

Cross Infection And Infectious Control In Dentistry; Knowledge And Attitude Of Patients Attended Private Dental College In Chennai

Dhivya.S, Arthi Balasubramaniam

1 Saveetha Dental College And Hospitals, Saveetha Institute Of Medical And Technical Sciences (Simats), Saveetha University, Chennai – 600077 Email Id: Dhivysarathi173@Gmail.Com

2 Senior Lecturer Department Of Public Health Dentistry Saveetha Dental College And Hospitals Saveetha Institute Of Medical And Technical Sciences Saveetha University Chennai-77 Mail Id: Arthib.Sdc@Saveetha.Com

Abstract

Good Oral Hygiene Is Important As It Improves Oral Health And General Health. A Person Can Acquire Infection Easily From A Hospital, Especially From A Dental Hospital Due To Aerosols. Thus, This Study Aims To Determine The Level Of Knowledge And Attitude Regarding Infection And Cross Infection Among The Patients Visiting Private Dental Institutions.

Materials And Methods: A Cross Sectional Study Was Conducted Among 62 Patients Visiting A Private Dental College. A Self Structured Pre Validated Questionnaire Was Distributed To The Patients And Their Responses Were Recorded. Statistical Analysis Was Performed In Spss Software Version 23. Descriptive Statistics And Chi-Square Association Tests Were Performed To Present The Responses Of The Patients.

Results: Among The Patients 67.2% Were Females And 32.79% Were Males. Of Them, 26.23% Of Males, And 42.62% Of Females Ask The Dentist About The Sterilization Of Instruments, 32.79% Of Males And 62.30% Of Females Wash Their Hands After Returning Home. The Association Of Gender And Knowledge, Attitude Towards Cross Infection And Infection Control Was Not Significant ($P>0.05$).

Conclusion: Female Patients Had More Knowledge And Positive Attitude Regarding Infection And Cross Infection Than Male Patients. However, An Awareness Needs To Be Created Regarding Infection And Cross Infection Among Patients Attending Dental Hospitals Especially In This Covid Pandemic.

Key Words: Knowledge, Attitude, Infection And Cross Infection, Innovative Technology.

Introduction

Infection Is Defined As The Invasion Of Microorganisms In An Organism's Body Causing Production Of Toxins (By Microorganisms) (1). Some Of The Signs Of Infection Are Expanding Redness Around The Wound Causing Yellow Or Green Pus To Be Formed (2). Infection Can Also Be Defined As An Enlargement Of A Part Of The Body (Swelling). Fever ,Chills And Sweats, Cough ,Sore Throat, Nasal Congestion And Stiff Neck Are Also Symptoms Of Infection (3). Dentists And Dental Patients Are Generally Exposed To Infectious Substances Including Body Surface, Contaminated Supplies, Water Or Air, Environmental Surfaces And Equipment (4). The Transmission Of Infection From Patient To Staff (Doctor) Within The Clinic Is Called Cross Infection. This Topic Has Been Considered More In The Field Of Dentistry As It Has High Chances Of Cross Infection Diseases Like Hiv/Aids , Hepatitis B And C, Cmv (Etc) (5). There Are Also High Chances Of Cross Infection Through Saliva, Mucus Causing Respiratory Problems (6).

Mycobacterium Tuberculosis, Staphylococci, Streptococci And Other Viruses And Bacteria Spread From One Person To Another. Today We Are Living In A World With The Re-Emergence Of Many Communicable Diseases. Some Of The Emerging Agents Like Ebola, Coronavirus, H1n1 , H5n1 (Etc) Can Be Transmitted During Dental Practices (7). There Is A Need Of Great Concern For Both Dentists And Patients When There Is An Exposure Of Blood And Body Fluids As It Has High Chances Of Infection (8)(9). The Previous Study Concluded That Without Testing The Patients (For Hiv, Hbv Etc) This Leads To Treating Infected Patients As Non Infected Patients Due To Which There Are High Chances For Cross Infection To Occur. The Continuous Increase In The Number Of Patients In The Dental Clinics Gives An Alarm Among The Dentists And The Dental Healthcare Programs (Dhpc) For Better Care And Extra Precautions Taken While Treating Dental Patients. These Rules Are Needed For The Protection Of Both Patients And Staff Members. The Procedures To Control Cross Infections And Precautions In Dental Surgeries Is Effective In Controlling Cross Infection And Infection And Is Supported By Other Organisations, Schools Of Dentistry, Other Health Agencies And Professional Associations. Our Team Has Extensive Knowledge And Research Experience That Has Translated Into High Quality Publications (10–29). Thus This Study Is Done To Assess The Knowledge And Attitude Of Patients Regarding Infection And Cross Infection In A Private Dental College , Chennai.

Materials And Methods

A Cross Sectional Study Was Conducted Among 62 Patients In A Private Dental College Hospital To Know The Knowledge And Attitude Of Patients Towards Infection And Cross Infection. This Study Was Conducted In The Month Of February 2021. A Pre-Validated And Reliable Questionnaire Containing 10 Questions Both In English And Vernacular Language (Tamil) Was Distributed To The Patients And They Were Requested To Fill The Same (Annexure 1). The Internal Consistency Of The Questionnaire Using Cronbach's Alpha Was Found To Be 0.75 . Patients With Physical And Mental Illness Were Excluded From The Study. A Non-Probability Convenience Sampling Method Was Used For Recruitment. The Average Time Taken To Complete The Questionnaire Was 8 Minutes. Statistical Analysis Was Performed In Statistical Package For The Social Sciences (Spss) Software Version 23.0 (Ibm, Chicago, Usa). Descriptive Statistics And Chi-Square Tests Were Performed To Present The Frequency Distribution Of The Options Of The Question Items.

Results

The Total Patients In The Present Study Were 62 In Number Out Of Which 67.2% Were Female And 32.79% Were Male. In The Dental College, Among The Participants 68.85% Of Patients Ask About Sterilization Of Instruments [Figure 1], 86.89% Of Patients Mind If The Dentists Doesn't Wear Masks And Gloves While Treating Patients [Figure 2], 61.67% Of People Prefer Dentists To Change Gloves After Receiving Phone Calls [Figure 3], 60.66 % Of People Are Aware That Prophylactic Antibiotics Are Given To Them Based On The Dental Procedures [Figure 4], 80.33% Of People Are Aware That Dental Setup Can Be Prone To Contagious Infections [Figure 5], 95.08% Of People Wash Their Hands After Returning Home [Figure 6] And 67.21% Of Patients Ask Their Dentist If They Change Their Gloves [Figure 7].

In The Dental College Among The Participants (Patients) 26.2% Of Male And 42.62% Of Female Ask About Sterilization Of Instruments [Figure 8], Also 21.31% Of Male And 50.82% Of Females Prefer Their Doctor To Be Vaccinated Against Communicable Diseases [Figure 9] And 13.39% Of Male And 29.51% Of Females Prefer Dentist To Wear Eye Goggles [Figure 10], 32.79% Of Male And 54.10% Of Female Mind If Their Dentist Doesn't Wear Mask , 20.00% Of Male And 41.67% Of Female Prefer Their Dentists To Change Their Gloves After Receiving Phone Calls, 24.59% Of Male And 36.07% Of Female Are Aware Of Their Prophylactic Antibiotics Given To Them Prior To Some Dental Procedures, 29.51% Of Male And 50.82% Of Female Are Aware That Dental Setup Can Be Prone To Contagious Infections, 32.79% Of Male And 62.30% Of Female Do Wash Their Hand After Returning Home And 27.87% Of Male And 39.34% Of Female Ask Their Dentists Whether They Change Their Gloves. The Association Of Gender And Knowledge, And The Attitude Of Patients Towards Cross Infection And Infection Control Was Not Significant ($P>0.05$).

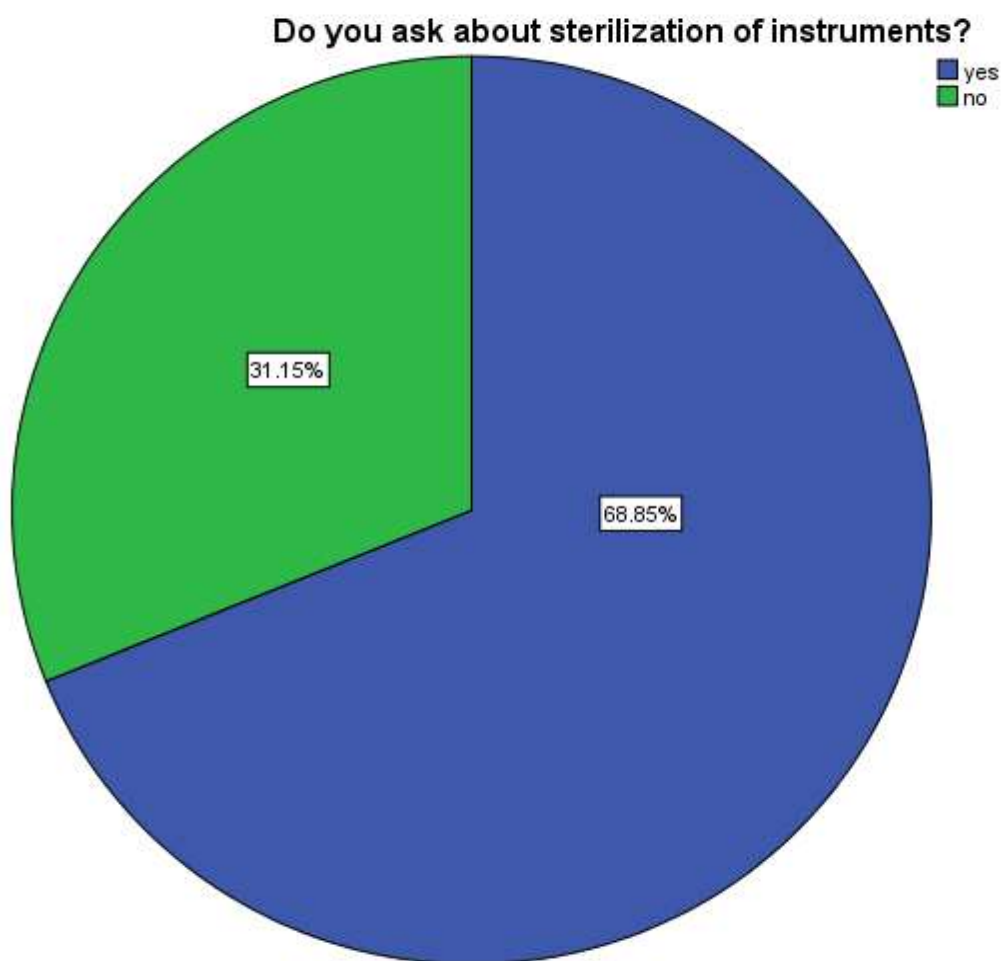


Figure 1: This Pie Chart Represents The Percentage Of People Asking For Sterilization Of Instruments. In The Figure, Blue Represents The Responses Yes (68.85%) And Green Responses To No (31.15%).

Do you mind when your dentist doesn't wear mask or gloves while screening your oral cavity?

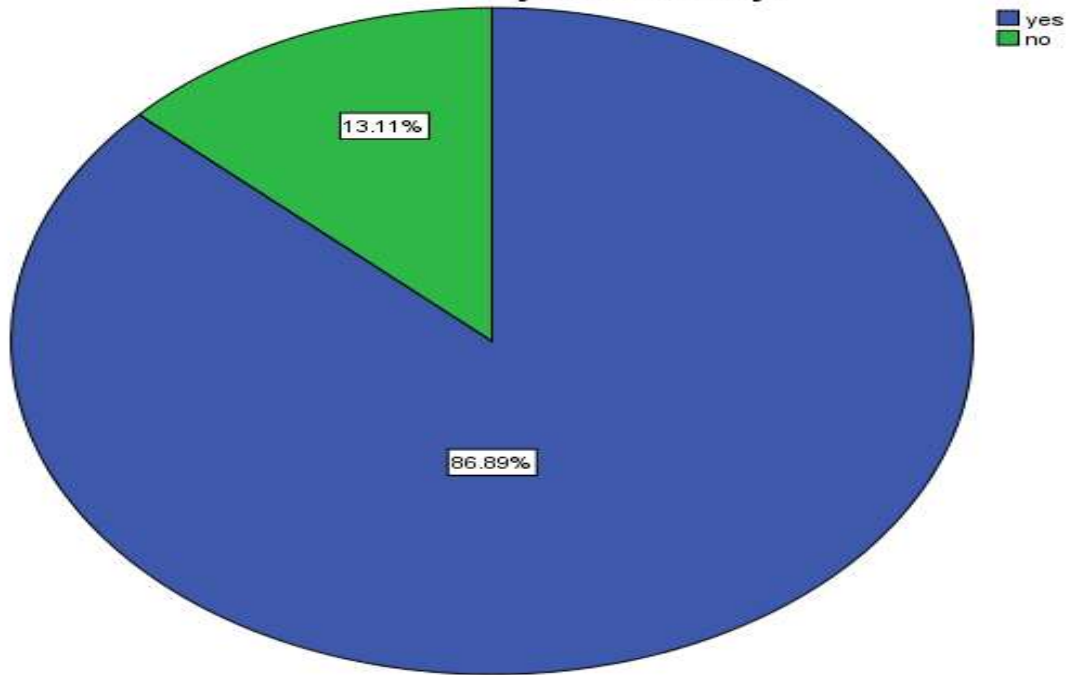


Figure 2: This Pie Chart Represents The Mental Attitude Of Patients When Their Dentist Didn't Wear Gloves While Screening The Oral Cavity . In This Figure The Blue Represents The Responses Yes (86.89%) And Green Represents The Responses No (13.11%).

Should dentist replace gloves after receiving phone calls?

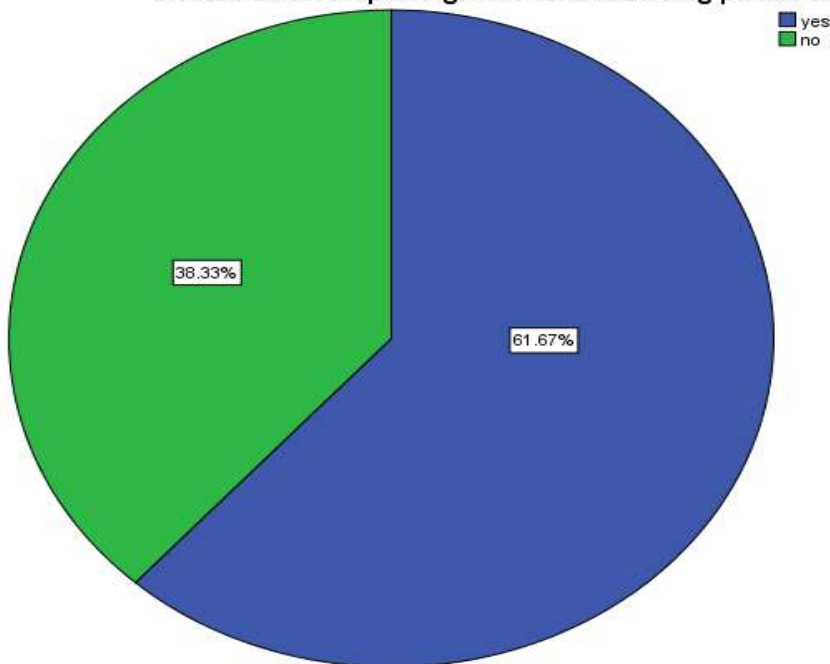


Figure 3: This Pie Chart Represents The Mental Attitude Of Patients On Hand Hygiene . In This Figure The Blue Represents Yes (They Mind) (61.67%) And Green Represents No (38.33%).

Are you aware that prophylactic antibiotics given to patients prior to some dental procedures?

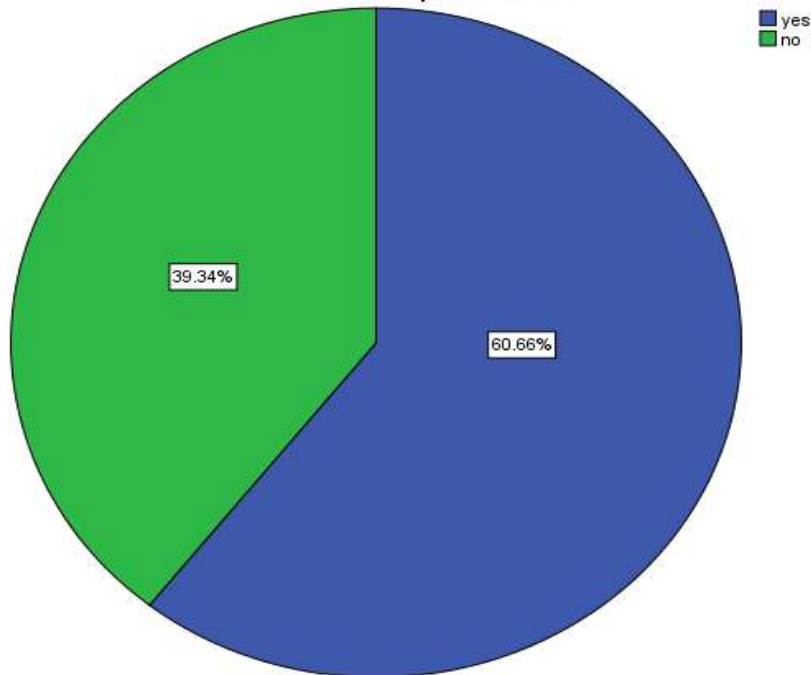


Figure 4: This Pie Chart Represents Whether People Are Aware That Prophylactic Antibiotics Are Given To Them Prior To Some Dental Procedures. In This Figure Blue Represents Yes (60.66%) And Green Represents No (39.34%).

Are you aware that dental setup can be prone to contagious infection?

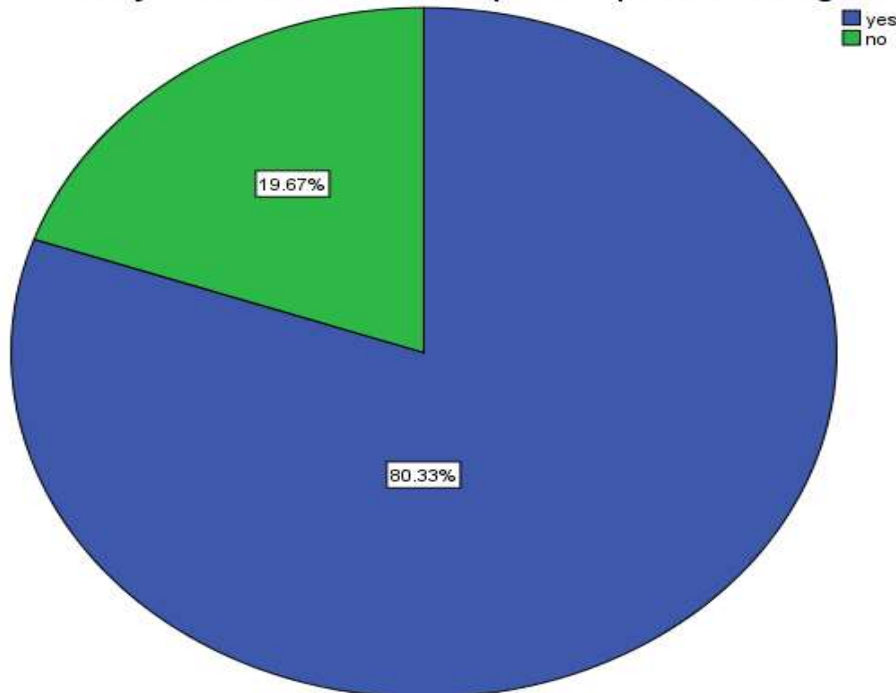


Figure 5: This Pie Chart Represents Whether People Are Aware Of Dental Setups Being Prone To Infection. In This Figure Blue Represents Yes (80.33%) And Green Represents No (19.67%).

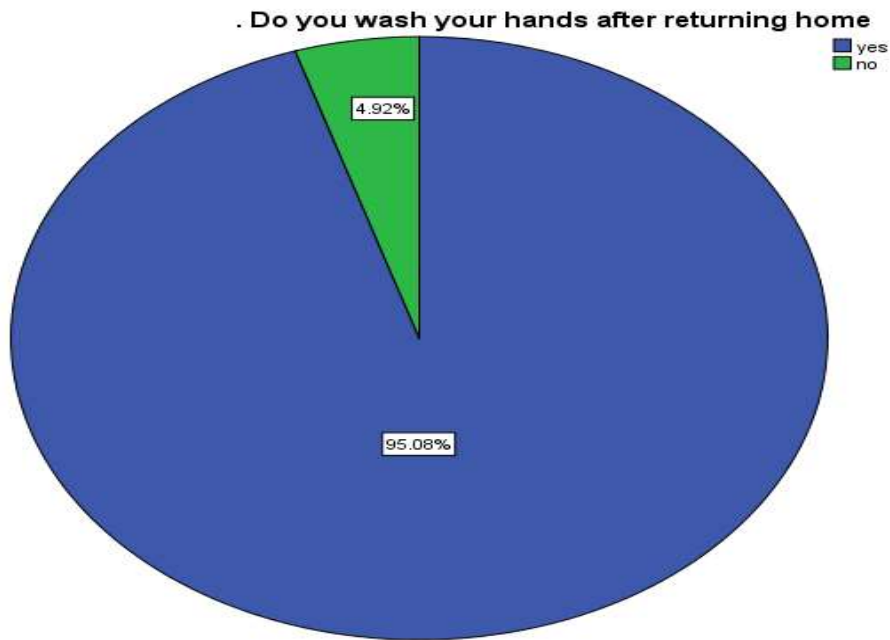


Figure 6: This Pie Chart Represents Whether People Cleanse Their Hands Returning Home After A Dental Visit. In This Figure Blue Represents Yes (95.08%) And Green Represents No (4.92%).

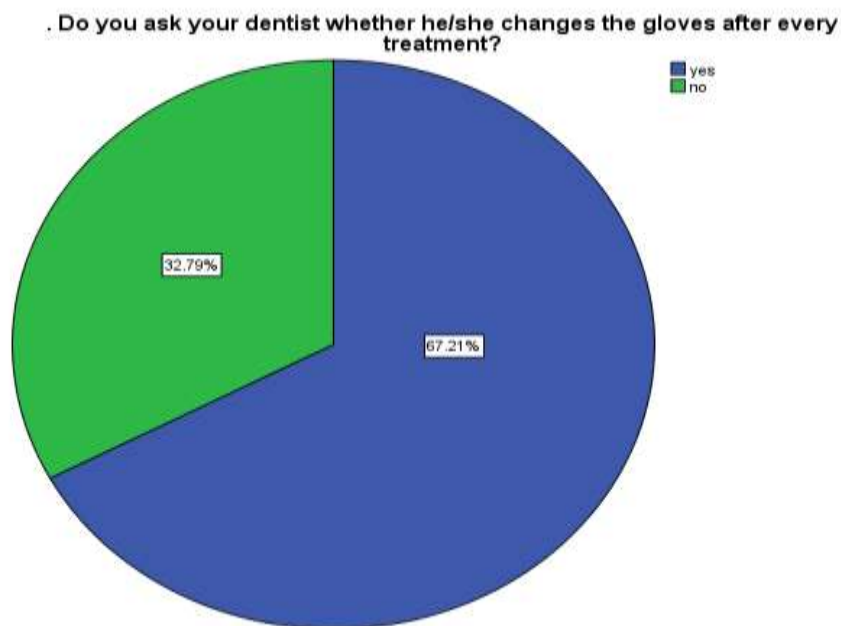


Figure 7: This Represents Whether People Ask Dentists About Changing Gloves After Every Treatment. In This Figure Blue Represents Yes (67.21%) And Green Represents No (32.79%).

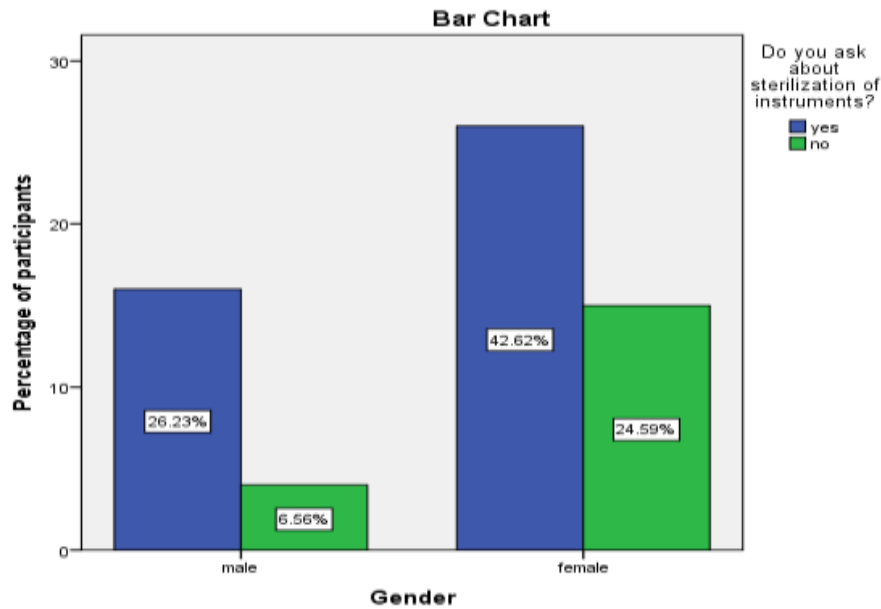


Figure 8 : The Given Bar Graph Depicts Whether The Patients Ask About The Sterilization Of Instruments. The X Axis Represents Gender And Y Axis Represents The Percentage Of Participants. According To The Figure 26.23% Of Male And 42.62% Of Females Do Ask Regarding The Sterilization Of Instruments And 6.56% Of Male And 24.59% Of Females Do Not Ask About Sterilization Of Instruments. The Association Of Gender And Knowledge To Ask For Sterilization Of The Instruments Was Not Significant (Chi-Square Test; P =0.32- Not Significant)

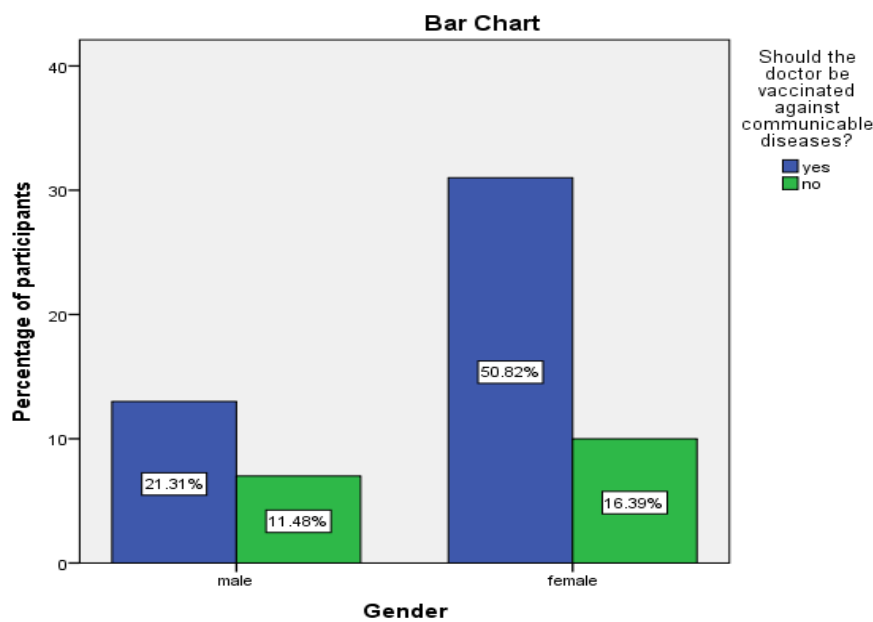


Figure 9 : The Given Bar Graph Depicts Whether The Patient Wants The Doctor To Be Vaccinated Against Communicable Diseases. The X Axis Represents Gender And Y Axis Represents The Percentage Of Participants. According To The Figure 21.31% Of Male And 50.82% Of Females Prefer Their Doctor

To Be Vaccinated Against Communicable Diseases And 11.48% Of Male And 16.39% Of Females Prefer Their Doctor Not To Be Vaccinated. The Association Between Gender And Attitude Towards Vaccination Of The Dentist Treating Them Was Not Significant (Chi-Square; P = 0.76 - Not Significant)

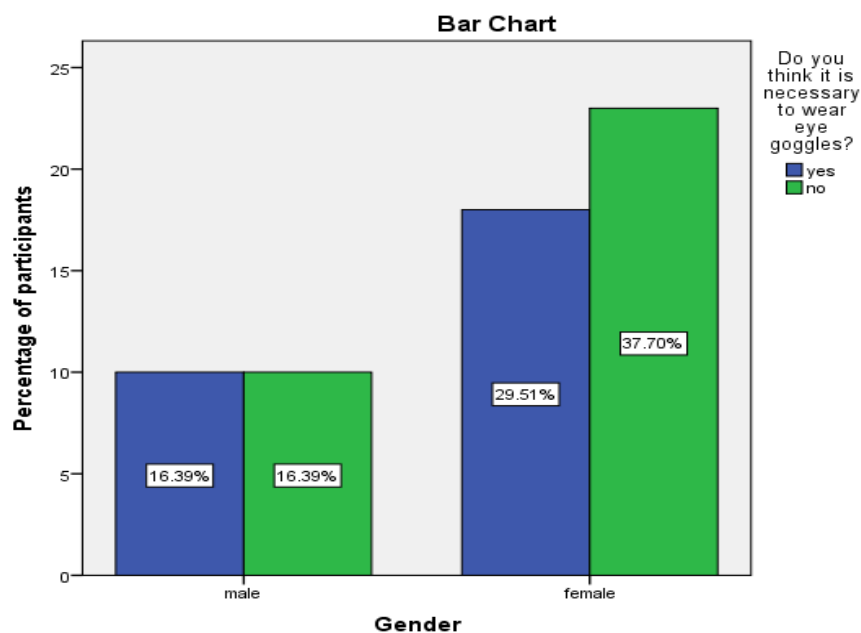


Figure 10 : The Given Bar Graph Depicts Whether The Patients Think That It Is Necessary To Wear Eye Goggles. The X Axis Represents Gender And Y Axis Represents The Percentage Of Participants. According To The Figure, 13.39% Of Male And 29.51% Of Females Prefer Eye Goggles And 16.39% Of Male And 37.70% Of Females Do Not Prefer Eye Goggles. The Association Of Gender With The Attitude Of The Patient Towards The Dentist To Wear Eye Goggles Was Not Significant (Chi-Square; P = 0.43)

Discussion

The Present Study Is Done To Assess The Knowledge And Attitude Of Patients Attending Private Dental College, Chennai. By Following The Infection Control Measures And Applying It Can Prevent Information And Cross Infection In Dental Care. The Results Previous Study Showed That Knowledge, Attitude Of The Patients Attending King Abdulaziz University Hospital, Jeddah, Saudi Arabia Where The Study Revealed That 39.5%, 38.7% And 21.8% Participants Were Poor, Fair, Satisfactory Level (4).

Regarding Self-Reported Practice, Very Few Participants (Patients) Asked Their Dentists About Sterilization Of Dental Instruments (9.3%), Wearing Face Masks (13.3%) And Gloves (16.4%) If They Did Not Follow Them. The Participants (Patients) Had A Good Attitude Towards Infection Control In Dentistry(Ibrahim Et Al, 2017). There Are About 300 Types Of Bacteria In A Person's Mouth When They Have Dental Plague. Therefore When Dental Assistants And Dentists Are Exposed To It They Have High Chances For The Infections To Spread.

Infections Can Spread Through Skin, Oral Secretions, Patient's Saliva Or Through Injuries Caused By Sharp Contaminated Instruments Or By Infectious Droplets (30). The Dentists Wear Operative Gloves To Prevent Infection From The Operator's Hands And To Prevent The Contact Of Blood And Saliva With The Operator's Hands (6). The Hospital Has Been Sterilized Frequently To Prevent Infection And Cross

Infection As There Are Many Patients Attending Here. Syringes, Needles, Blades And Other Instruments Were Used Once And Thrown Away(7).

The Patients Were Also Made To Cleanse Their Mouth After Treatment. The Educational Programs Needed To Be Conducted On Cross Infection And Infection Control Procedures Are Suitable To Improve The Knowledge Of Patients (7). Knowledge About Infection Control Can Be Gained By Watching Tv Programs, Schools, Public Places And Shopping Malls. These Programs Are Helpful To Prevent Infections And Cross Infections Among Patients Between Patient And Doctor. The Only Limitation Is That A Convenience Sampling Method Was Employed With A Limited Population. Furthermore Studies With Larger Populations Are Needed To Extrapolate The Study Results.

Conclusion

Female Patients Had More Knowledge And Positive Attitude Regarding Infection And Cross Infection Compared To Male Patients. Also Female Patients Practice Hand Hygiene After Making A Visit To The Dentist Compared To Male Patients. However, An Awareness Needs To Be Created Regarding Infection And Cross Infection Among Patients Attending Dental Hospitals Especially In This Covid Pandemic.

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Annexure 1

1. Do You Ask About Sterilization Of Instruments?

(Yes/No)

2. Do You Mind When Your Dentist Doesn't Wear A Mask Or Gloves While Screening Your Oral Cavity?

(Yes/No)

3. Do You Ask Your Dentist Whether He/She Changes The Gloves After Every Treatment?

(Yes/No)

4. Do You Think It Is Necessary To Wear Eye Goggles?

(Yes/No)

5. Should Dentists Replace Gloves After Receiving Phone Calls?

(Yes/No)

6. Should The Doctor Be Vaccinated Against Communicable Diseases?

(Yes/No)

7. Are You Aware Of Prophylactic Antibiotics Given To Patients Prior To Some Dental Procedures?

(Yes/No)

8. Do You Disinfect Your Oral Cavity After Dental Procedure?

(Yes/No)

9. Are You Aware That Dental Setup Can Be Prone To Contagious Infection?(Yes/No)

10. Do You Wash Your Hands After Returning Home?(Yes/No)