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Research Article

**A CROSS SECTIONAL STUDY ON THE ASSESSMETNT OF
THE MEASURES TO CONTROL THE DENTAL INFECTION
AMONG THE DENTAL CONSULTANTS IN FAISALABAD,
PAKISTAN**¹Bisma Rauf, ²Muhammad Hammad, ³Hafza Sana Ijaz¹Dental Section Faisalabad Medical University²Faisalabad Medical University³Allied Hospital Faisalabad**Abstract:**

Objective: The purpose of this research work is to assess the measures to control the dental infection among the dental consultants.

Methodology: Dental consultants in every town of the Faisalabad city of Pakistan were visited by fifteen students of dental department with a special designed questionnaire. The duration of this research work was from 1 March 2018 to 15 March 2018. The method of Chi square test was in use with a significance amount P greater than 0.05.

Results: The visit of 400 dental practices centre carried out and obtained rate of response was 83.25%. 62.76% operations were carried out by the dental consultants who were not qualified in this field & only 37.23% surgeries were carried out by the qualified dentists. 94.35% qualified dentists were using the gloves as compared to only 28.2% of incompetent consultants. A large amount of the skilled dentists utilized gloves for every visitor as compared to the unprofessional consultants. Face masks were in use by 97.5% skilled dentists and 80.3% unprofessional consultants. 85.1% unskilled consultants and 98.3% skilled dentists utilized fresh sterilized instrument set for every patient. Sterilization procedures were mostly followed by the skilled practitioners as compared to the unskilled. The measures for the control of infection among both types of consultants were significant statistically.

Conclusion: A very low level practice for the control of the infection was assessed in the dental treatment carried out by the unskilled consultants. A large number of skilful dentists were taking the measures for the control of infection. There is still a need for more qualification and practice to reduce the infection in this field.

Key Words: Unprofessional Consultant, Sterilization, infection, Barrier Protection, significance, masks.

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INTRODUCTION:

The prospects of the people from facility of the health care are zero risk [1]. The control of infection is a continuous changing process & the staff of dental field should remain aware of modern methods for the mitigations of the infections. The consultants should have the knowledge for the need of these safety procedures [2]. The infections can harm both the patients and the staff of dental field if those methods are not followed. The dental consultants can prevent the transmission of the disease by following the practices of infection control [3]. Some of the world acknowledged protection procedures are sterilization & barrier protection. Universal methods should be observed to control the transmission of the germs of the disease due to the unique nature of methods and instrument used in this field [4].

Dentistry included the contact with the blood & other material of infection, so it needs high precautions for the control of infections [5]. The practices in the dental field in Pakistan found with high possible danger in the progression of the infections and diseases as hepatitis B and hepatitis C [6]. Best cares are provided by the skilled dentists. There is a considerable amount of unprofessional consultants is still working in our country [7]. A past research work concludes the poor condition of the measures for the controls of infections among dental consultants of the city of Faisalabad [8].

METHODOLOGY:

The information about the division of the dental exercises in the city of Faisalabad is not present. An expedient sampling method utilized to cover the people from all towns. First of all, seventy dental practices centres in every town regardless the fact that centre was in control of a skilled dentist or unprofessional consultant, were visited. The consultants were informed about the objective of the research work & their willing was taken. The data about the control of infection and procedures of

sterilization gathered with the help of special arranged questionnaire. About 15 students well about the dental hygiene from a dental college of Faisalabad completed that questionnaires & completed this work in only two weeks. Ninety percent level of reliability attained.

Questions of the questionnaire were about following,

1. This practice centre is in the ownership of unskilled or skilled consultant;
2. Utilization of the gloves
3. Face masks usage
4. Sterilization procedures in use
5. Use of different tools or instruments for the patients of hepatitis
6. Usage of the pouches for the instrument
7. Change of instruments for each and every patient.

The collected information was classified into unskilled and qualified consultants and their traits were compared with the utilization of the SPSS software version 11.5. Chi square test was in use to search the relationships between various variables.

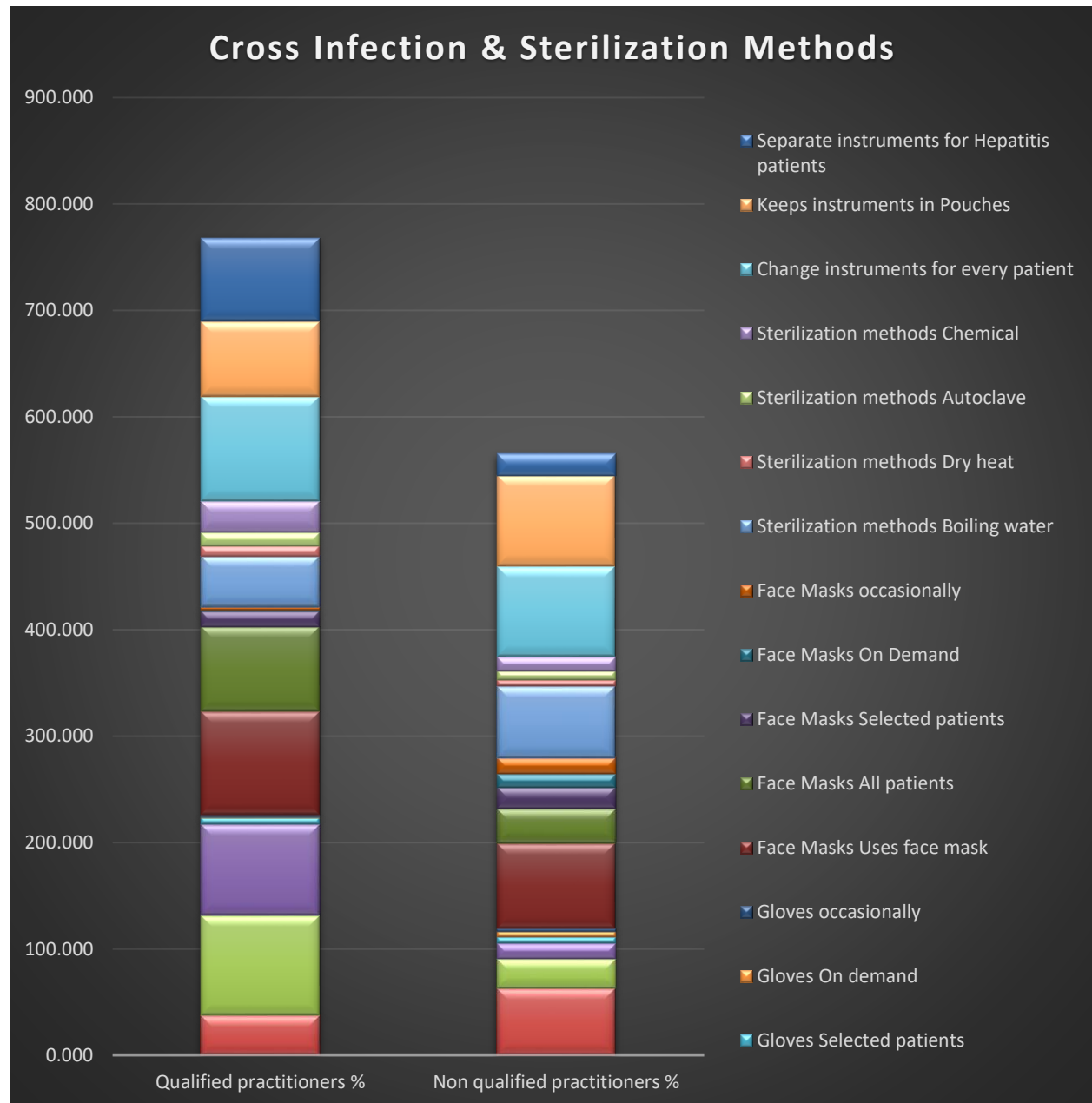
RESULTS:

About 400 dental practices in the Faisalabad city were visited by student of dental hygiene students to gather the information mentioned in questionnaire. About 52 consultants did not participate in the case study, twenty five forms were cancelled due to deficient information; complete information was available in three hundred and thirty three forms. About 83.25% was the achieved response rate. The outcome of this research work about the mask usage, gloves usage, ownership, procedures of sterilization & separate instruments usage for every patient are available in Table-1. About sixty three percent operation carried out by the unprofessional dental practitioners in Faisalabad & 37.24% surgeries were under the headship of the skilled dentists. About ninety five percent skilled dentists were using gloves during working as compared to the twenty eight percent of the unprofessional practitioners.

| Table-I: Cross Infection & Sterilization Methods adopted by Dental Practitioners | | | | |
|--|-------------------|-----------------------------|---------------------------------|------------|
| Practices by the Dentist | | Qualified practitioners (%) | Non-qualified practitioners (%) | P - value* |
| Practice owned by Gloves | | | 62.760 | |
| Gloves | uses gloves | 117.00 (94.300) | 59.00 (28.200) | 0 |
| | All patients | 106.00 (85.400) | 30.00 (14.300) | 0 |
| | Selected patients | 8.00 (6.400) | 12.00 (5.700) | 0.0020 |
| | On demand | 1.00 (0.800) | 11.00 (5.200) | 0.0250 |
| | occasionally | 2.00 (1.600) | 6.00 (2.800) | 0 |
| Face Masks | Uses face mask | 121.00 (97.500) | 168.00 (80.300) | 0 |
| | All patients | 99.00 (79.800) | 68.00 (32.500) | 0 |
| | Selected patients | 18.00 (14.500) | 42.00 (20.000) | 0.0090 |
| | On Demand | 1.00 (0.800) | 26.00 (12.400) | 0.0050 |
| | occasionally | 3.00 (2.400) | 32.00 (15.300) | 0 |
| Sterilization methods | Boiling water | 60.00 (48.300) | 141.00 (67.400) | 0 |
| | Dry heat | 12.00 (9.600) | 12.00 (5.700) | 0 |
| | Autoclave | 16.00 (12.900) | 18 (8.600) | 0 |
| | Chemical | 36.00 (29.000) | 28.00 (13.300) | 0 |
| Change instruments for every patient | | 122.00 (98.300) | 178.00 (85.100) | 0 |
| Keeps instruments in Pouches | | 88.00 (70.900) | 178.00 (85.100) | 0 |
| Separate instruments for Hepatitis patients | | 97.00 (78.200) | 43.00 (20.500) | 0.0030 |

*Chi-Sq Test, Degree of freedom=1

Gloves were in use for each and every by the both groups of the consultants. About ninety eight percent skilled dentists and eighty percent unprofessional practitioners found with the habit of wearing face masks. But 79.8% skilled and 32.5% unskilled consultants utilized face mask for every patients during treatment. The boiling of the instruments was the method of sterilization by 67.4% unskilled consultants & 48.3% skilled dentists also confirmed this method. Autoclaving & dry heat sterilizers' methods were also in use in both groups with different percentages. A chemical procedure for sterilization was utilized by twenty nine percent skilled and about thirteen percent unskilled dentists. All dental consultants were not changing the instrument for every patient in both groups. Most of the consultants in both groups were storing the instruments in the pouches & had different instruments for the patients of hepatitis.



DISCUSSION:

A great amount of the dental practices was available in this city run by unprofessional consultants or skilled dentists. The standard was much lower in those centres as compared to the staff and the working atmosphere that may be measured satisfactory for the patients. Every Pakistani with a low knowledge of medicines can run a health care centre in this country and endanger the lives of common people due to lack of law. There were seven thousand and forty six dentists registered with PMDC up to February of 2007 [9]. So, a dentist in our country is for twenty three thousand people. If

the unskilled included in this then one dentist is for five thousand people. Only two hundred skilled dentists are providing their services in the non urban areas of Pakistan that is seventy percent population of the country [10]. So, thirty percent population has the facility to the skilled dentists. This is the third research in this specific field in the city of Faisalabad.

Other research work from Faisalabad carried out in 1998 on utilization of measures for infection control reported gloves use by sixty percent, face masks use by seventy six percent (in this study, it was ninety

seven percent) of skilled dentists. Sixty two percent were using autoclave, forty six percent were using dry heat & thirty six percent were using the procedures of the sterilization [5]. The outcomes this research work matches to other case studies that conclude a high amount of the skilled consultants were using gloves & face masks [11] and changing gloves after every patient [12]. In Durban, eighty nine percent consultants were with autoclaves, ninety seven percent were using gloves & masks in routines [13]. Al-Omari & AlDwairi [14] concludes about eighty two percent uses and change the gloves; about fifty four percent are using and changing masks & ninety five percent changes the instruments. The administration of the dental instruments can be measured effective if they are sterilized in an autoclave of ninety seven percent & experience phased SET (sterilization efficacy tests of about seventy six percent [15]. The availability of the guidelines for the control of infection in the dental practices is very vital modification in the practices of the infection control that will help in the mitigation of the transmission of the pathogens of the diseases [16].

CONCLUSION:

The measures for the control of infection are very poor in the setup of the dental treatment controlled by the unprofessional consultants. There is a requirement of proper qualification and continuous training about the prevention of the infections & the utilization of the procedures for the personnel safety. There is a requirement of a standard law for the betterment of the practices in the dental field.

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