred to work for 3-4 hours with only 5 respondents. This is attributed most likely procedures last for at least 30 minutes to 1 hour and if practicing for only 3-4 hours a day won't let the dentist accommodate as much patients as they can.

The risk assessment and identification are the basis toward a management of safety and health which involves looking at different aspects in the workplace have the potential to cause any accidents and such an occupational disease and also to identify a person who may exposed to a risk. It is also very important for the dentist to know how to deal with the risk and on how to control an injury or a disease which would be beneficial not only for the dental sector but also for many persons who receive a special treatment

Table 2 Hazard experienced in the past 3 months

Which of the following have you experienced in the past 3 months	WM	VI	R
1. Injured by needles and sharp instruments in the dental clinic	1.72	S	1
2. Injured by heat, steam, or hot instruments in the dental clinic	1.51	S	2
3. Injured by chemicals in the dental clinic (e.g., dental amalgam and mercury)	1.04	N	6
4. Injured in other accidents in the dental clinic	1.13	N	4
5. Got infected by air-borne microorganisms, e.g., influenza	1.09	N	5
6. Got infected by blood-borne microorganisms, e.g., hepatitis	1.03	N	7
7. Allergic dermatitis of the hands	1.20	N	3
Composite Mean	1.23	Never	

Legend: 3.50 – 4.49 = Always(A); 2.50 – 3.49 = Often(O); 1.50 – 2.49 = Sometimes(S); 1.00 – 1.49 = Never(N)

As seen from the table 2, over-all assessment was not equal to a composite mean of 1.23. Among the items cited, injured by needles and sharp instruments in the dental clinic got the highest weighted mean value of 1.72. The given result shows that respondents are most prone to being injured by sharp needles. It was followed by injured by heat, steam, or hot instruments in the dental clinic. Then by allergic dermatitis of the hands, injured in other accidents in the dental clinic, got infected by air-borne microorganisms, injured by chemicals in the dental clinic and lastly got infected by blood-borne microorganism, all were assessed as never. This input speaks for respondents who are highly cautious and careful in their practice in the dental dispensary.

Dentistry is a particularly secure profession. Different adverse fitness dangers arise as new

technology and materials are advanced. However, as soon as recognized and diagnosed as a chance, new pointers, precautions and protocols are rapidly instituted to significantly lessen or even cast off the occupational danger. Occupational hazard refers to a danger or risk due to the character or working conditions of a specific activity. Dentists are exposed to many occupational hazards in their professional work. With creation of superior era, no matter how beneficial it is, can exert a negative impact additionally on some participants of the population. This article highlights on occupational dangers like physical, chemical, biological, psychological, musculoskeletal issues and their outcomes. The goal of this paper is to increase the level of attention of occupational dangers a number of the dentists and also to provide information on ways in which hazards can be reduced.

Table 3. Safety Protocols in the Clinic

	WM	VI	r
1. Wearing of gloves when carrying out patient treatment	3.89	A	3
2. Wearing of face masks when carrying out patient treatment	3.88	A	4
3. Wearing of protective clothes when carrying out patient treatment	3.91	A	1.5
4. Wearing of gloves when handling patient-related materials, e.g., impression	3.91	A	1.5
5. Wearing of an irradiation exposure detection device	3.72	A	5
6. Bending of your neck or back when carrying out patient treatment	3.70	A	6
7. Doing of simple office exercises	3.42	A	7
Composite Mean	3.78	Always	

Legend: 3.50 – 4.49 = Always(A); 2.50 – 3.49 = Often(O); 1.50 – 2.49 = Sometimes(S); 1.00 – 1.49 = Never(N)

This table 3 represents the complete and proper armamentarium according to different safety protocols in the clinic. Based on the result, it is always a reminder to wear the proper protective barrier to lessen the stress. It is favourable to the dental practitioner to prevent the spreading of infections. This result pertains that dentist, usually wear gloves before any procedures to prevent

the transmission of such diseases plus the complete protective clothes to be wear for the cleanliness within practice. It is one of the most important guidelines before doing any treatment or procedures.

On a daily practice, dentists are more prone to the transmission of infectious diseases through with blood contact with saliva, blood and tissues through direct

and indirect spreading. We should be aware and know how to manage on using complete and proper armamentarium to prevent such diseases. Infection control is necessary with the help of barrier techniques. Wearing of gloves, eye wear, face mask, lab gown and head cap are examples of personal protective equipment.

According to Pollack [6], many dental practitioners are all threat for occupational exposure to a selection of unsafe chemical compounds and situation. Being unaware of this risk may prone to incidents and injury. Microbial contamination from the working place leads to danger to any dental practitioner or to an employee.

Several occupational hazards are predisposed to dental experts. These include infection exposure (including human immunodeficiency virus and viral hepatitis); incidents of percutaneous exposure, dental

equipment, radiation and noise, musculoskeletal disorders, psychological and dermatitis disorders, respiratory disorders, and eye insults because exposure to severe infectious agents is a virtual danger, percutaneous exposure incidents stay a major problem. Basically, dentists should be conscious of personal safeguards and suitable sterilization or other high-level disinfection services for any infection control policies. The strained posture at work disturbs the alignment of the musculoskeletal and leads to a stubborn spine. Some muscle groups and joints were also involved in the stooped posture. This can result in musculoskeletal system diseases. To reduce the complication of these risks, continuous education and suitable intervention studies are required. It is therefore essential for dentists to stay continuously up to date on policies on how to cope with newer methods and dental equipment, and that this professional group needs unique medical care.

Table 4. Patient-Dentist Relationship

Patient-Dentist Relationship	WM	VI	R
1. Dentists have a duty to inform the patients of their treatment options including the advantages and disadvantages; and whether it is appropriate to consider a referral to specialists.	3.83	A	1
2. The patient is the one who makes the final decisions on choice of treatment and on choice of practitioner to perform the treatment or to follow-up after referral or second opinion.	3.34	A	3
3. The dentist should inform the patient of the proposed treatment and any reasonable alternatives in a manner that allows the patient to become involved in treatment decisions.	3.76	A	2
4. Dentist overriding the autonomous decision of a competent patient for that patient's own benefit.	3.25	A	6
5. The dentist with his/her busy schedule may lead to less time spending with the family that will cause depression.	2.86	A	10
6. High expectation of the patient may affect the dentist during his/her practice.	2.97	A	9
7. Uncooperative patient should be properly trained so that they will be able to understand the procedures of the treatment.	3.27	A	5
8. Working with an anxious patient may affect his/her relationship with the dentist.	3.08	A	8
9. Stress situations from dentist's everyday work like meeting high expectations of patients and emergency clinical situations.	3.16	A	7
10. Stress leads to increased tension, high blood pressure, tiredness, and sleepless nights.	3.30	A	4
Composite Mean	3.28	Agree	

Legend: 3.50 – 4.49 = Strongly Agree (SA); 2.50 – 3.49 = Agree(A); 1.50 – 2.49 = Disagree(D); 1.00 – 1.49 = Strongly Disagree(SD)

Table 4 shows the patient-dentist relationship. Based on the ranking, the top 3 most agreed from the survey are the duty of the dentist in informing the patients their treatment options and explaining it to them as well as proposing the treatment alternatives and allowing the patient to make the final decisions on the choice of treatment.

The top 3 interpretation shows that the result will always rely on the patient's own decision. It is

important for the dentist to explain well the procedures first before proceeding to any treatment to avoid misunderstanding between each other. Every alternative to the desired treatment must also be explained duly to the patient to give him/her treatment options.

The patient, still in the end, has the power to decide whether they would want to follow the dentist's treatment plan or go for their preferred treatment. The

patient has the need to exercise their right in decision making and their decision is always valid.

On the other hand, the top 3 lowest ranking were related to the emotional aspect of the patient-dentist relationship. The least agreed is the cause of depression of dentists working on a busy schedule that leads to less time spending with the family followed by high expectation of the patient affects the dentist during the practice and working with an anxious patient affects

their relationship with the dentist. The cause of depression of dentists doesn't lie on the busy schedule that they have. They are not also affected by the high expectation of their patients because they are confident that they give their utmost quality service in every patient they treat. Working with an anxious patient is not a problem as it can be corrected and manipulated by a good communication between the patient and dentist.

Table 5. Stress in the Workplace

Stress in the Workplace	WM	VI	R
1. Occupational stress may lead to anxiety and depression in the workplace.	2.87	A	3
2. Stress of the dentist causes nutritional deficiency.	2.74	A	4
3. Knowledge of the dentist during the treatment is important to do the practice well so that she knows what she's doing.	3.44	A	1
4. Some dentists prefer to have a suicidal tendency to move out from their depression.	2.08	A	10
5. Dealing with fearful patient results to anger.	2.44	A	9
6. Economic pressure forces many dentists to work through their lunch, an hour that is the single most important period of the workday.	2.63	A	5
7. The psychological stress of working with apprehensive and fearful patients can be devastating to dental practitioners.	2.58	A	6
8. Most dentists practice alone. Consequently, they do not have the opportunity to share and solve problems with their colleagues the way other professional groups do through peer support. The problem of isolation is compounded by the fact that dentists tend to be competitive with one another.	2.47	A	8
9. The stress of working with apprehensive and fearful patients can be devastating to the dentists	2.55	A	7
10. Maintaining concentration during working hours	3.20	A	2
Composite Mean	2.70	A	

Legend: 3.50 – 4.49 = Strongly Agree (SA); 2.50 – 3.49 = Agree(A); 1.50 – 2.49 = Disagree(D); 1.00 – 1.49 = Strongly Disagree(SD)

Table 5 depicts the stress in the workplace experienced by our local dentists were agreed by the 143 randomly picked dentists in Batangas. It also provides the ranking of their insight about our question by agreeing and having them rank its question. These questions reflected most the hazards that our dentists face in their clinics. Every question was agreed to have a factor in their emotional aspects especially “Knowledge of the dentist during the treatment is important in order to do the practice well so that she knows what she's doing.” This question is ranked 1 as the most agreed cause of possible hazards and the least agreed question is “Some dentists prefer to have a suicidal tendency to move out from their depression.”

In another study conducted by Durgaha and Sakthi [7], there should be proper training of the practitioners to increase awareness and acquire knowledge regarding various ergonomic issues. Simple awareness and

training of ergonomic issues are not enough as they find that stress in the workplace is not enough by merely solving the physical issues, but stress can also be lessened by interpersonal relationships and by decorating the workspace. It is also of great help if practitioners would be professional enough as not to bring personal problems and issues in the working space, getting involved with a certain hobby and merely focusing on the daily tasks and daily procedures in the clinic.

This is related with the study conducted by Durgaha and Sakthi [7], there should be proper training of the practitioners to increase awareness and acquire knowledge regarding various ergonomic issues. Simple awareness and training of ergonomic issues are not enough as they find that stress in the workplace is not enough by merely solving the physical issues, but stress can also be lessened by interpersonal relationships and

by decorating the workspace. It is also of great help if practitioners would be professional enough as not to bring personal problems and issues in the working space, getting involved with a certain hobby and merely focusing on the daily tasks and daily procedures in the clinic. Stress can be caused by a lot of things specially if your workplace demands a lot of time and physical energy, but it all depends on each one of us in how we handle these stresses. One individual may find it very stressful, and another individual may not. It all depends on how we come up with it and how we accept it. Although there are tons of factors that induce stress, it all boils down in an individual on how he or she is going to manage and react to these things.

Based on the ranking, the 3 least agreed from the survey are that dentists practice alone and that they are competitive with one another and dealing with fearful patients results to anger, as well as suicidal tendency to move out from depression. The lowest 3 interpretation shows that work of dentists in the office should be group-oriented and dental practitioners have a common knowledge in handling fearful patients and ways to

approach them in the dental clinic. Lastly, dental practitioners always maintain utmost professionalism under any circumstance.

Another research of Gonzales [8] has shown dental professionals are continuously exposed to many precise occupational dangers. In many instances, this publicity effects in diseases, which might be appeared as occupational illnesses. Counting on relevant literature, this paper discusses the occupational risks present inside the dental surroundings. These range from toxicity from chemical substances mechanically utilized in dentistry and threat of cross contamination in the dental health facility to musculoskeletal diseases consequential to suboptimal working posture. Such hazards cause the appearance of various ailments which might be particular to the profession and that increase and accentuate over years. Being unaware to the capacity risks inside the work environment makes dental employees greater prone to injury and illness. Attention of those occupational risks and implementation of preventive strategies can provide a safe dental environment.

Table 6. Difference of Responses on Health Hazard when Grouped According to Profiles

	F-value	p-value	I	F-value	p-value	I
Age	.727	.537	NS	.485	.693	NS
Sex	2.457	.015	S	1.953	.053	NS
Year of practice	1.863	.092	NS	1.465	.195	NS
Type of working institution	3.357	.001	S	.63	.526	NS
Working Hours (a day):	3.663	.014	S	2.239	.086	NS

Legend: Significant at p-value < 0.05; S- Significant; NS-Not Significant

Table 6 reveals the responses on health hazards experienced when grouped according to profile variables. As seen from the result, there were significant difference observed on social hazards when grouped according to sex (0.015), type of working institution (0.001) and working hours (0.014) since the obtained p-values were less than 0.05 alpha level. This means that the responses vary significantly and based on the post hoc test, female dentists who belong to a private institution and working for 5 to 6 hours a day experienced more the social hazards. There are more female dentists because they are more concerned with their aesthetics, and they are more tolerant when it comes to handling patients. When it comes to working institutions, more dentists preferred working in private clinics because practicing privately gives the opportunity to earn more and practice freely in their

own pace. Lastly, most dentists work 6-8 hours because more dentists cannot control the number of patients to be treated.

According to the study of Reddy et al., [8], one of the factors that contributes to the success of a dental procedure or practice is the ability of the practitioners to be always at their utmost best condition. To be able to achieve this, practitioners should be able to maintain their general well-being; physically, socially, and mentally which occupational health education is responsible for. Dominating female dentists who work for at least 5 hours in their private clinics experience the most social hazards in their practice. Dealing with patients and building a proper communication with them is one contributing factor to the success of a dental procedure.

Table 7 Proposed Plan of Action to Lessen the Hazard Encountered in the Workplace

Key Result Areas/ Objectives	Activities/ Strategies
1. To inform patients of their treatment options including the advantages and disadvantages	Dentists should be more strategic and creative in giving their patients treatment options.
2. To inform the patient of the proposed treatment and any reasonable alternatives	Dentists should discuss all the advantages and disadvantages of all possible treatments to the patient.
3. To give the patient the freedom to make his/her own choice regarding the final treatment and choice of procedure	Dentists should discuss possible outcomes of treatment choice but leave the decision to the patient.
3. To be fully knowledgeable about the treatment and the procedures done	Dentists should continuously attend seminars and read books in relation to the past and latest trends in Dentistry.
5. To maintain concentration during working hours	Dentists may make a timetable and set goals for a particular day to keep them focused.
6. To know the occupational stress may lead to anxiety and depression in the workplace.	Dentists may make use of their preferred songs to change the ambiance inside the clinic that may result to a stress-free environment.

CONCLUSION AND RECOMMENDATION

Majority of the dentist population in Batangas City belong to the young, female groups who are practicing for 1-5 years and work in their private clinics for 6-8 hours a day. Dentists were most likely injured by needles and sharp instruments and least likely got infected by blood-borne microorganisms. Most dentists agreed that the knowledge of the dentist during and about the treatment is the most important hazard to do the practice well and produce the best results for each procedure. Female dentists who belong to a private institution and working for 5 to 6 hours a day experienced more the social hazards. A proposed plan of action was formulated to lessen the hazards encountered.

Based on the findings, it was recommended for Dental practitioners may avail vaccinations against various infectious diseases like HIV, HBV etc. is very essential for every Dental Health Care Worker. It is very essential to maintain an adequate work posture and that the instruments and furniture that the dentist is working with, have adequate working characteristics to prevent musculo-skeletal disorders from developing. Dentists may control their working hours, pace of work, be aware of occupational hazards and observe their mental health. Strategies for improving mental health and reducing the effects of occupational hazards should be developed and implemented to secure the well-being of dentists. Dental personnel may be familiar with the major signs and symptoms of allergic reactions, including anaphylaxis in the case that an allergic emergency should arise during a consultation. Female dentists should opt for having CCTVs inside their clinics and an extra personnel present during clinic hours for safety purposes. The proposed plan of action may be tabled for discussion and implementation. Future researchers may conduct similar study but focusing on other variables.

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