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RESEARCH ARTICLE

SURVEY ON AWARENESS ABOUT ORTHODONTIC TREATMENT IN GENERAL POPULATION OF NAGPUR DISTRICT.

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Key words:-

Malocclusion, Awareness, questionnaire survey.

Abstract

Context: Malocclusion is not a disease in itself but a variation in the arrangement of teeth, morphology of jaws, face and cranium. Awareness is the state or ability to perceive, to feel or to be conscious. Awareness forms the basis for planning oral health which is an inseparable part of general health.

Aims & Objectives: - To assess the awareness of orthodontic problems & its treatment in Nagpur District.

Materials & Methods: A cross sectional, observational (non-experimental) descriptive questionnaire survey was conducted in urban population of Nagpur District. Two age groups were studied i.e. adolescence and adult. According to the prestructured questionnaire (15 objective questions) data was formulated for assessment of knowledge and awareness of orthodontic treatment.

Results: There were no statistically significant differences in general information and awareness about the proper age of orthodontic treatment.

Conclusion: Awareness of malocclusion and the need to make corrections has increasingly become prevalent among our population. As growing public interest in oral health increased, the demand for orthodontic treatment also became more noticeable in dental practices.

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Introduction:-

Oral health can affect general health & well being of childhood through development. Malocclusion is not a disease in itself but a variation in the arrangement of teeth, morphology of jaws, face and cranium. Desire and need for orthodontic treatment is influenced by awareness, socioeconomic factors, and availability of the experts, ethnic trends and values. Awareness is the state or ability to perceive, to feel or to be conscious. Awareness forms the basis for planning oral health which is an inseparable part of general health. With the availability of meristic criteria and

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evolutions of indices of malocclusion, information on malocclusion and treatment needs is now being made available from all around the world.

Aims & Objectives:-

There is a paucity of data about the awareness of orthodontic treatment among school children in the Indian context. Therefore the rationale for this study was to assess the awareness of children towards orthodontic problems & its treatment. In this context, the objective of the present epidemiological survey was to assess the awareness of orthodontic problems & its treatment in Nagpur District.

Materials & Methods:-

A cross sectional, observational (non- experimental) descriptive questionnaire survey was conducted in urban population of Nagpur District. The sample size of 2000 people represented the rural population of Nagpur District. The sample was constituted from patients reporting to college OPD, patients from satellite clinics and students from school and college. In this modern era, though general population is aware of a dentist yet many people are unaware of Orthodontics as a speciality dealing with misalignment of teeth. Even if people are aware of orthodontics they hesitate to seek the treatment because of high cost of treatment, long duration of treatment, esthetic concern about placement of orthodontic appliance, extraction of some teeth if necessary. This survey has been formulated to evaluate the concern of general population in seeking orthodontic treatment.

Two age groups were studied i.e. adolescence and adult. People in age group 13-19 years constituted adolescent group & and People in age group of 20-40 years constituted adult group. Children who obtained written informed consent from parents to participate in the study were included. Exclusion criteria used were- history of previous orthodontic treatment, rampant caries, multiple missing teeth, mutilated malocclusion and other craniofacial anomalies like cleft lip and palate, facial hemiatropy, cleidocranial dysplasia etc. An oral health lecture was given to all the children in the school to create awareness about Dental health and Orthodontic treatment.

Statistical data was analysed and categorised according to age and gender. Responses of the people were recorded on a 3 point Likert scale from poor, fair and good. According to the prestructured questionnaire (15 objective questions) data was formulated for assessment of knowledge and awareness of orthodontic treatment.

Questions included were:-

- Q.1) Have you ever visited a dentist?
a) Yes b) No
- Q.2) Have you heard of an orthodontist?
a) Yes b) No
- Q.3) Are you aware that an Orthodontist can bring your teeth in proper position?
a) Yes b) No
- Q.4) Did you notice improper positioning of your teeth by yourself or was it told to you by society/others?
a) Yourself b) Society/others.
- Q.5) Have you ever noticed people with improperly positioned teeth?
a) Yes b) No
- Q.6) Do you think that teeth should be properly positioned for a better facial appearance?
a) Yes b) No
- Q.7) Do you know at what age orthodontic treatment should be started?
a) At school b) Junior college
- Q.8) Do you know the side effects of improperly positioned teeth?
a) Yes b) No
- Q.9) Do you know that taking proper orthodontic treatment at an early age would improve your facial appearance?
a) Yes b) No
- Q.10) Do you know the cost of orthodontic treatments?
a) Yes b) No
- Q.11) Do you know how much time, orthodontic treatment takes?
a) <1 year b) 2-3 year
- Q.12) Are you aware that few teeth may have to be removed for proper positioning of irregular teeth?
a) Yes b) No
- Q.13) Do you know different types of habits that can cause improper positioning of teeth?

a) Yes b) No

Q.14) Do you know about orthodontic braces and its types?

a) Metallic Braces , Ceramic Braces

b) Lingual Braces , invisalign braces

Q.15) Are you aware that the improperly positioned teeth can be corrected at the age of 35-40 yrs also?

a) Yes b) No

Statistical analysis:-

Data was coded and entered into excel sheet. To maintain the data quality (validity) rechecking and cross checking was done during data entry phase. Later, data was transferred into SPSS windows version 16, where cleaning, coding, recording, crosschecking, processing and analysis of the data were done. Simple

Descriptive statistics was applied to describe the study variables. The t- test procedure was used to compare means for two groups.

Results:-

There were no statistically significant differences in general information and awareness about the proper age of orthodontic treatment. Gender & Age distribution of the sample participating in the study is represented in Tables 1 and 2.

Table 1:- Distribution of sample size

Gender	Frequency	Percentage
Female	1010	50.5 %
Male	990	49.5 %
Total	2000	100 %

Table 2:- Age wise distribution.

Age	Frequency	Percentage
15-24	650	32.5
25-34	800	40
35-44	440	22
45-54	110	5.5
Total	2000	100

Table 3:- Response to Q1 –Q6.

	Q1		Q2		Q3		Q4		Q5		Q6	
	a	b	a	b	a	b	a	b	a	b	a	b
Frequency	550	1450	550	1450	660	1340	550	1450	700	1300	790	1210
Percent	27.5	72.5	27.5	72.5	33	67	27.5	72.5	35	65	39.5	60.5

Table 4:- Response to Q7 – Q12

	Q7		Q8		Q9		Q10		Q11		Q12	
	a	b	a	b	a	b	a	b	a	b	a	b
Frequency	1570	430	700	1300	1010	990	230	1770	320	1680	230	1770
Percent	78.5	21.5	35	65	50.5	49.5	11.5	88.5	16	84	11.5	88.5

Table 5:- Response to Q13 – Q15.

	Q13		Q14		Q15	
	a	b	a	b	a	b
Frequency	1450	550	1210	790	700	1300
Percent	72.5	27.5	60.5	39.5	35	65

Table 6:- Gender wise evaluation of response

		GENDER		Total
		Female	Male	
Evaluation	FAIR	240	310	550
	GOOD	640	580	1220
	POOR	130	100	230
Total		1010	990	2000

Chi Square=1.55 p=0.459

Table 7:- Age wise evaluation of response.

		AGE				Total
		15-24	25-34	35-44	45-54	
Evaluation	GOOD	370	500	240	110	1220
	POOR	90	80	60	00	230
	FAIR	190	220	140	00	550
Total		650	800	440	110	2000

Chi Square=8.55 p=0.2

According to their survey answers we found out that Majority of the sample included in this study had never visited a dentist before (Q1) neither the orthodontist (Q2) & his area of specialization (Q3). These people were told about their mal-alignment of teeth by other people of the society (Q4) & were not yet aware of the functioning of the orthodontist (Q6). These subjects were not aware of the side effects of improperly positioned teeth (Q8). They believed that this kind of treatment should be started at an early age (Q7) in order to improve their facial appearance (Q9), even though they were not aware about the cost of such treatment (Q10). They showed awareness that such treatment could take more than 2 years (Q11), but were not aware that few sound teeth had to be sacrificed for the same (Q12). The survey revealed that they had a knowledge about various habits causing malocclusion (Q13), metallic & teeth colored ceramic braces (Q14) but were not about adult orthodontic treatments (Q15). (Table 3-7)

Discussion:-

“Why people do not seek orthodontic treatment?” is the driving question among all starting orthodontist & a driving force for this study. The answer to this question would vary from, “Lack of Awareness, Metal display, Expensive treatment, Duration of treatment or Extraction of sound teeth”. The exact satisfactory response to this question was evaluated through this study.

Globally, there has been an increase in awareness of Orthodontics as a dental specialty in children as well as adults^[1-2]. The level of dental health knowledge, positive dental health attitude, and dental health behavior are interlinked and associated with the level of education and income as demonstrated by various studies^[3-8]. Attitudes and perceptions towards dental appearance differ among populations and among individuals^[9, 10].

Self-awareness is a dynamic process, not a static phenomenon^[11]. Although; imparting oral health education begins from the footstep of awareness, evaluation of its implementation is an important indicator of the success of the education imparted^[12]. Age-related changes in malocclusion concerns ideally should be studied longitudinally because with the progress in age, the awareness to nature & complexity of malocclusion increases.

In a similar study by Siddegowda¹³, High school children showed a higher level of awareness about orthodontic treatment when compared to middle school children. Urban children had shown more positive attitude like visiting a dentist in a study done by Singh *et al.* in 2012.^[14] Considering the influence of age on awareness of orthodontics, it was found that it increased significantly. Similar findings were seen in a study conducted by Friedman *et al.*, in 1976.^[14] The aim of orthodontic procedure is to improve dental occlusion, which results in better smile and good functioning in harmony with the face.^[13] Overall, it has been seen as an increase in awareness of orthodontic treatments as a dental specialty among children as well as adults.^[1]

Conclusion:-

Enhancing appearance and improving psychosocial status have been identified as important motivating factors behind the decision to initiate orthodontic treatment. This survey created awareness of orthodontic treatment among

various patients & children's. Awareness of malocclusion and the need to make corrections has increasingly become prevalent among our population. As growing public interest in oral health increased, the demand for orthodontic treatment also became more noticeable in dental practices.

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