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Research Article

**AN OBSERVATIONAL STUDY TO ASSESS RUBBER DAM
USAGE AS A COMMON METHOD BY DENTISTS, HOUSE JOB
DENTISTS & DENTAL MEDICAL SCHOLARS**¹Dr. Tooba Riaz, ²Dr. Saira Batool, ³Dr. Maliha Tahir¹CMH Lahore Medical and Dental College²Nishter Medical College³Multan Medical and Dental College**Abstract:**

Objective: To calculate the rate of rubber dam usage amongst medical scholars, internees and dental doctors and fences they face to use Rubber Dam in their daily practice.

Methods: An observational short-term research was led from March to August 2017 by means of non-probability suitability selection at Sir Ganga Ram Hospital, Lahore. A questionnaire was accurately planned founded on questions used in identical researches in past. The bull's eye populations of our research were medical dental scholars, internees and Doctors doing their duties at various institutes. Statistics from the finalized questionnaire was examined by means of SPSS.

Results: With the strong reply of 82%, our research suggested that most (77%) of medical scholars, internees and house job dentists, they remain to overlook rubber dam assignment in their daily exercises. Overall 90% of dentists did not practice it as they think it as very time consuming and 67% of these dentists declared that Rubber Dam is quite hard to place. Few other motives due to which half of the participants don't like to use a rubber dam, they are regular ripping of sheet and sufferer's anxiety or detesting thinking towards the assignment of rubber dam.

Conclusion: Our research recommends that using of rubber dam is a disliked technique for separation of functioning site amongst medical scholars, internees and Dentists.

Keywords: Rubber dam, dentists, foreign bodies.

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INTRODUCTION:

Effective dentistry measures take a massive part of overall dentists' treatment time and need to transmit such dental measures under dehydrated settings have been known and is well recognized. Several approaches of functioning field separation are used to evade pollution from spittle and further uttered liquids. The choices accessible to dentists contain preoccupation by means of yarn rolls, gauze, retraction cord or clearing over spittle ejectors and high-power pressure. The rubber dam established in 1864 by Dr Sanford Christie Barnum, is known to be the best separation method. It is a part of stretchable fluid or nitrile that develops a fence once applied to selected teeth and is obtainable as a piece of 6x6 inches for subsequent teeth and 5x5 inches for frontal teeth accessible in several opposing colours and widths.

Rubber dam separation is known compulsory in modern dental practices as sufferers under treatment, through most of the healing or endodontic measures, is in flat location. In that place, a sufferer is most expected to swallow any slight tool, for example, an accent or an endodontic file carelessly slithered from a dentist's hands [1]. The Letdown to use rubber dam has been exposed to affect the optimal of root canal irrigating explanation which might have an opposing outcome on treatment consequence, as the use of sodium hypochlorite owing to its depraved taste is not likely without rubber dam. Besides, believing of external frames, such as elimination of an unsuccessful mixture, fragmented ceramic and fragmented denture parts, has also been stated in the examples wherever rubber dam separation was not implemented [2]. Nevertheless, maximum of external frames passes over the alimentary canal unexcitingly, but few become stuck, regularly in the throat and might have the potential to effect thoughtful difficulties [3].

Through achievement of a functioning dentistry process, an attending dentist is very susceptible to contract irritated contagion over the sufferer's uttered liquids just like spittle, blood or provocative exudate. These probable doubts of cross contagion among dental doctor and sufferers can be diminished if not entirely removed by smearing rubber dam separation in its place of using other accessible resources for field separation.

Regardless of all its possible recognized assistances and accessibility for use since nearly 160 years, the usage of rubber dam might not get worldwide fame to be utilized as an actual separation practice [4]. Comparing to numerous other states, usage of rubber

dam is barely widespread amongst dentists and dental scholars in our country Pakistan [5]. According to our information, few types of research are existing that give some information about dentist's attitude towards rubber dam assignment; that also include few dentists employed in the northern side of Pakistan. Statistics to disclose practices and attitudes of dentists employed or studying hardly exists. One research proves about education and arrogance of dentist towards the practice of rubber dam, but then again explanations for not practicing are not described [6]. Results of our research will reveal reasons of overlooking that important separation step. The aims of the research were to regulate the occurrence of rubber dam practice amongst Dental scholars, interneers and dentists and the problems they face to place it regularly in their practices.

SUBJECTS AND METHODS:

This questionnaire constructed study was passed amongst medical scholars, interneers and dentists of various dental colleges. The 2-point Likert's measure study form with close-ended questions having defendants' likings of "Yes" and "No" was substantially circulated amongst medical scholars, enumerated interneers and dentists involved in overall dental exercise through a chosen central individual in every dental institution. The central individual was also answerable for briefing applicants about the aim of the research, to discourse any felt vagueness in the survey and to gather filled-out questionnaire forms as for each applicants' ease inside a week after circulation. For the sake of privacy and obscurity of defendants, their designation, organization or any private recognizing info was not getting from them. An observational short-term research was led from March to August 2017 by means of non-probability suitability selection at Sir Ganga Ram Hospital, Lahore. The survey contained two parts, the primary for demographic and another part limited to modest questionings about practice or non-practice of rubber dam as a regular medical exercise through functioning and/or endodontic measures. The non-users of rubber dam separation were asked about sprints they face to practice this. Facts from the completed surveys were examined using SPSS for Windows, also was presented as figures and proportions. Pearson Chi-square test was done to check the connection of rubber dam practice amongst the sets.

RESULTS:

The members of research answered at the strong percentage of almost 84% as a total of 254 questionnaire forms circulated, 206 complete forms were found. As questions were unassuming, all of

them were totally jam-packed and henceforth there was no refusal. The participants of research study comprised 82 last year scholars, 74 house officers and 50 universal dentists (Table 1). It was detected from answers established that just 24.9% of participants practised rubber dam in their dental clinics (Table 2).

The other 75% defendants did not smear rubber dam for many reasons even with the statistic that most of

them thought that it is a very good technique for separation of working field and gives improved verbal emissions regulator in contrast to yarn rolls or gauze. The overall of 90% of non-practised did not practice it as they discovery its time consuming and 68% of them believed that it is hard to place. A pair of other explanations for which greater than 55% of defendants evade practice rubber dam is recurrent tearing of page and sufferers' distress or hating attitude towards assignment of rubber dam (Table 3).

Table – I: Distinctive of applicants from dental institutions

Variables	Rate	Percentage
Last year scholars	82	41.00
House Job Practitioners	74	37.00
Dentists	50	25.00
Overall	206	100.00

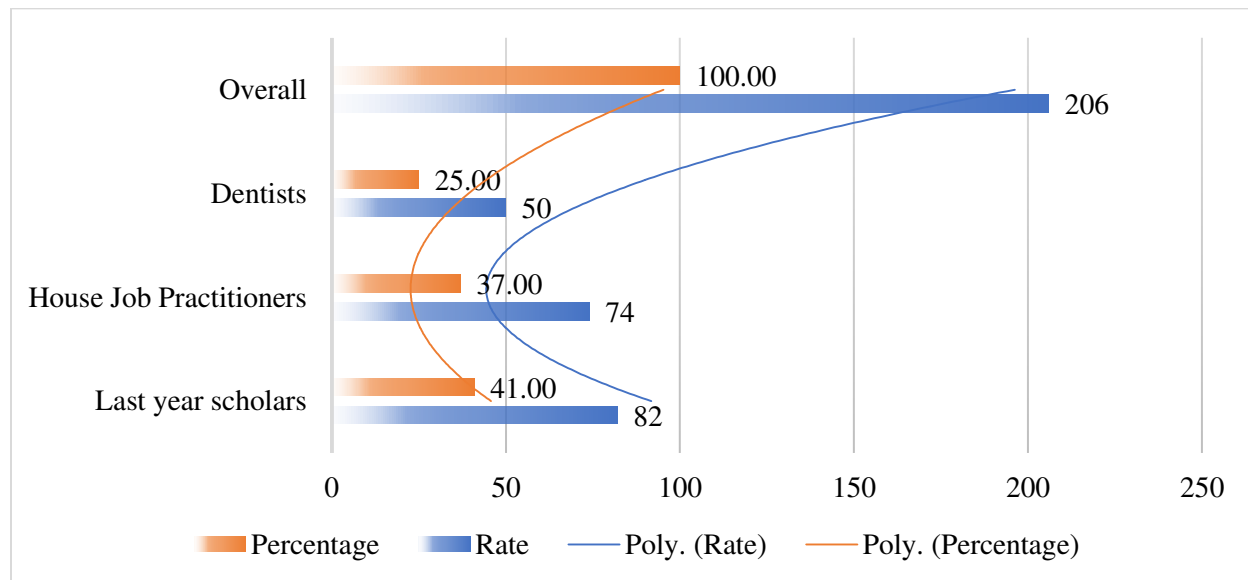


Table – II: Occurrence of rubber dam practice by dental medical scholars, House Job Dentists and dentists

Use of Rubber Dam	RD users		RD non-users		Totals		P-Value
	Number	Percentage	Number	Percentage	Number	Percentage	
Final year	12	6.00	70	35.00	82	41.00	0.02
House Officers	24	12.00	51	25.40	74	37.00	
Dental Practitioner	15	7.50	36	17.80	50	25.00	
Totals	51	25.50	157	78.20	206	103.00	

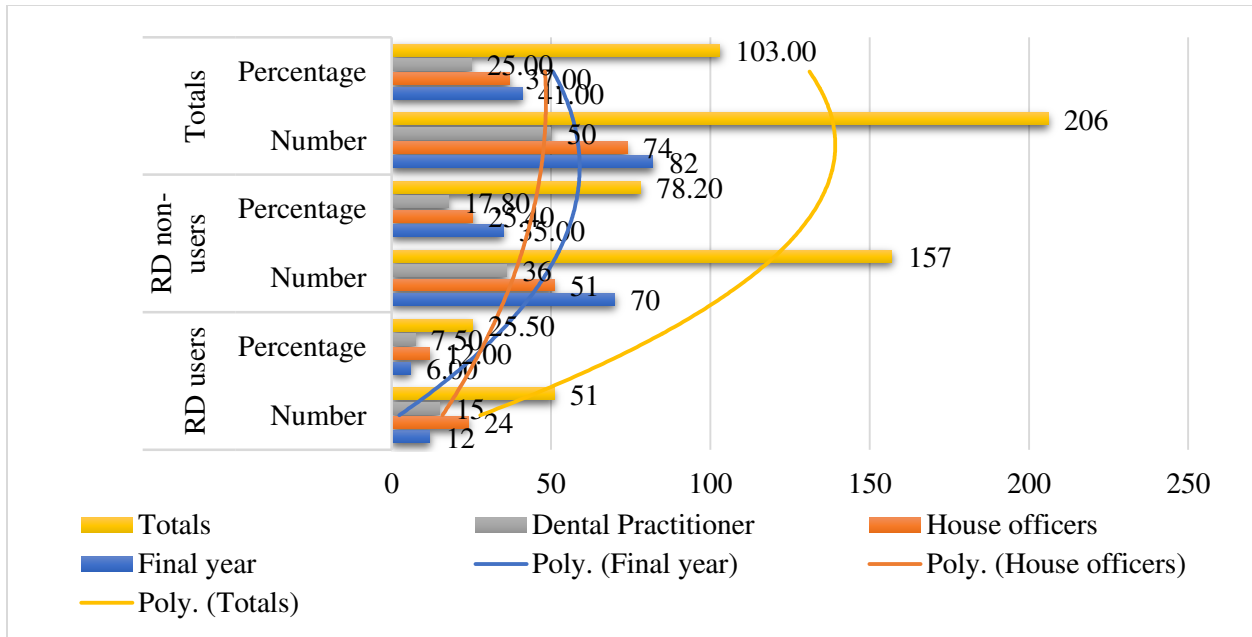
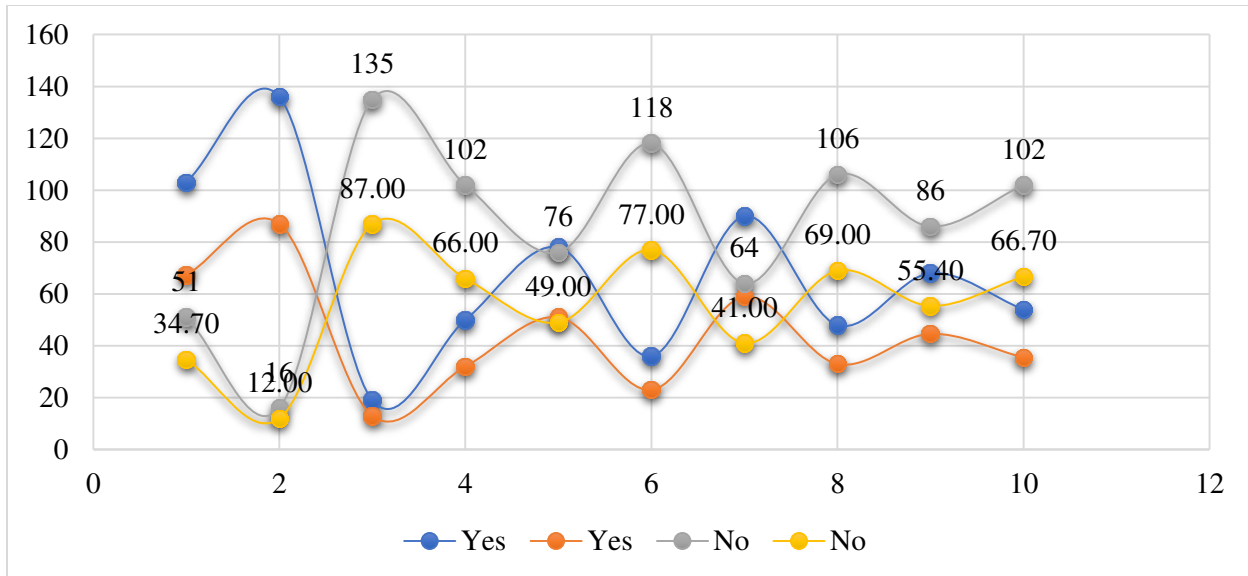


Table – III: Motives for not practising rubber dam by dental medical scholars, house Job Doctors and dentists

I do not use RD because of the following reasons:	Yes		No	
	Number	Percentage	Number	Percentage
a. It is difficult to place	103	67.30	51	34.70
b. It is time-consuming	136	87.00	16	12.00
c. It is ineffective	19	13.00	135	87.00
d. Cotton rolls and gauze perform isolation as good as RD	50	32.00	102	66.00
e. It frequently tears	78	51.00	76	49.00
f. It leaks very often which causes failure of isolation	36	23.00	118	77.00
g. Patients feel fear or don't like it	90	59.00	64	41.00
h. I fear, the patient may ingest the slipped RD clamp	48	33.00	106	69.00
i. I have insufficient training for its placement	68	44.60	86	55.40
j. It increases the treatment cost	54	35.50	102	66.70



DISCUSSION:

The rubber dam is measured as the final technique for separation of functioning ground in dentistry. Regardless of its identified aids, the practice of rubber dam to transmit out functioning dentistry events is not a widespread technique of ground separation amongst dentists universally. The clue of practising a rubber sheet to separate a functioning dental site dates to the 17th century but it seems unlikely that two centuries later, most of the overall dentists are not influenced about the efficiency of this self-effacing separation technique [6]. Results of this research demonstrate that just 25% of participants counting final year scholars, interneers and overall dentists smear rubber dam. It regulates that our results do not vary from generally usual condition about non-practice of rubber dam. Our results also tie with our national study led in Rawalpindi and Islamabad which accomplishes that 29% dentists practice rubber dam [7].

Amongst several motives not to practice rubber dam, one frequently answered cause was the inadequacy of drill as 44% of defendants thought that they did not obtain enough drill for rubber dam submission throughout scholar medical meetings (Table 3). This shortage is more uncovered by 67% of defendants who believed rubber dam is problematic to be kept or 90% who thought that it is time-consuming (Table 3). If the scholars throughout undergraduate drill continually exercise smearing rubber dam in premedical and medical settings, the trouble will be condensed and thus the time of request declines. It is clear if scholars are well familiar with the application method, rubber dam can be done inside five minutes [8]. It is machinist's weakness of expertise owing to

which he ducks rubber dam than a deficiency of exercise [9].

Concerning sufferer's fondness to let functioning dentist toil below rubber dam separation, 59% dentists did not place rubber dams due to sufferer's anxiety or difference. There are testified researches that oppose those results and disclose sufferers' fondness to experience dental action under rubber dam separation [10]. A research led in KPK province on that subject demonstrations that if assistance of rubber dam are clarified to sufferer's, their anxiety for its location decreases [11]. Mostly, sufferers' support can be gotten if the dentist is persuaded with effectiveness and worth of rubber dam. It is described that clever dentist produces not as much of strain in the location of rubber dam [12]. The dentists must spend the required time to clarify consequence, security and success of rubber dam in loud out healing actions.

Mostly (41%) of defendants to this study questionnaire were last year dental undergraduates. These scholars just afterwards receiving through their last specialized examination are allotted interim certificate from Pakistan Medical and Dental Council to exercise overall dentistry and, henceforth, they have been comprised in this research. It is an overall opinion that dentists in their medical exercises do whatsoever they have got while in student life, medical drill and indication recommends that separation of functioning ground using rubber dam is not a very widespread process working.

Review constructed researches have few inherent deficits. For example, defendants might not identical

to deliver precise, authentic responses or might sense worried giving responses that existing them in a disapproving way. The current research suffers from this faintness as it cannot be identified with inevitability how correct self-rumours of rubber dam practice are. It is thus suggested that for medical scholars and internees, it would be necessary to place rubber dam earlier opening any healing or endodontic method. For working dentists, under current dental education (CDE) lineups, sessions and hands-on workshops must be led to highlight the profits of rubber dam and to recover their physical skill to place it faster. It clearly, will guarantee distribution of excellence dental action to sufferers.

Restrictions of this research study comprise that organizations were not designated and any last year scholar, internees or faculty involved in overall dental exercise who keenly filled out procedure was involved in this research.

CONCLUSION:

This research study specifies that dentists, might they be scholars, internees or graduate dentists, do not exploit rubber dam for many motives. Deficiency in exercise consequences in time-consuming and problematic process.

REFERENCES:

1. Kapitan M, Hodacova L, Jagelska J, Kaplan J, Ivancakova R, Sustova Z. The attitude of Czech dental patients to the use of rubber dam. *Health Expect* 2015; 18:1282-90. [DOI: 10.1111/hex.12102].
2. Ammann P, Kolb A, Lussi A, Seemann R. Influence of rubber dam on objective and subjective parameters of stress during dental treatment of children and adolescents- a randomized controlled clinical pilot study. *Int J Paediatr Dent* 2013; 23:110-5. [DOI: 10.1111/j.1365- 263X.2012. 01232.x].
3. Carotte P. Endodontics: Part 6 Rubber dam and access cavities. *Br Dent J* 2004; 197:527-34. [DOI 10.1038/sj.bdj.4811799].
4. Saraf HP, Nikhade PP, Chandak MG. Accidental ingestion of endodontic file: a case report. *Case Rep Dent* 2012; 2012:278134. [DOI: 10.1155/2012/278134].
5. Kuo SC, Chen YL. Accidental swallowing of an endodontic file. *Int Endod J* 2008; 41:617-22. [DOI: 10.1111/j.1365-2591.2008. 01392.x].
6. Tanwir A, Amin M, Choudhry Z, Naz F. Knowledge, attitude and perception of dental fraternity towards practice of rubber dam [Online]. *Pak Oral Dent J* 2015; 35:691-3. Available from: http://www.podj.com.pk/Dec_2015/PODJ_31.pdf. Accessed on August 16, 2017.

7. Udoye CI, Jafarzadeh H. Rubber dam use among a subpopulation of Nigerian dentists. *J Oral Sci* 2010; 52:245-9.
8. Al-Omari MA, Al-Dwairi ZN. Compliance with infection control programs in private dental clinics in Jordan. *J Dent Educ* 2005; 69:693-8.
9. Mirza AJ, Aljanakh M, Javaid MA, Siddiqui AA, Asghar S. Rubber Dam placement: Why majority of senior dentists practicing in Ha'il, Saudi Arabia ignores it? *Baqai J Health Sci* 2017; 20:1-6.
10. Smith GE, Richeson JS. Teaching of Rubber Dam Technique in North America [Online]. *Oper Dent* 1981; 6:124-7. Available from: <http://www.jopdentonline.org/doi/pdf/10.2341/1559-2863-6-4-1>. Accessed on August 16, 2017.
11. Petersson K, Olsson H, Söderström C, Fouilloux I, Jegat N, Lévy G. Undergraduate education in endodontology at two European dental schools. A comparison between the Faculty of Odontology, Malmö University, Malmö, Sweden and Faculty of Odontology, Paris 5 University (René Descartes), France. *Eur J Dent Educ* 2002; 6:176-81.
12. Kalhor FA, Mirza AJ. A study of flare-ups following single-visit root canal treatment in endodontic patients. *J Coll Physicians Surg Pak* 2009; 19:410-2. [DOI: 07.2009/JCPS.410412].
13. Lin HC, Pai SF, Hsu YY, Chen CS, Kuo ML, Yang SF. Use of rubber dams during root canal treatment in Taiwan. *J Formos Med Assoc* 2011; 110:397-400. [DOI: 10.1016/S0929-6646(11)60058-2].
14. Ahmed MF, Elseed AI, Ibrahim YE. Root canal treatment in general practice in Sudan. *Int Endod J* 2000; 33:316-9.
15. Umesan UK, Chua KL, Balakrishnan P. Prevention and management of accidental foreign body ingestion and aspiration in orthodontic practice. *Ther Clin Risk Manag* 2012; 8:245-52. [DOI: 10.2147/TCRM.S30639].
16. Barker TG. Tooth isolation without a rubber dam [Online]. *J Prosth Dent* 1970; 23:655-7. Available from: [http://www.thejpd.org/article/0022-3913\(70\)90229-5/abstract](http://www.thejpd.org/article/0022-3913(70)90229-5/abstract). Accessed on August 16, 2017. [DOI: 10.1016/0022-3913(70)90229-5].
17. Gergely EJ. Desmond Greer Walker Award. Rubber dam acceptance. *Br Dent J* 1989; 167:249-52.
18. Khan R, Butt F, Rizwan F, Akram A. Perception of rubber dam - a qualitative view [Online]. *World J Pharm Med Res*

2017; 3:5-7. Available from: http://wjpmr.com/home/article_abstract/248.
Accessed on August 16, 2017.

19. Ali A, Aslam A, Rehman B, Tariq A. Rubber dam use by general dental practitioners – prevalence and obstacles to its use [Online]. *Pak Oral Dent J* 2016; 36:468-71. Available from: http://www.podj.com.pk/Sep_2016/PODJ-28.pdf.
Accessed on August 16, 2017.