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Research Article

**AN ASSESSMENT OF THE PARTIAL EDENTULOUS OCCURRENCE PATTERNS AMONG FEMALE PATIENTS WITH RESPECT TO AGE & KENNEDY'S CLASSIFICATION**

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**Abstract:**

**Objective:** The aim of this research was to determine the frequency of partial edentulous patterns among female cases presenting themselves at the secondary healthcare facility.

**Methods:** We carried out this research at Services Hospital, Lahore from September 2017 to October 2018. Females were recorded for their partial edentulism through Kennedy's Classification after the application of Applegate's rules. The rules were implemented by visually examining the site. After fulfilling the research criterion, a total of 750 patients were included in the research. All the patients were female and the age of the patients was above fifteen years. These patients were affected with partially edentulous in one or both the jaws. We did not include any patient with complete edentulous, only missing mandibular and maxillary third molars and having any physical or mental disability. We also took a verbal consent of every patient before clinical assessment. Visual examination was carried out to note down all the partial edentulism patterns. The survey was a visual examination which was carried out by using a dental chair and mouth mirror to assess the area and type of missing teeth in order to determine Kennedy's classification.

**Results:** A total of 5031 patients were examined for the occurrence of partial edentulism. Patients were observed for their age bracket, number, percentage and Kennedy's Classification. Research outcomes report that most repeated Class for partial edentulism was Class – III in the maxilla; whereas, least involved Class was Class – IV. The dental arch tendency in Class – I & II increased with an increase in the age; whereas, in mandible and maxilla both the Class – III & IV decreased.

**Conclusion:** Most common Class was Kennedy's Class – III in both the dental arches of RPD affected females. This research was specifically targeted on female patients which highlights the dentition loss as a prime issue of oral health. Gender prominence was difficult to assess as we failed to prove its involvement.

**Keywords:** Kennedy's Class, Partial Edentulous, Applegate Rule, Mandible and Maxilla.

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**INTRODUCTION:**

Better and improved oral health depends on access to dental care facilities. Teeth perform a key role in the stomatognathic system of animal and the human body. Tooth loss results in speech disabilities, biting evoking mastication difficulty, chewing and degraded aesthetics. Better oral health reflects improved healthcare facilities and vice versa. It may reflect the effective dentistry facilities of the government or the neglected use of dentistry facilities by the general public [1]. Efforts have been made to educate, flourish and take preventive measures about the dentistry among people resulting in the form of better oral health outcomes. Natural teeth retention has been secured by such efforts at appropriate levels. There is a visible reduction in the complete loss of dentures over the passage of time with the advancement and provision of dentistry facilities. The number of removable partial dentures have also been increased [2].

The role of women especially being a mother is very much important for the flourishing of the overall society. Women face the scarcity of healthcare facilities in third world countries because of access and cultural boundaries. Unavailability of transport and non-availability of dentistry facilities were the most common hindrances in the improved dentistry state among females in order to pay frequent visits to the healthcare facilities for improved oral health. Females suffered in terms of endodontic treatment due to low socioeconomic status, dependency on others, homemade remedies, ritual therapies and herbal management of the disease as the first line of management option. It is logical to categorize partially edentulous arches with respect to similar features, attributes, characteristics, traits and merits. We can perform a longitudinal comparison through classification for various RPD classes. Various classification methods are also used to categorize and educate about the RPDs such as Beckett, Swenson, Godfrey, Friedman etc. [3]. Presently, the most widely recognized and acceptable classification system is Kennedy's Classification.

The basic theme of the partially edentulous arches classification is to indicate teeth combinations to the edentulous ridges for the facilitation of technicians, students and dental colleague's communication [4, 5]. Classification also supports longitudinal RPD class comparison for the determination of RPD teaching model which is consistent with the RPD used frequencies [6].

The aim of this research was to determine the frequency of partial edentulous patterns among female cases presenting themselves at the secondary healthcare facility.

**METHODOLOGY:**

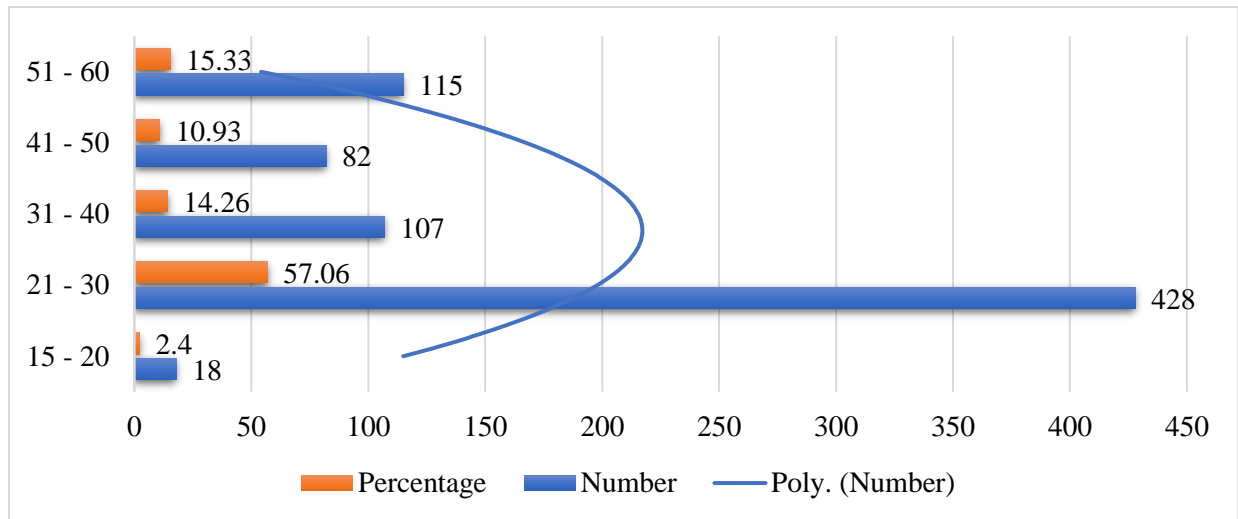
We carried out this research at Services Hospital, Lahore from September 2017 to October 2018. Females were recorded for their partial edentulism through Kennedy's Classification after the application of Applegate's rules. The rules were implemented by visually examining the site. Research outcomes report that most repeated Class for partial edentulism was Class – III in the maxilla; whereas, least involved Class was Class – IV. The dental arch tendency in Class – I & II increased with an increase in the age; whereas, in mandible and maxilla both the Class – III & IV decreased. After fulfilling the research criterion, a total of 750 patients were included in the research. All the patients were female and the age of the patients was above fifteen years. These patients were affected with partially edentulous in one or both the jaws. We did not include any patient with complete edentulous, only missing mandibular and maxillary third molars and having any physical or mental disability. We divided the selected patients into five different age categories as reflected in Table – I. We also took a verbal consent of every patient before clinical assessment. Visual examination was carried out to note down all the partial edentulism patterns. The survey was a visual examination which was carried out by using a dental chair and mouth mirror to assess the area and type of missing teeth in order to determine Kennedy's classification. We used Kennedy's classification along with Applegate's modified rules to assess the partially edentulous arches patterns. In order to remove complexity, we did not include modification areas. Every detail was recorded on a Proforma. Researcher carried out descriptive statistics analysis through SPSS software.

**RESULTS:**

A total of 5031 patients were examined for the occurrence of partial edentulism. Patients were observed for their age bracket, number, percentage and Kennedy's Classification. Research outcomes report that most repeated Class for partial edentulism was Class – III in the maxilla; whereas, least involved Class was Class – IV. The dental arch tendency in Class – I & II increased with an increase in the age; whereas, in mandible and maxilla both the Class – III & IV decreased. Detailed outcomes are given in tabular and graphical representation.

**Table – I:** Age Distribution

Group	Age Bracket	Number	Percentage
Group – I	15 – 20	18	2.4
Group – II	21 – 30	428	57.06
Group – III	31 – 40	107	14.26
Group – IV	41 – 50	82	10.93
Group – V	51 – 60	115	15.33

**Table – II:** Kennedys Class Distribution

Kennedys Class	Number	Percentage
Class – I	56	7.46
Class – II	27	3.6
Class – III	297	39.6
Class – IV	25	14

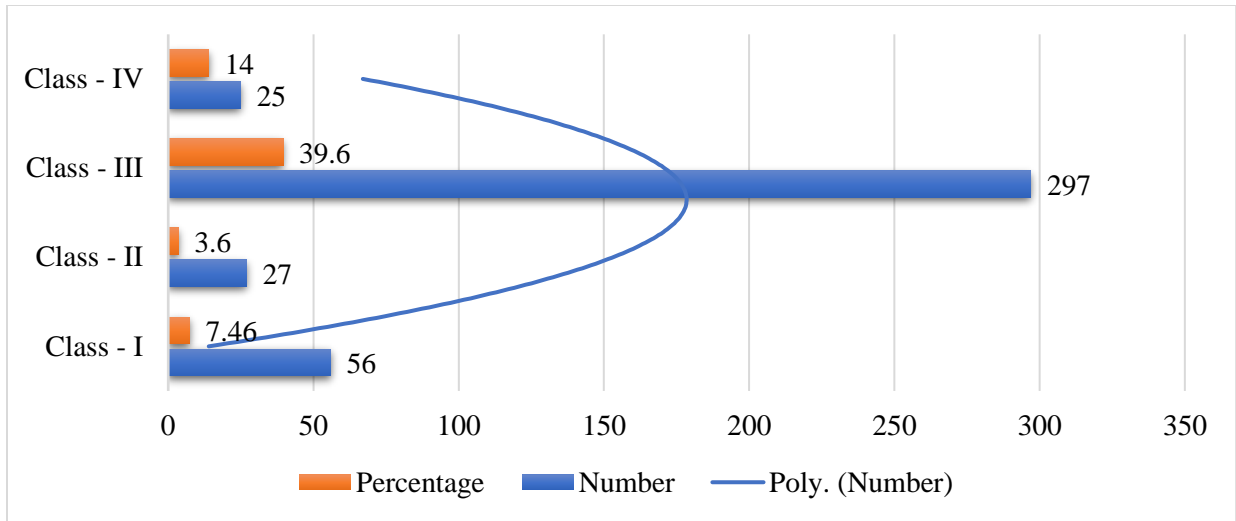


Table – III: Distribution of Class (I to IV)

Kennedys Class	Number	Percentage
Class – I	63	8.4
Class – II	40	5.33
Class – III	237	31.6
Class – IV	5	0.66

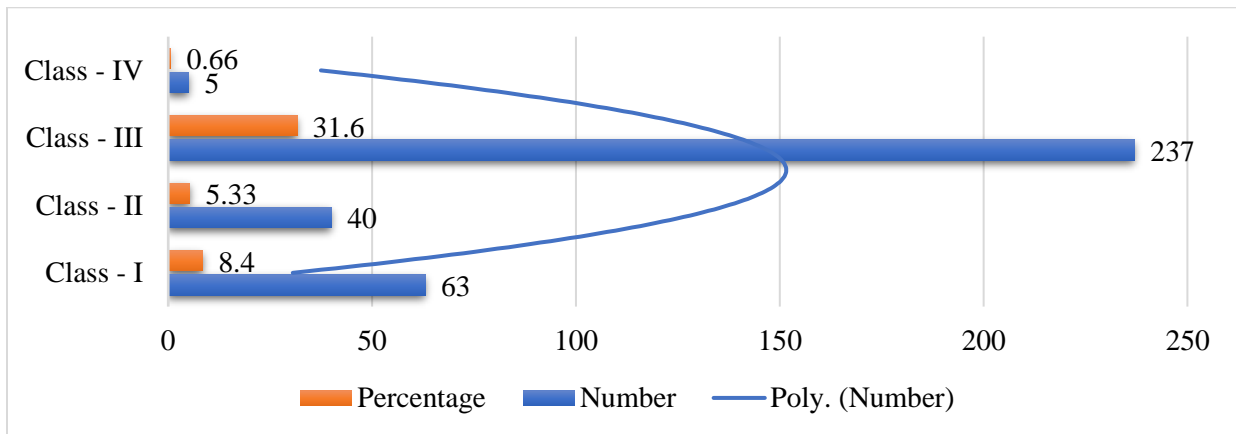
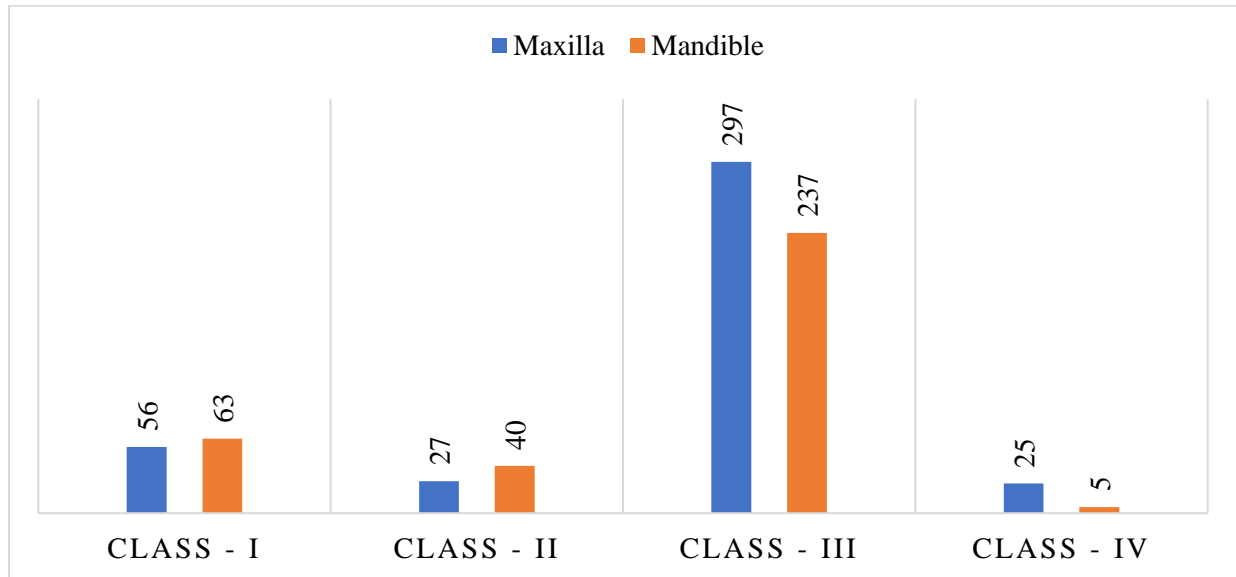


Table – IV: Maxilla Versus Mandible

Arch	Maxilla	Mandible	Total	Percentage
Class – I	56	63	119	15.86
Class – II	27	40	67	8.93
Class – III	297	237	534	71.2
Class – IV	25	5	30	4
Total	405	345	750	100



### DISCUSSION:

As we know, this is the only research of its nature conducted at the local level to report on Kennedy's classes prevalence about the partially edentulous among females. There is no proper mechanism of following regular clinical audit in Pakistani hospitals and dental teaching institutes. The aim of using RPDs classification is to make as simple as we can the teeth to ridges combination. In our research the Kennedy classification permits the visualization of the partially edentulous arch; furthermore, it also enables a design to approach the problem. Additionally, sound principles are also applied for the design of partial dentures. It is no doubt a logical approach for classification. Without any gender variations, numerous research studies report that tooth loss is mainly because of periodontal diseases and unsalvageable dental caries. Both the diseases are also causing tooth loss at the earlier stage of life especially in the adolescent and childhood which is similar to the outcomes of this particular research study [7 – 9].

Most common Class was Kennedy's Class – III in both the dental arches of RPD affected females' other studies also consider it the same for both males and females [10]. Both the dental arches were mostly affected by Kennedy's Class – III; whereas, the other dominant classes were Class I, II & IV. Same is an inconsistency with other authors reports [11, 12]. Whereas few of the authors also disagree as poor oral hygiene, dietary intake and sugar consumption may vary from individual to individual. Multiple causes of extraction are found among young females as there was a significant increase in Class – I and decrease in Class – III. Class I & II increased with increasing age

factor which is also same as reported by other authors. We targeted females; whereas, other research studies targeted both males and females.

A comparative analysis reflected that distribution of gender and age among RPDs is more in Class – I and after that Class – II especially in the older adults of above fifty years of age along with females. On the other hand, the increased number of young adults under the age of fifty years males and females were involved in Class – III followed by Class – II RPDs [13].

### CONCLUSION:

Most common Class was Kennedy's Class – III in both the dental arches of RPD affected females. This research was specifically targeted on female patients which highlights the dentition loss as a prime issue of oral health. Gender prominence was difficult to assess as we failed to prove its involvement.

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