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ORIGINAL RESEARCH

Assessment of knowledge and preference of prosthodontic and orthodontic treatment options for dental anomalies among general practitioners

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Abstract
Background: One of the most common etiologies for the development of dental caries, fluorosis, temporomandibular disorders and gingival diseases is malocclusion. The present study was conducted to assess knowledge and preference of prosthodontic and orthodontic treatment options for dental anomalies among general practitioners.
Materials & Methods: 120 general dental practitioners of both genders were included and a questionnaire was prepared and distributed to all and response was recorded. It comprised of questions of knowledge about principles and practice of orthodontic and prosthodontic treatment
Results: Out of 120 subjects, males were 72 and females were 48. The mean knowledge score in males was 8.32 and in females was 10.2. The difference was non- significant (P> 0.05). The mean attitude score in males was 5.61 and in females was 6.74. The difference was non- significant (P> 0.05). The total knowledge and attitude score in males was 13.93 and in females was 16.94. The difference was significant (P< 0.05).
Conclusion: There was sufficient knowledge and attitude among general dental practitioners about prosthodontic and orthodontic treatment options for dental anomalies.
Key words: Oral health, orthodontic, prosthodontic treatment

Introduction

Oral health generally has the effect on the general health of the individual and ultimately affects well-being, education, and development.[1] In many countries, parents and their childrens are not aware of the basic causes, incidence and prevention of the common oral diseases.[2] One of the most common etiologies for the development of dental caries, fluorosis, temporomandibular disorders and gingival diseases is malocclusion. Tooth malposition may also lead to difficulty in functional movements of the mandible, difficulty in mastication, swallowing, speech, increased susceptibility to trauma and periodontal problems.[3]
It has always been a challenge for prosthodontists and orthodontists to treat a young patient with anterior spaces and/or presence of peg shaped lateral incisor. To resolve this problem,

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generally speaking there are two principal approaches. First approach aims at maintenance of spaces for future auto transplantation or restoring with prosthodontic approach if extraction is planned.[4] The alternative way is to close the spaces orthodontically and then restoration of peg lateral by prosthetic means i.e. alteration of shape to simulate central incisor. Each of these approaches has its own advantages and disadvantages and the prevailing conditions also influence the type of treatment plan or approach.[5] The present study was conducted to assess knowledge and preference of prosthodontic and orthodontic treatment options for dental anomalies among general practitioners.

Materials & methods

This study comprised of 120 general dental practitioners of both genders. All agreed to participate in the study. Inclusion criteria were general dental practitioner with bachelor degree and age between 30 and 80 years.

Data such as name, age, gender etc. was recorded. Information about the study was given to all participants through personal contact, phone as well as through email. A questionnaire was prepared and distributed to all and response was recorded. It comprised of questions of knowledge about principles and practice of orthodontic and prosthodontic treatment (Yes/No type questions): 1. Can orthodontic treatment be started at any age? 2. Can malocclusions be treated during mixed dentition stage? 3. Do you consider that well-aligned teeth are important for overall facial appearance? 4. Do you aware of functional therapy? 5. Do you know that functional appliance gives a better result when advised during pre-pubertal growth spurt period? 6. Do you consider skeletal malocclusions when patients report to you with a complaint of incompetent lips and proclined teeth? 7. Are you aware that few teeth may have to be removed for aligning irregular teeth? 8. Is orthodontic treatment always requires extraction? (N) 9. Do habits like mouth breathing or thumb-sucking has an effect on the front teeth alignment? 10. Do you believe that straightening the teeth makes better smile, helps in mastication, better oral hygiene, easier to speak, healthy lifestyle? 11. Do you know that temporomandibular joint disorders can be cured by orthodontic therapy? 12. Do you aware of the fact that mini screws can replace molars for anchorage? 13. Should retainers be worn after fixed appliance therapy? 14. Do you think there is role of replacemet of missing tooth? 15. Can it be corrected with correction of tooth size? 16. Can it be corrected with correction of occlusion? Knowledge and preference of prosthodontic and orthodontic treatment options was recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

Results

Table I Distribution of subjects

Total- 120		
Gender	**Male**	**Female**
Number	72	48

Table I shows that out of 120 subjects, males were 72 and females were 48.

Table II Scores of the knowledge

Gender	Mean	P value
Male	8.32	0.47
Female	10.2	

Table II shows that mean knowledge score in males was 8.32 and in females was 10.2. The difference was non- significant (P> 0.05).

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Table III Score of attitudes

Gender	Mean	P value
Male	5.61	0.61
Female	6.74	

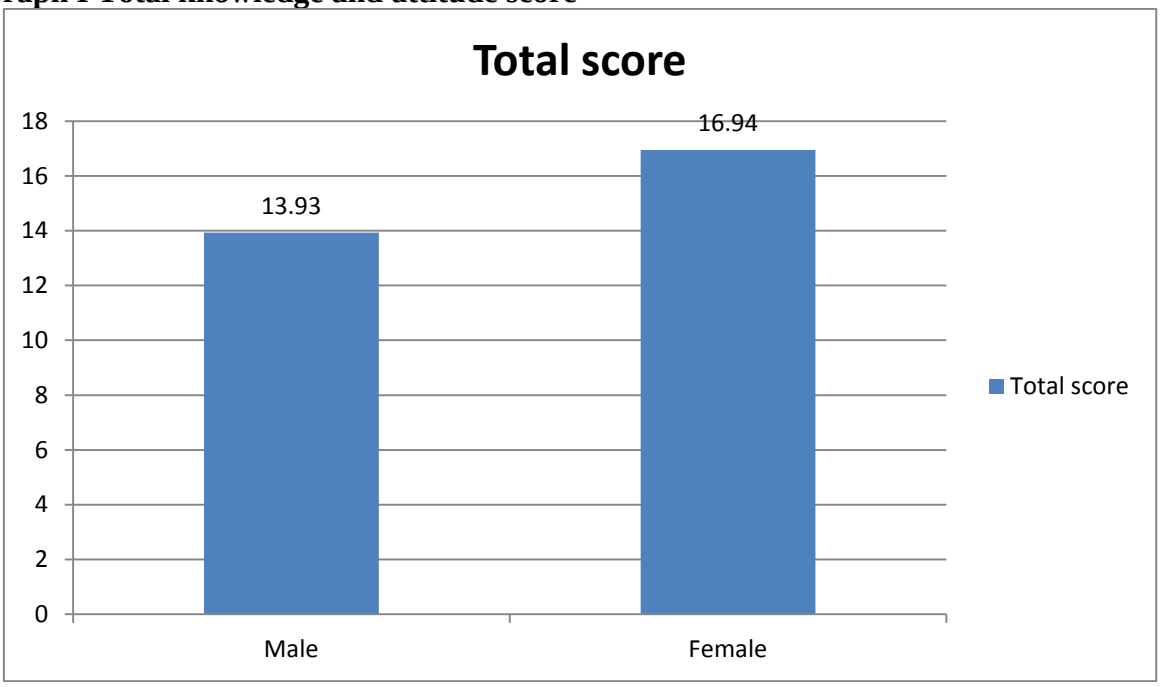
Table III shows that mean attitude score in males was 5.61 and in females was 6.74. The difference was non- significant (P> 0.05).

Table IV Total knowledge and attitude score

Gender	Total score	P value
Male	13.93	0.05
Female	16.94	

Table IV, graph I shows that total knowledge and attitude score in males was 13.93 and in females was 16.94. The difference was significant (P< 0.05).

Graph I Total knowledge and attitude score



Discussion

Malocclusion means bad bite, and it consists of a spectrum of deviation from the normal or ideal occlusion to severe anomalies. Malocclusion is defined as an "occlusion in which there is a molar relationship between the arches in any of the planes of spaces or in which there are anomalies in tooth position beyond the normal limits."[6] Malocclusion usually creates feeling of shame for their facial appearance and may also give feeling of shy in their society.[7] The outcomes of the orthodontic treatment are prevention of tissue damage, improvement in physical function and esthetic.[8] The other major benefits are improving quality of life, development of self-confidence; and physical, psychological and social changes.[9] The present study was conducted to assess knowledge and preference of prosthodontic and orthodontic treatment options for dental anomalies among general practitioners.

We found that out of 120 subjects, males were 72 and females were 48. Sastri et al[10] did comparative analysis in general dental practitioners and other specialties on 78 dentists, which was divided into two groups. Group I consisted of 46 general dental practitioners and Group II consisted of 32 non-orthodontic specialties. The study was carried out with the help of 21 questionnaires, which consisted of 13 questions of orthodontic knowledge and 08

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questions about the attitude toward orthodontic practice. The comparative analysis showed highly significant difference of knowledge and attitude score between general dental practitioners and non-orthodontic specialties. Also the comparison was made between male and female practitioners, who showed more scores in case of male practitioners; but the difference was not significant statistically.

We found that mean knowledge score in males was 8.32 and in females was 10.2. Gupta et al[11] conduct a survey using questionnaire containing 16 questions which were mailed and distributed to random sample of 1000 general dental surgeons who voluntarily took part in the study. Most important goal for the treatment according to 91% responders was improvement in esthetics. 91% of responders believed that combination of both orthodontic and prosthodontic approach was best to achieve the perfect treatment outcome. Pre restorative orthodontic treatment is best for management of peg lateral incisor. Multidisciplinary approach towards the complex dental treatment is always better for the best treatment outcome. Referral system is also developed by such means.

We found that mean attitude score in males was 5.61 and in females was 6.74. We found that total knowledge and attitude score in males was 13.93 and in females was 16.94. Legislation regulating dental practice permits general dentists to perform a broad range of complex procedures that are also performed by dental specialists.[12] A general dentist's decision to perform treatment or to refer a patient to a specialist depends on the competence of the general dentist, patients' expectation, the available specialists in the same dental office, the accessibility of specialized dental treatment in the region, the time involved, cost of treatment, motivation of the patient, etc.[13]

Conclusion

Authors found that there was sufficient knowledge and attitude among general dental practitioners about prosthodontic and orthodontic treatment options for dental anomalies.

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