

Summer Training

At

Group Pharma Ltd.



April 1, 2019 to June 1, 2019

**PERCEPTION MAPPING OF DENTISTS TOWARDS BIOACTIVE GLASS BASED
DESENSITISING TOOTHPASTES AND ITS COMPETITORS**

By:

Ankur Raghuvanshi

MBA Pharmaceutical Management

2018-2020

Under Guidance Of

Mr. Rahul Kumar

Associate Professor, IIHMR University Jaipur



CERTIFICATE

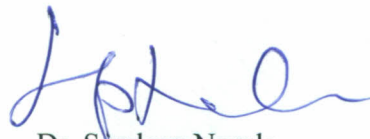
This is to certify that **Ankur Raghuvanshi** has undergone Summer Training at **Group Pharmaceutical Ltd.** from 1st April 2019 to 31st May 2019.

The candidate himself completed the project assigned to him in summer training. His approach to project was sincere and proactive. This Summer Training is in partial fulfillment of the course requirement recommended for the award of MBA in Pharmaceutical Management.

I wish him success in all his future endeavors.



Mr. Rahul Sharma
Associate Professor
IIHMR University, Jaipur



Dr. Sandeep Narula
Dean- in- Charge (Associate Professor)
Pharmaceutical Management
IIHMR University, Jaipur



Group Pharmaceuticals Ltd

healthy smiles matter

1116 Hubtown Viva,
Shankarwadi, Jogeshwari East,
Mumbai - 400 060.
+91 228722695 / 68182222
mumbai@grouppharma.in

Date: 28.06.2019

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. Ankur Raghuvanshi**, student of MBA Pharmaceutical Management, School of Pharmaceutical Management, IIHMR University; Jaipur has completed his Summer Project on **"Perception Mapping of Dentists towards Bioactive Glass based Desensitising Toothpastes and its Competitors"** from **1st April, 2019 to 31st May, 2019** at **Delhi** under the guidance of Mr. Nishant Srivastava, Product Manager.

The candidate completed the project assigned to him as part of his summer internship in our organisation. During the project, he is exposed to various facets of market research in the pharmaceutical industry.

His approach to the project was sincere and we wish him success in his future endeavours.

For Group Pharmaceuticals Ltd.,

Ann Attavar

Executive Director

CIN: U24239MH1980PLC022889

Registered Office

W / 46(B) MIDC, Tarapur Industrial Area,
Palghar - 401506.
+91 80 87655188
gp1tarapur@grouppharma.in

Acknowledgement

I humbly owe the completion of this Summer Internship work to the almighty and my family whose love and blessings will be with me in every movement of our life .

I would like to extend my sincere gratitude to **Mr. Laxmikanth Sugandhi** (General Manager-Business Development) for providing us an opportunity to learn and develop professionally.

I also extend my gratitude to our Project Coordinator **Mr. Nishant** (Product Management Trainee) for his valuable suggestions, support and keen interest throughout the study that helped us in completing this work. “I thank him for the freedom of thought, expression and trust which was greatly bestowed upon us. I would also like to pay my gratitude to the entire team of Group Pharma Ltd. who has helped me by sparing their valuable time and extended their support and guidance to help me achieve my task successfully.

I would also like to thank my mentor **Mr. Rahul Kumar** (Associate Professor, IIHMR University Jaipur) for all his support, motivation and providing me valuable guidance throughout the period of my summer internship.

I am very much indebted and thankful to all the Doctors, Medical Representatives and Marketing Managers of pharmaceutical organisations for their participation and cooperation. Last but not the least I would like to thank my family for supporting and standing with me in successfully completing the project.

Ankur Raghuvanshi

MBA Pharmaceutical Management

INTRODUCTION

Sensitive Teeth

What about it:

Sensitive teeth is tooth trouble in any event one teeth that is enacted by hot, nippy, sweet, or cruel sustenances and drinks, or even by breathing infection air. The misery can be sharp and startling and can penetrate significant into the nerve endings of your teeth. The most notable sensation is cold, with 75% of people with affectability declaring perpetual supply of a crisp lift.

The occurrence and severity with which the pain occurs are known to be variable.

There are two types of tooth sensitivity:

Dentinal affectability: normally happens when the dentin (focus layer) of a tooth is uncovered and unprotected. Regularly, the dentin is verified by finish over the gumline and by cementum underneath the gumline. Dentine has little chambers ('tubules') that prompts the nerve and are stacked up with fluid. Eating or drinking sustenances and refreshments that are too much hot, cold or sweet can cause an alteration in smooth movement.

This smooth movement causes the nerve endings to respond in like manner, setting off a short, sharp distress. This causes affectability. Dentin winds up uncovered when the outside protective layers of facade or cementum break down away

Pain Management

NSAIDs are compelling in the underlying agony with irritation and they give excellent absence of pain to mellow to direct torment. In view of the pain relieving and mitigating impacts these medications they are ordinarily utilized in dental torment. NSAIDs demonstrates its activity by means of restraining the cyclooxygenase(COX) chemicals which has essential job in the amalgamation of prostaglandins and different eicozanoids (3,4).

This pharmacologic impact of these medications can likewise prompt aggravation and seeping in gastrointestinal tract. So as to annihilate the gastrointestinal symptoms of these medications, selective COX – 2 inhibitor sorts were grown, however sooner or later there is an expanded danger of myocardial dead tissue and other cardiovascular maladies (counting abrupt heart demise, stroke) were resolved in patients who were utilizing a portion of these medications (for example rofecoxib). In a present report it is expressed that NSAIDs (both particular COX–2 and non specific COX inhibitors) ought to be utilized cautiously in patients with cardiovascular illnesses. For the most part because of the utilization of these medications in the administration of dental torment expands the danger of unfavorable impacts (counting gastrointestinal, hematologic, renal and so forth.) because of these medications (3).

Then again, paracetamol which is likewise ordinarily utilized as pain relieving in dentistry, which has no obvious mitigating impact on fringe tissues, and in this way gives slight hazard on gastrointestinal mucosa harm. The most genuine symptom is expected to the paracetamol treatment is "hepatotoxicity" which can happen with high dosages. Because of the broad utilization of analgesics, there are worries about medication prompted danger (i.e.NSAID-actuated poisonous quality) which can prompt huge wellbeing risk. No medications come without reactions or are splendidly sheltered, yet their protected use in clinical practice would prompt augmentation of the helpful viability and minimization of the antagonistic impacts. A huge parameter of the adequacy is to illuminate the patients adequately about the endorsed medications. This data incorporates not just about the portion and portion interim of the medications yet in addition about the unfriendly responses, tranquilize associations, stockpiling conditions and the cost of the endorsed drugs.(7)

DESENSITIZING TOOTHPASTES

Desensitizing toothpastes can help individuals whose teeth are touchy to warmth or cold. These toothpastes contain fixings, for example, strontium chloride and potassium nitrate that can hinder the transmission of agony signals from the outside of your tooth to the nerve inside.

How Desensitizing Toothpaste Works

1. Some brands guarantee that their toothpaste can diminish affectability inside two employments. I'd express it's nearer to about a month of normal day by day use.
2. It just treats manifestations afterward — it can't fix your affectability. I'm not catching that's meaning?

Envision if your home was ablaze and you reacted by attempting to evacuate the smoke. In the event that your teeth are delicate, something serious is going on to cause these indications. Desensitizing toothpaste is incredible for feeling much improved, and I use it myself, however make a point to treat the significant reason for your affectability to shield your teeth from deteriorating. Or if nothing else know real reason since it could be concealing indications of something greater later on.

Active Ingredient present in Desensitizing Toothpaste

Potassium nitrate got the best score from the EWG: 1 on a scale from zero to 10, with 10 being the most astounding risk and 0-2 being "low peril."

Stannous fluoride got the subsequent best score: 2 out of 10. While fluoride isn't gainful in fortifying teeth as toothpaste, it is an extremely compelling desensitizer.

Strontium chloride scored 3 out of 10 – "moderate peril." It's been restricted by the Japanese government for being hazardous for use in cosmetics.[11]

Objective of the study

To understand the motivating factor, current understanding and decision influencing stimuli for shift.

To understand the Doctor's perspective to bioactive glass based toothpaste.

Scope of the study

1. A detailed planning of visit.
2. Advanced segmentation of doctor's based on their prescription preference and personal/professional attributes.
3. Creating a structure doctor perception mapping formats.
4. Detailed analysis on the primary data received.
5. Developing a structure and unstructured questionnaire for understanding the prescription psychology.

Literature review

1.Daniel E. Becker, DDS et.al, underscored on fix of patient torment, the clinician may browsed narcotic and nonopioid analgesics. It is typical for the professional to join drugs from these classes when getting moderate serious agony. To choose mix effectively, it is fundamental to comprehend the significant pharmacological highlights of every class. Cautious choice of a compelling pain relieving depends on the sort and measure of agony the patient is experiencing. The clinician can and ought to build up an assortment of successful, safe pain relieving regimens to diminish the agony power and furthermore uses sound pharmacological standards.

2.Sinan Şermetetal et al. represented that dental specialists as a rule endorse naproxen for the administration of dental agony and they barely recommend contradictory pain relieving blends. The outcomes likewise demonstrated that dental specialists instructed their patients deficiently about analgesicuse. Deficient data given to persistent by dental specialists about medication connections, stockpiling conditions and cost of the recommended medications is a significant point during the investigation which may likewise influence the achievement proportion of the treatment and the patient complaine.

3.Rahul Datta et.al., stressed upon the ordinary pattern of pain relieving and calming in medication remedy for dental embed medical procedure among the Indian dental specialists which is for the most part as indicated by the rules for torment the board. Notwithstanding, it is significant that a couple of dental specialists do recommend drugs not essentially utilized for dental torment the executives and is utilized broadly fluctuating conventions for the equivalent. Accordingly, so as to maintain a strategic distance from potential confusions, it is critical to

bring issues to light among the dental experts for the proper signs and dose routine of the given medication.

4. Luiza Pereira Dias da Cruz et al., outlines that the glass powders were planned into five distinctive toothpaste details. Dentine plates were separated from extricated human teeth and arranged for the examination by expelling the cutting flotsam and jetsam (smear layer) following segmenting utilizing a 6% citrus extract answer for around 2 minutes. Each circle was split to give test and control parts to examination following with the brushing of the five toothpaste details onto the test parts for every toothpaste gathering. Following the toothpaste application, the test plates were plunged in either counterfeit salivation or presented to a corrosive test.

INDUSTRY PROFILE

Health care industries in India

Introduction

Human administrations has ended up being one of the India's greatest sections - both to the extent salary and business. Restorative administrations contains crisis centers, remedial contraptions, clinical starters, redistributing, telemedicine, therapeutic the movement business, medicinal inclusion and helpful equipment. The Indian human administrations region is creating at a fantastic pace on account of its strengthening incorporation, advantages and growing use by open additionally private territories.

Indian social protection movement system is divided into two significant get-togethers open and private. The Government, for instance open therapeutic administrations system includes obliged discretionary and tertiary thought foundations in key urban regions and spotlights on giving key social protection workplaces as fundamental human administrations center (PHCs) in provincial areas. The private zone gives larger piece of helper, tertiary and quaternary thought associations with an essential concentration in metros, level I and level II urban zones.

India's advantage lies in its immense pool of solid and steady restorative specialists. India is in like manner cost forceful when stood out from its sidekicks in Asia and Western countries. The cost of restorative system in India is around one-tenth of that in the US or Western Europe.

Market Size

The social protection market can extend on different occasions to Rs 8.6 trillion (US\$ 133.44 billion) by 2022.

India is experiencing 22-25 percent advancement in restorative the movement business and the business is depended upon to twofold its size from present (April 2017) US\$ 3 billion to US\$ 6 billion by 2018.

There is a critical degree for updating human administrations organizations considering that social protection spending as a dimension of Gross Domestic Product (GDP) is rising. The organization's utilization on the prosperity part has extended to 1.4 percent in FY18E from 1.2 percent in FY14. The Government of India right now is planning to grow general prosperity by consuming 2.5 percent of the country's GDP by 2025.

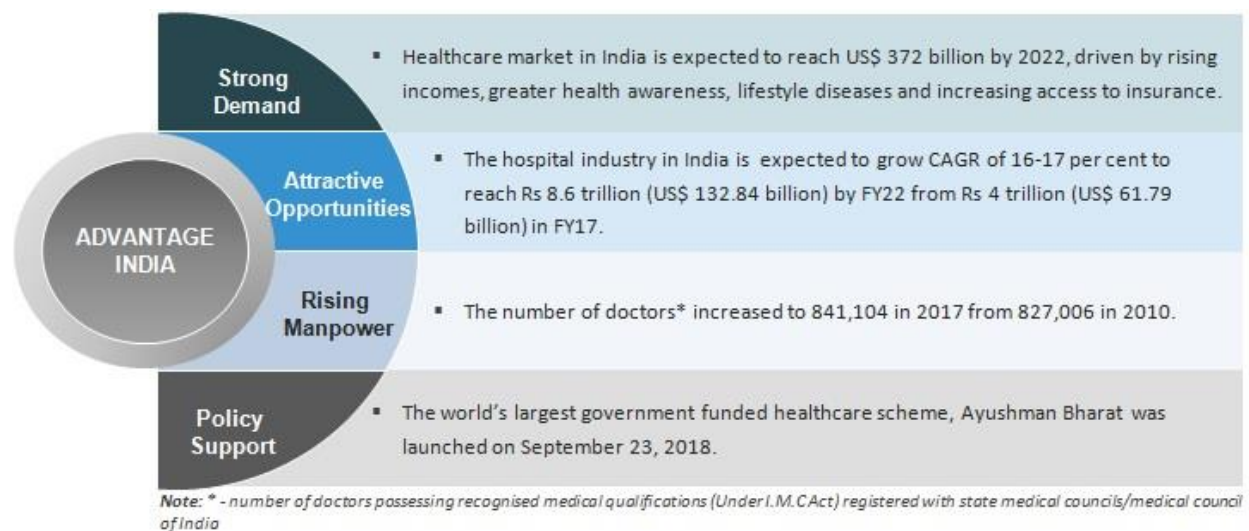


Fig 1: Healthcare industry in India

COMPANY PROFILE

Group Pharma is an advanced pharmaceutical company having 38 years of expertise in dental as well as oral care.

At Group Pharma we create, assembling, market and fare a wide scope of oral consideration items that helps shoppers with explicit dental and oral conditions consolidating recently inquired about fixings just as nature's decency.

Our facilities in addition to being ISO 9001:2015, ISO:22716 and ISO:13485 certified are WHO cGMP and PIC/S compliant. This allows us to constantly deliver the finest products to the dental fraternity as well as consumers as well as also manufactures for large Indian and multinational companies.

We constantly keep upgrading technologically and also streamline our operations to ensure best industry practices. We are dedicated to over 800 employees, their families and also to our stakeholders. We are driven by our purpose of delivering 'the best' for good oral health, well-being of the society at large and the growth of our people. Group Pharma has three facilities across India, manufacturing multiple dosage forms which adheres to the highest standards. The facility at Tarapur nearby Mumbai is specially designed and equipped to manufacture moisture sensitive tablets requiring strict humidity control. Group Pharma was the first company in India to manufacture denture cleansing tablets. Two of our modern manufacturing facilities at Malur in Karnataka (43 km from Bengaluru) are built in according to the WHO guidelines. These facilities have been set up for the manufacture of toothpaste, gels, creams, syrups and mouthwash.

The infrastructure, protocol, documentation and procedures at all our companies comply with WHO's current Good Manufacturing Practices (cGMP). Our operations include exporting products to over 40 countries.

Our facilities are approved by leading Indian and multinational companies for whom we do contract manufacturing for their domestic as well as international markets.

The core of any great business action lies in its Marketing and Distribution quality. Our consistent development can be authorize because of our ability here. We have a submitted and skillful group of 300 Medical Representatives guided by more than 70 Field Managers who legitimately meet more than 60,000 Doctors each month. Our Product and Brand Management group guides them with the required showcasing and preparing inputs. Our dispersion system traverses 200,000 Retailers overhauled by 16 C&F Agents and 600 Stockists making our essence unequivocally felt in many states in India.

DATA ANALYSIS & PRESENTATION

Methodologies:

A poll was appropriated to 200 dental specialists working in New Delhi. The polls comprised of open-finished inquiries concerning pain relieving use in dentistry and were passed out straightforwardly to dental specialists. They were broke down and reactions to each question communicated as total frequencies. The cases and the analgesics recommended by dental specialists for each case were controlled by the illustrative measurements technique; "recurrence".

Study Design: Quantitative Based Descriptive Study

Sampling Method: Purposive Sampling

Sample Population: Pharmacists, Dentist (New Delhi)

Source: Field Analysis

Sample Size: 200 Doctors

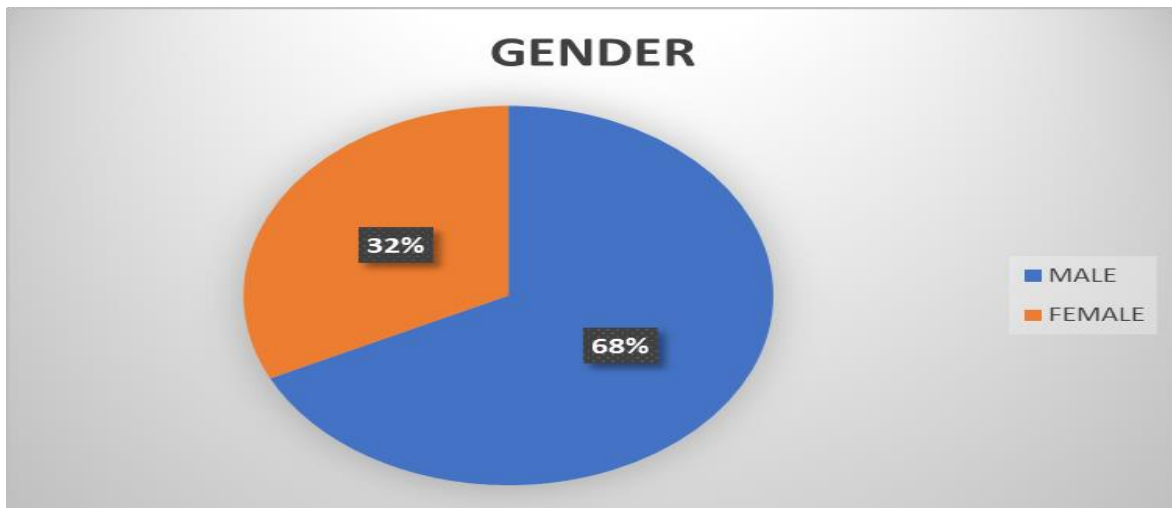
Data Collection: Primary data through Semi-Structured Questionnaire and secondary data through Journals, books, Internet etc.

Data Analysis: Microsoft Excel

QUESTIONARIE ANALYSIS

1. Gender Perception

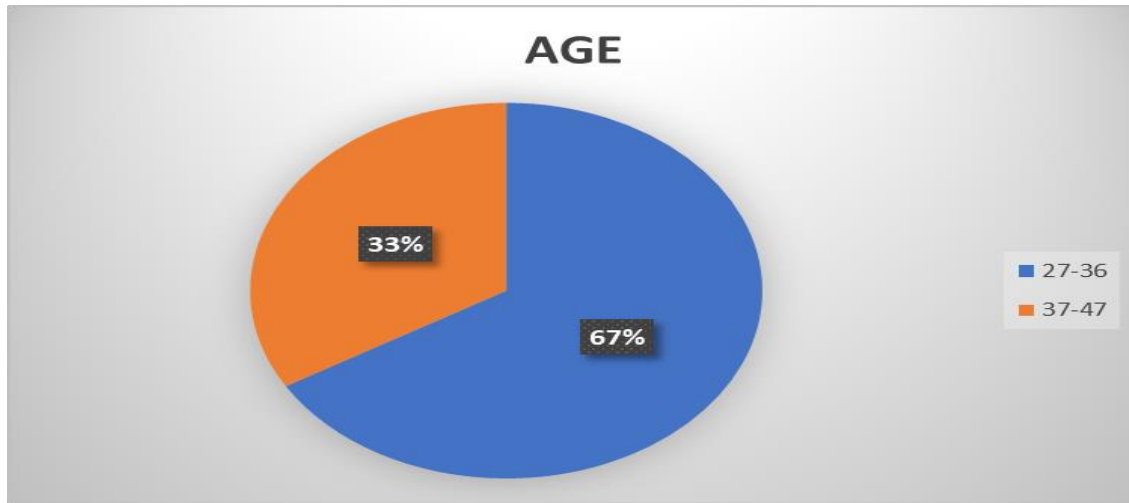
On the basis of gender perception of the dentist filling questionnaire the study shows 68% was male and 32% was found to be female.



Graph 1: The graph representing the gender size.

2. Age Perception

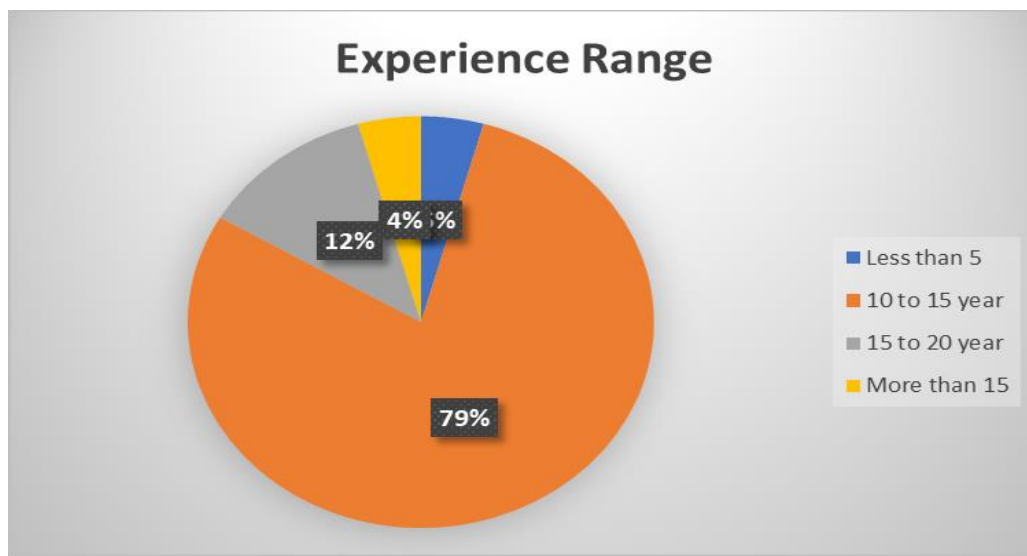
On the basis of age perception of doctors from whom the questionnaire where answered.



Graph 2: The graph representing age pattern

3. Experience Range

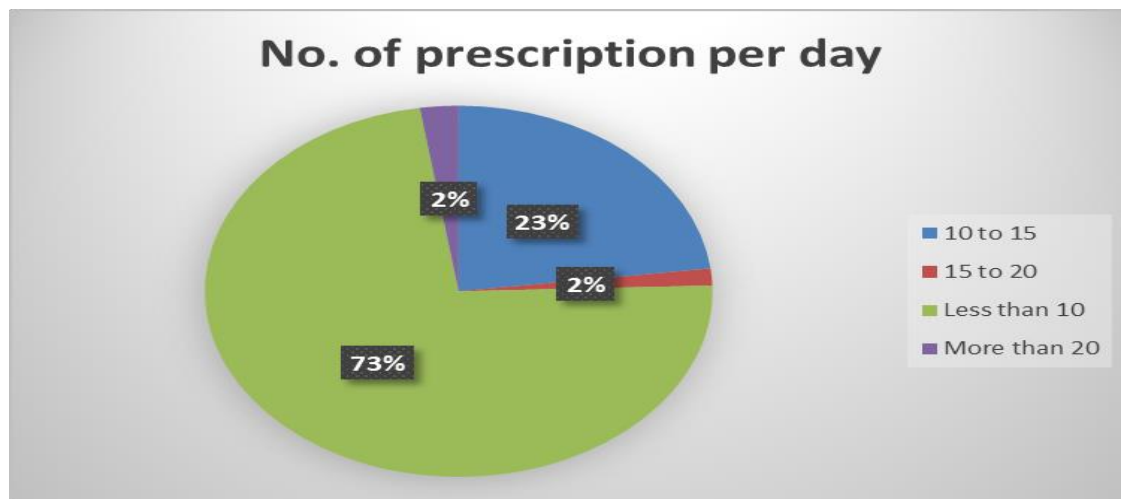
On the basis of the experience perception of the doctors answering the questionnaire.



Graph 3 : The graph representing the experience range

4. What are the total no of prescriptions per day?

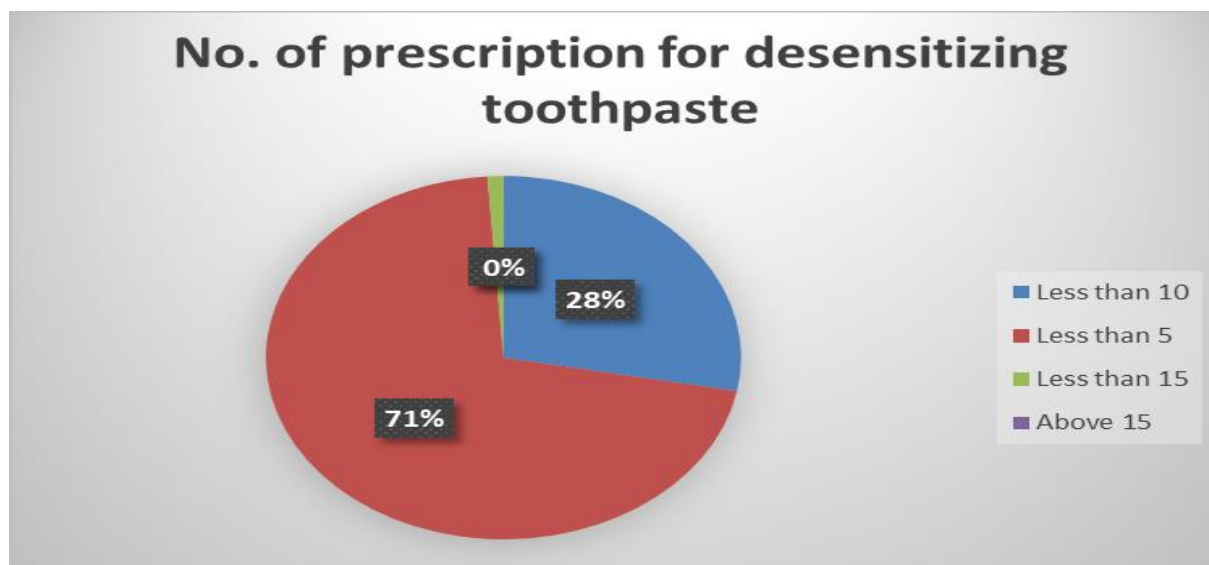
On the basis of perception of the total no. of prescription generated per day.



Graph 3: The graph representing no. of prescription per day

5. What are the total no of prescription do you prescribe as desensitizing toothpaste per day?

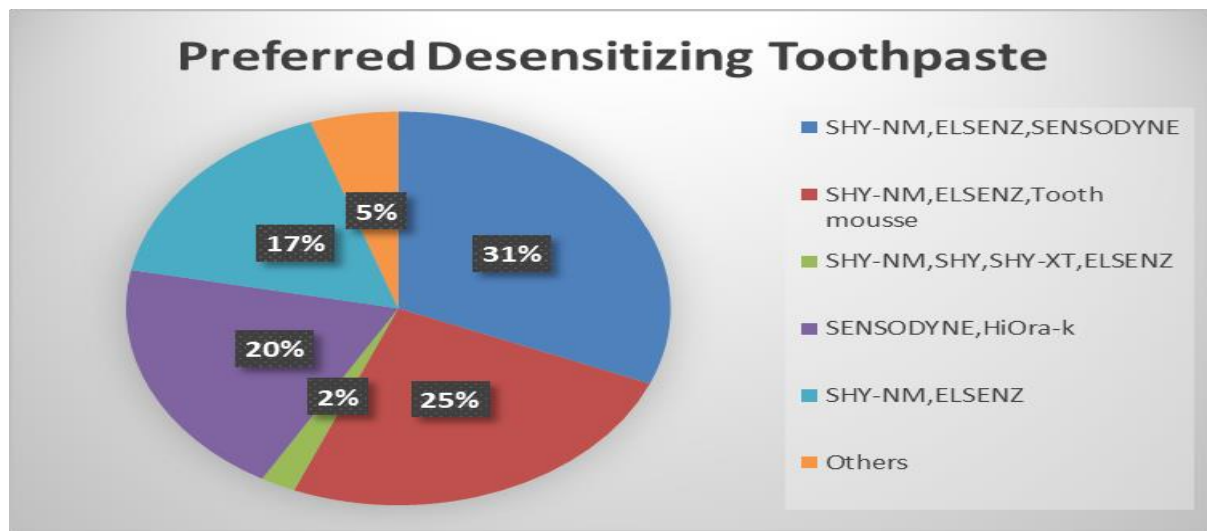
On the basis of perception of the no. of prescription generated for desensitizing toothpaste perday.



Graph 4: The graph representing no. of desensitizing paste prescribed per day.

6. Which are the preferred dental desensitizing toothpaste?

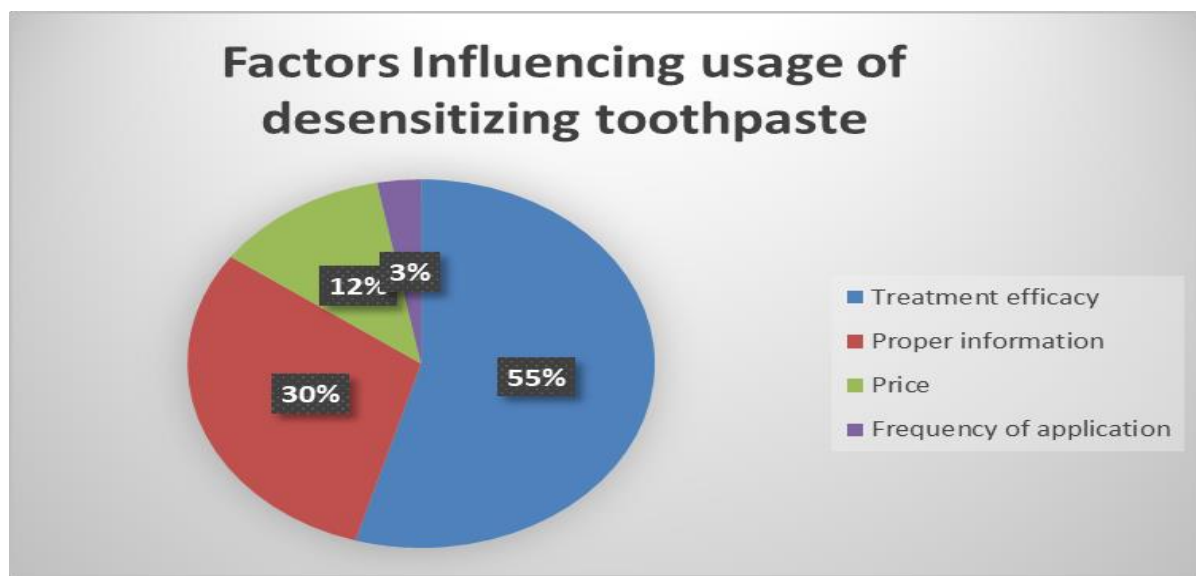
On the basis of perception of the desensitizing toothpaste being used.



Graph 5: The graph representing the preferred desensitizing toothpaste.

7. What are the factor influencing the usage of bioactive desensitizing toothpaste?

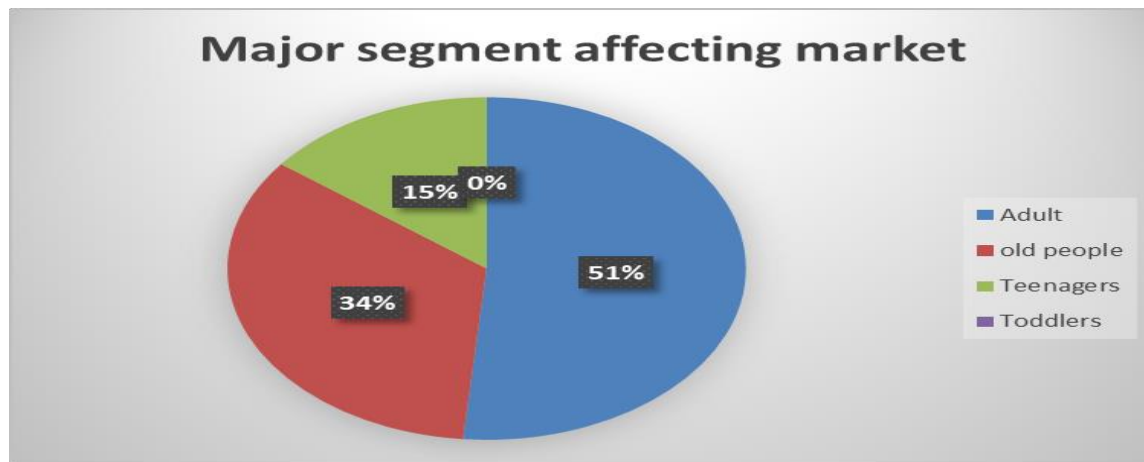
On the basis of the perception of the factors affecting usage of bioactive desensitizing toothpaste.



Graph 6: The graph representing the factors affecting the usage of bioactive toothpaste.

8. Which is the major segment of population affecting the market of bioactive glass based desensitizing product?

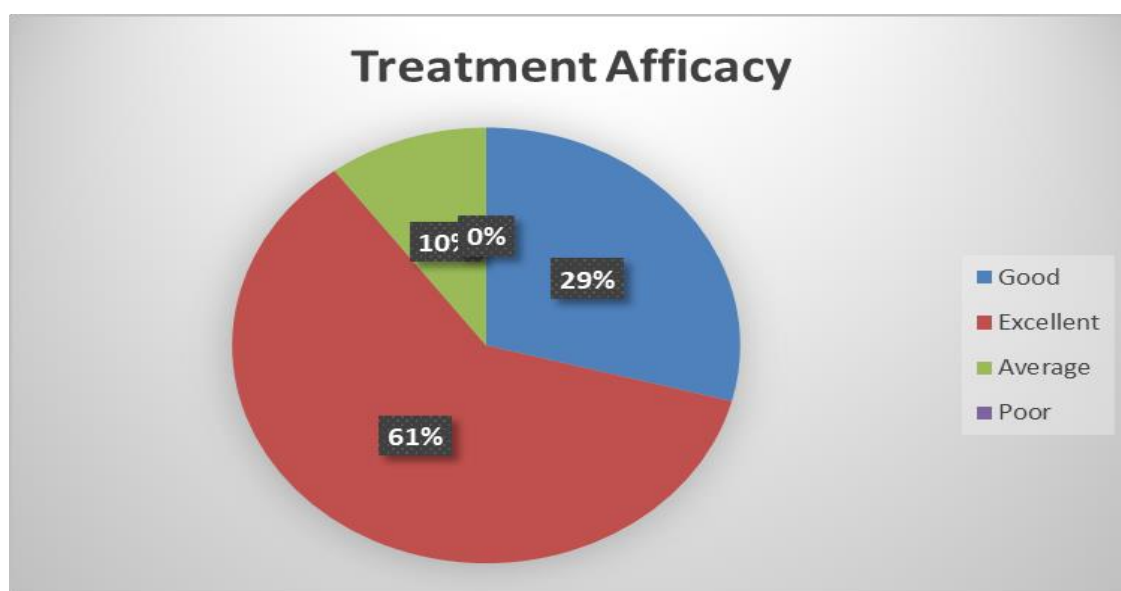
On the basis of the perception of the segment of the population affecting the market of bioactive glass based desensitizing product.



Graph 7: The graph representing the major segment affecting market.

9. What are the treatment efficacy of SHY-NM and Elsenz as a bioactive desensitizing toothpaste?

On the basis of the perception of treatment efficacy of SHY-NM and Elsenz as a bioactive desensitizing toothpaste.



Graph 8: The graph representing treatment efficacy SHY-NM and Elsenz

CONCLUSION

- The study finally concludes that less than 5 prescription were generated as stated by 71% doctors who answered the questionnaire.
- According to study most preferred desensitizing toothpaste is SHY-NM,ELSENZ and Tooth mousse.
- According to study 55% doctors stated that most influencing factors in choosing desensitizing toothpaste is Treatment Efficacy.
- According to study 34% doctors stated that major segment of population affecting the market is elder age of people.

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