



ISSN Print: 2394-7489
ISSN Online: 2394-7497
IJADS 2023; 9(4): 206-214
© 2023 IJADS
www.oraljournal.com
Received: 26-08-2023
Accepted: 01-10-2023

Fatma Mohamed Ali
Department Conservative
Dentistry, Specialized center for
Oral and Dental surgery and
Dentistry. Benghazi Libya

Amel Mohamed Lefsaay
Head, Department of
Prosthodontics, Faculty of
dentistry at University of
Benghazi. Libya

Samiyah Abraheem Mohammed
Department of Dental Public
Health and Preventive
Dentistry, Faculty of Dentistry
at University of Benghazi. Libya

Hawa Adim Salim
Department of Prosthodontics,
Specialized center for Oral and
Dental Surgery and Dentistry.
Benghazi, Libya

Adham Faraj Ragas
Head, Department of
Prosthodontics, Specialized
center for Oral and Dental
surgery and Dentistry, Benghazi,
Libya

Reema Mohammed Abdulsalm
Department of Prosthodontics,
Specialized Center for Oral and
Dental surgery and Dentistry.
Benghazi, Libya

Corresponding Author:
Fatma Mohamed Ali
Department of Conservative
Dentistry, Specialized center for
Oral and Dental surgery and
Dentistry, Benghazi, Libya

Gender distribution of Libyan patients with removable dental prosthesis

Fatma Mohamed Ali, Amel Mohamed Lefsaay, Samiyah Abraheem Mohammed, Hawa Adim Salim, Adham Faraj Ragas and Reema Mohammed Abdulsalm

DOI: <https://doi.org/10.22271/oral.2023.v9.i4d.1871>

Abstract

Background: Regardless of gender or age, simple dentures are still the first option for tooth replacement in cases of edentulousness due to the expanding sex difference in oral health and disease.

Aims: Our purpose of this research Gender analysis of patients from Benghazi who had removable dentures, their age range, significance of tooth loss in these individuals, while also considering the demands of various patient sorts for these dentures.

Materials and Methods: A retrospective-longitudinal study of Patient's data records from two of Benghazi's major institutions of 1708 edentulous (Partial or complete), Libyan cases who require removable complete dentures were assessed between March 15, 2014, and September 15, 2022.

Results: According to the chi-square test, Dentures had been worn by 1107 Libyan men and 601 Libyan women, most common age were fifties in both genders, but age of edentulous cases begun from 26 years, there was a Strong distinctions of reasons tooth lost, gender and kinds of dentures.

Conclusion: This study shows that Edentulism generally affects Males more than Females in city of Benghazi and it usually manifests in young, there is a major problem within Libyan community to encouragement of oral health, in addition there were a clear difference between gender, age, tooth lost, types of dental prosthesis and places.

Keywords: Sex, age, removable denture, exodontia prevalence and Benghazi

1. Introduction

As any city around the world Benghazi is effected by edentulism, outcome of this phenomena has negative impacts on one's dental and overall health [1, 2, 3].

A person's oral health may be affected by it in the following ways: Speech, digestion, mastication are all affected, as well as the patient's appearance [4]. Nearly all instances were handled by wearing a removable denture partial or complete.

The vast majority of occurrences of edentulism in humans are the results of tooth loss due to dental caries, poor oral hygiene, gum disease, other periodontal disorders, it might by reason of genetic defect, which is rare [5, 6].

A complicated interaction between cultural, economic, individual access to care factors may be responsible for the distribution and prevalence of total and partial edentulism in industrialized and less-developed nations. According to World Health Organization database, severe periodontal disease is thought to impact 5-20% of the population, complete edentulism occurs between 7 to 69% of the time, however caries is still common in the majority of developed countries [7].

That has also been investigated at how gender differences affect the prevalence of totally edentulous mouths. Many researchers have found that men are more likely than women to develop periodontal disease, with a percentage of 56. 4 versus 38. 4 respectively [8, 9]. Out of every ten male adults, this corresponds to five having gum disease, Male patients were more likely to have complete dentures than female patients, although the situation was reversed for partial dentures. Men were found to have a complete denture prevalence of 38. 3%, whereas women had a prevalence of 28. 7% [7, 10, 11, 12].

Henceforth male-female disparity may be caused by a population's higher proportion of older females [9]. Likewise it was noted that men are less likely than women to express concern about their edentulism [13].

Purpose of the presented research was gender assessment of Libyan patients with removable dentures, age range of subjects with removable dentures, relevance of edentulism (complete or partial) within these individuals and incidences of removable dentures, if in single arch or both.

Materials and Methods

A retrospective-longitudinal study of Libyan edentulous patients that requires removable dentures for replacements of their teeth, furthermore this research had been done in two departments of Removable Prosthodontic at Specialized center for Oral and Dental surgery and Dentistry. As well as Faculty of Dentistry at University of Benghazi. This study was performed for first time in city of Benghazi, Libya. Previous fulfillment, the collected data from Prosthodontic departments in institutes, The general manager of the Specialized Center for Oral and Dental Surgery and Dentistry and the Dean of the Faculty of Dentistry at the University of Benghazi gave their full approval for this particular project. This research had taken a term of eight years from 15th of March 2014 to 15th of September 2022.

Data selection

Inclusion criteria were, Libyan cases that needs removable complete dentures to either Maxillary jaw /Mandibular jaw or both and they had done these dentures for the first time, on other hand exclusion criteria were Non-Libyan patients cases that must have removable partial dentures to Maxillary arch, Mandibular arch or Both, Repair cases, Restraints require relining of their dentures as well as second time contraction of complete dentures to single jaw, upon both jaws.

Data from SDC's department of Removable Prosthodontics: The department opened their doors at first of

March 2014, with Number of Resident staff as well as Laboratory Prosthodontic Technicians about sixteen members, with a total number of patients of 2774, Age range were between 26-87 years old, both gender, 1334 subjects had been selected from the SDC's records, whereas 1306 cases had been excluded due to 205 required a new removable complete denture, 105 cases were non-libyan, 196 cases need repair, 470 cases need relining and 330 cases had Removable partial dentures. Data from department of Removable Prosthodontics at BU Number of teaching staff at department were thirteen, while number of Prosthodontic technicians were twelve, analogous to edentulous patients involved in study, their age range were 29-89 years old, both genders, From a sum number of these cases were 1217, only 375 had been selected due to they follow the selection criteria, however 344 cases had missing information within their history sheets, 213 had been excluded due to these patient required Removable partial dentures and 143 cases were non-Libyan.

Biostatistical data analysis

Data analyses were conducted using Statistical package for social science software version 20, which is provided by IBM cooperation, Chiago at significant level of acceptance *P*-value 0. 05 and confidence interval set at 95%. Comparison between groups in presented study were carried out by Chi-square test, Simultaneously age had been divided to 5 age groups thus Mean were calculated to present numeric variable age, as well as frequencies in addition of percentage and determination of relationship between gender, age, reasons of exodontia and type of denture, Person's correlation test had been used. Results A sum of 1708 patients were involved in this research, provided from two major dental institutes in Benghazi, Libya. Nearly one-half participants were 1107 Males, while 601 were Females (figure-one), Comparatively of SDC and Benghazi university, both had shown Males cases were higher incidence than Females, ($\chi^2=1074.971a, P=0.0000000001$) as it is displayed in Table-one and Figure-two.

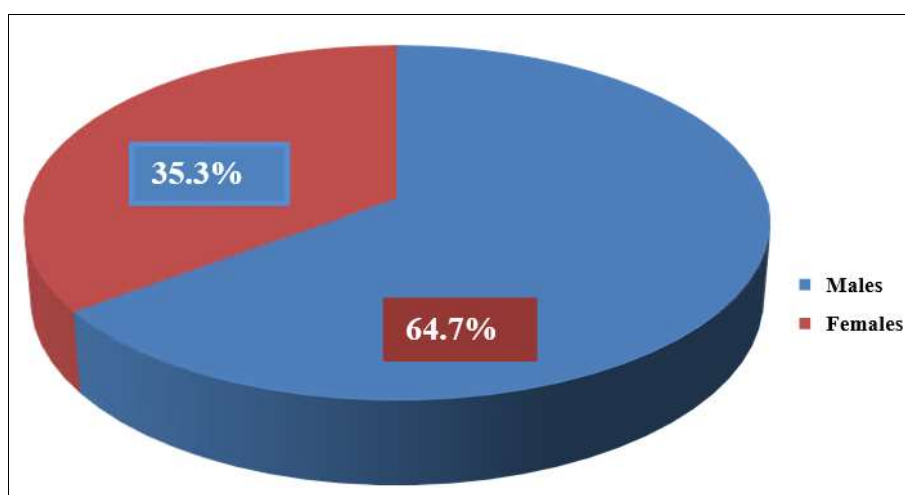


Fig 1: Prevalence of Subjects according to gender

Table 1: Gender distribution of patients involved in this study

Facility 's Department of Prosthodontic	Gender Distribution				Prevalence	
	Males	%	Female	%	N. cases	%
SDC	851	76. 8%	483	80. 3%	1334	78%
Benghazi university	256	23. 2%	118	19. 7%	375	22%
Total	1107	100%	601	100%	1708	100%

Analogous to age of participants with complete dentures, SDC's Males mean were 50 years but Females mean age were 60 years old, meanwhile in Benghazi university in both gender were within 50 years, Additionally, it had been noted, that edentulism begins at young individuals at both

institutions, As shown in Table-2 and figures(2 and 5) while $X^2=3915.827$, $P=$ value was < 0.0001 also Person's correlation coefficient between gender along with age were 0.661, indicates there was a moderate relationship between gender and age.

Table 2: Age frequency of edentulous subjects in the presented study from Prosthodontic sectors at SDC and Benghazi University.

Age group	Frequency				Prevalence	
	SDC		B. U		SDC (%)	B. U (%)
Gender	Males (%)	Females (%)	Males (%)	Females (%)		
25-35	26(3%)	13(2.8%)	10(3%)	6(2%)	39(2.2%)	16(7.2%)
35-45	61(7.1%)	33(5.7%)	29(9%)	20(13%)	94(6.3%)	49(12.1%)
45-55	413(48.5%)	170(35.4%)	81(41%)	38(42%)	583(43.8%)	119(32.3%)
55-65	206(24.3%)	172(35.8%)	72(26%)	31(23%)	378(28.4%)	103(26%)
Above 65	145(17.1%)	95(20.3%)	64(21%)	23(20%)	240(19.3%)	87(22.4%)
Total	851(100%)	483(100%)	256(100%)	118(100%)	1334(100%)	374(100%)

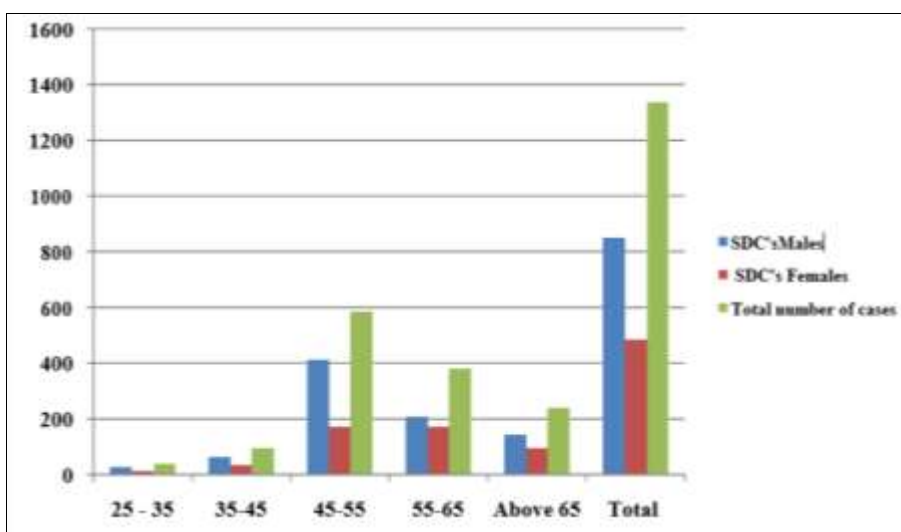


Fig 2: Age Frequency of Libyan complete denture cases from SDC's Prosthodontic division.



Fig 3: Years old, Female, Libyan Completely edentulous participant From SDC's cases May 2015.



Fig 4: Years old, Male, completely edentulous, From SDC's cases May, 2016.

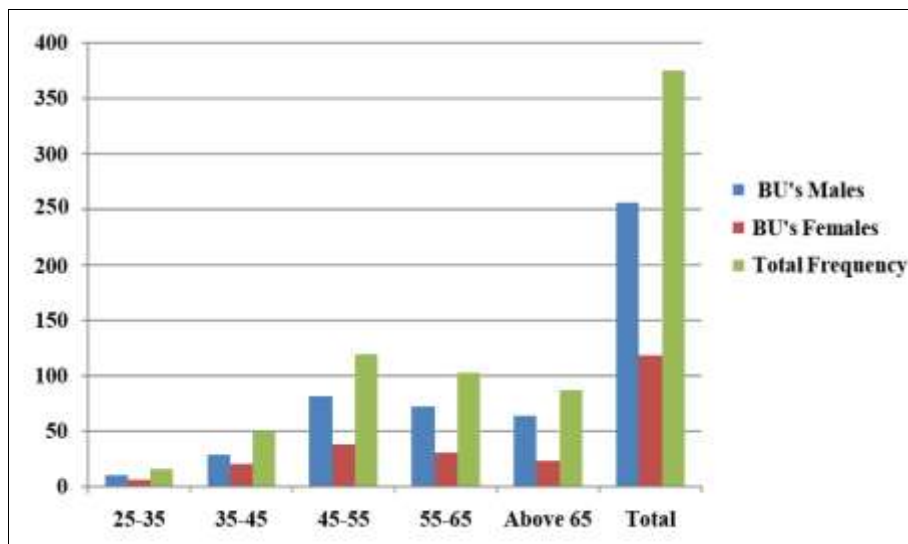


Fig 5: Age prevalence of patients with complete dentures from department of Prosthodontic at Benghazi University.





Fig 6: Years old Female, Completely edentulous from the cases at BU January 2018



Fig 7: Years old Male, Completely edentulous, one of cases at BU August 2022

The ramification of Exodontia among were Males had lost their teeth due to periodontal disease in 480 cases from SDC, while 98 cases from Benghazi university. The antithesis of females showed, relevance of Exodontia were caused by dental caries 211 cases from SDC, unlike Females from Benghazi university had lost their teeth due to Periodontal disease as well as dental caries in 52 cases out of 118 cases. It were noticed that at SDC several patients had preformed tooth extraction because of Trauma in 5. 9% male cases, but parallel to Prosthetic purposes were 4. 4% male cases and 3. 3% female cases, in opposition to Benghazi university there

were't any cases from both gender underwent tooth extraction for these reasons, meanwhile in both faculties, there weren't any participant that lost a teeth from oral cancers, orthodontic treatment, cystic lesions and Failure of RCT, as it appears in (Table-3 and Figure 8). Our study proves that, there were a statically significance relationship between gender and relevance of tooth extraction as well as faculties ($\chi^2=999. 570a, P=0. 0000000003$), in view of Person's correlation coefficient between gender as well as reasons of tooth lost among participants was 0. 789, therefore showed a strong correlation between those variables.

Table 3: Relevance of Exodontia in RCD Libyan patients

Relevance of tooth lost	SDC institute				Benghazi university				Total no. of cases	
	M	%	F	%	M	%	F	%	No.	%
Periodontal Diseases	480	56.4%	107	22.1%	98	38.2%	28	23	713	41.7%
Dental caries	189	21.8%	211	43.6%	85	33.3%	38	33	523	31.6%
Periodontal/caries	97	11.5%	150	31%	73	28.5%	52	44	372	21%
Trauma	51	5.9%	0	-	0	-	0	-	51	2.9%
Prosthetic reasons	34	4.4%	15	3.3%	0	-	0	-	49	2.8%
Orthodontic reasons	0	-	0	-	0	-	0	-	0	-
Oral cancers	0	-	0	-	0	-	0	-	0	-
Cystic Lesions	0	-	0	-	0	-	0	-	0	-
Failure of RCT	0	-	0	-	0	-	0	-	0	-
Occurrence	851	100%	483	100%	256	100%	118	100%	1708	100%

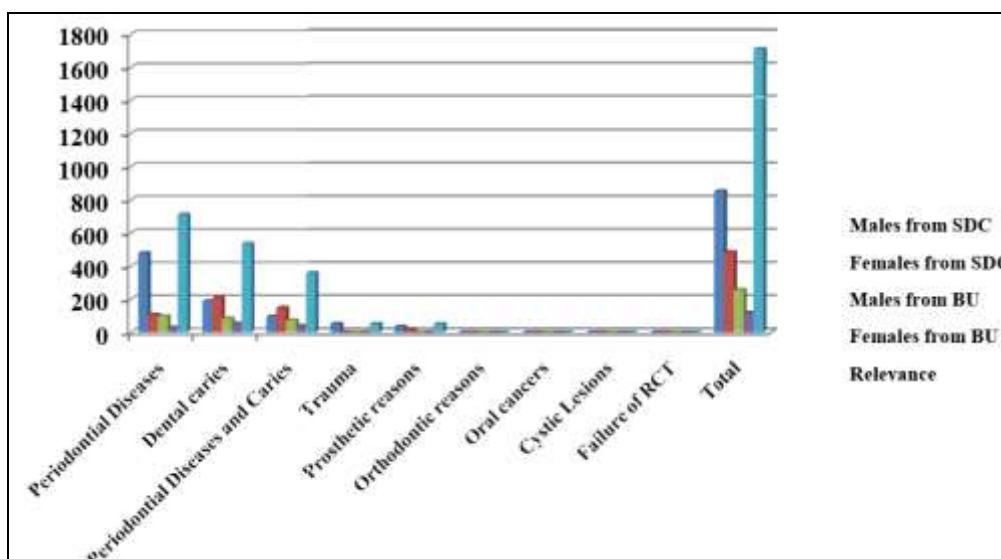


Fig 8: Distribution cases in this research

Synonymous to recurrence of different sorts of simple removable complete dentures demanded by participants in this study from SDC as well as Benghazi university, According to Specialized center high proportion of Maxillary complete denture/Mandibular partials dentures in 374 male cases, 227 female cases (45%), followed by Maxillary complete dentures/Mandibular complete dentures in 298 male cases, 154 female cases (33.8%), Maxillary complete dentures in 88 male cases, 52 female cases (10.4%), Maxillary partial dentures/Mandibular complete in 78 male cases, 43 female cases (9.07%) counter to lower incidence were found in Single Mandibular complete dentures in 13 male cases and 7 female cases (1.73%) out of the total 1334 patients. (Figure-9) Regarding Pervasiveness of several types among patients from Benghazi university, from total of 375 Libyan patients (Males 256, Females 118), Maxillary complete denture/Mandibular complete denture were most prevalent in 295 cases (220 male patients, 75 female patients), 78%, then followed by Maxillary partial dentures/ Mandibular complete dentures in 50 cases (29Males, 21 Females) 13.3%, Maxillary Complete denture 15 cases (7 Males, 8 Females), 5%, Complete Maxillary dentures/Mandibular partial Dentures in 9 cases (5 Males, 4 Females), 2.4%, and rare in Mandibular complete dentures in 5 cases (3 Males, 2 Females), 1.3%, as shown in figure-10. Respectively Chi-square was 1198.060a, P-value was less than 0.0001, following that Person's correlation coefficient between gender and types was 0.752, So there is a strong correlation between gender and types of dentures.

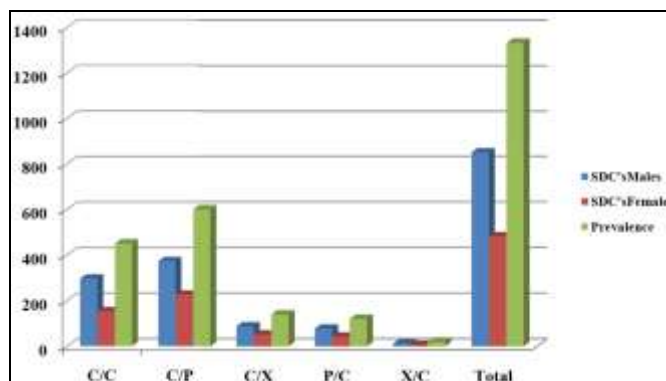


Fig 9: Different types RCD of SDC's patients

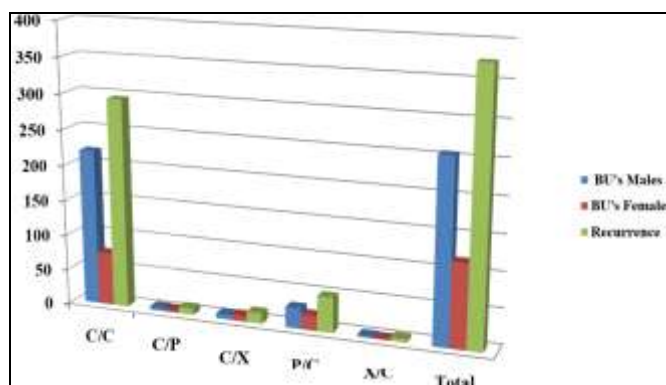


Fig 10: Different kinds of RCD encompassed by patients from Benghazi University.

Discussion

There were very large gender variations in prosthesis requirements. As well as intuitions demands plays important role, comparatively speaking, From a total of 1708 pateints, (64. 81%) Libyan males were more likely than (35. 19%) Females to require a complete denture. In both upper and lower arch in both genders, an investigation conducted in Manglore by Shenoy and Hegde, 2011 was comparable to this observation ^[14]. There have been 510 study participants in total by Shah *et al.* 2012. There were 246 females (48. 2%) and 264 males (51. 8%) ^[15] Likewise Shah, 2003, from a total of 1240 subjuts, the distribution to sex were 710 males, and While 530 were Female at New Dehi, India ^[16]. Over the course of the trial done by Esan *et al.* in Nigeria 2004 during the study's duration, the prosthetic clinics saw 152 patients, respectively found that 52. 6% were males and 47. 4% were females ^[17]. On other hand Taylor *et al.*, 2021found that women making up 55. 4% and men were 44. 6%, out of 187, 277participants with dentures ^[18]. As well as Sobolera and Rogovska 2022, trial involved 70 participants who were completely edentulous. In addition to the 24 cases of men, there were 46 cases of women ^[19]. In a similar fashion Shae Yee Oo *et al.*, 2013 demonstrated that more females than males choose removable prosthodontic therapy ^[20]. Whereas Alfadda *et al.*, 2014 their study were on 32 patients, who were randomly selected including 15 men and 17 women in Saudi ^[21]. Consistent with Pan *et al.*, 2008 There were 256 participants in all, including males (n = 114) and Females (n = 142) ^[22].

It was observed that Complete edentulosness individuals in, this study begins at 26 years old (SDC), counter to Benghazi university at 29 years old, These findings could aid in the creation of a population-wide oral health care strategy that would raise dental awareness and promote oral health within Benghazi's local society, Subsequently regarding the relationship of age and edentulous patients in both gender it increases by age specially in fifties in both faculties but it had been found that at SDC's females were higher occurrence within sixties unlike Benghazi dental school both genders were in fifties, Although in both institutions decreases above sixty-five, as compared with Shah *et al.*, 2012, Out of 322 patients who were edentulous (full or partial), age-wise distribution of the condition revealed that one- fourth (25. 3%) belonged to the age range of 45–54 years ^[15]. In instance, Sobolera and Rogovska's, 2022 study enrolled 70 completely edentulous individuals who ranged in age from 34 to 81 ^[18]. While Talyor *et al.*, 2021 revealed that from 187227 pateints, it were the common between 65 to 79 years old ^[19]. An opposing view by Esan *et al.*, 2004had 8 years old was the youngest among them and higher prevalence were in the age group of 21-40 years old out of 152 participants in their performed research ^[17]. However Alfadda *et al.*, 2014 had found that edentulous cases were above 45 years old ^[21].

There was a clear difference in etiology of tooth extraction, gender as well as even faculties in the presented study, retrospectively according to SDC's documentation office, Exodontia and oral surgery division, had reserve around between 30 to 35 cases pre-day of ordinary tooth extractions cases, whereas 7 to 12 cases daily of tooth removal surgeries, uniformly that makes it 975 cases/month at SDC's department of exodontia, meanwhile 285 cases/month from oral surgery sector, therefore totally from SDC's two divisions were 15120 extraction in a year, Since 2014, its staff has carried out 218150 tooth removal operations to recent date, as compared with Benghazi university numbers of tooth extractions from

year 2014 to 2023, as compared with BU's department of Exodontia and Oral surgery, they didn't performed any procedures during Karma war in 2015 due to Benghazi university faculty of dentistry located at middle of war zone and BU's staff were consider about patient's safety, as well as COVID-19 pandemic 2020, but in 2022, they had received in average of 30 cases/day according to number of interns and students but unfortunately, they didn't accomplish any oral surgeries.

In the current study, the incidence of any form of edentulousness and the study population in the two institutes had different relationships with faculties. At SDC, in both genders, the prevalence of maxillary complete edentulous jaws and Mandibular partial edentulous pateints was higher, whereas at Benghazi University, on account of 375 survey participants, the common condition was completely edentulous both jaws, it might be due to Benghazi university's students requirements, this is consistent with the Taylor *et al.*, 2021 complete edentulous 109388 pateints, Maxillary edentulous jaws 70685 patients and less common Mandibular edentulous jaw 7154 pateints ^[19].

Observation by Shae Yee Oo *et al.*, 2015 The most popular was upper and lower partial edentulous, followed by upper edentulous jaws or lower partial and lower complete edentulous ^[20].

Meanwhile reasons of tooth lost among overall number of cases, had an opposing view, it depends on sex, faculty, in addition other factors, Men lost their teeth due to periodontal disease in both SDC and Benghazi University, In opposed to females from Benghazi University who lost their teeth due to periodontal disease and dental caries in 44%, thus antithesis of females revealed that relevance of exodontia were caused by dental caries in 43. 6% from SDC, also It was evidenced that, in way of comparison to Benghazi University, where there were no cases from either gender who underwent tooth extraction for these reasons, several patients at SDC had tooth removal procedures performed because of trauma in 51 Male cases, parallel to prosthetic purposes in 34 Male cases, and 15 Female cases. Uniformly, no attendee lost a tooth as a result of oral cancer, orthodontic therapy, cystic lesions, or RCT failure, In contradiction to Al Moaleem *et al.*, 2016 who studied 339 males and 240 females, they found that periodontal disease caused the majority of tooth loss among those in both genders, followed by dental caries ^[23].

This conducted study included 1708 Libyans instances with removable complete dentures, relative to types of dentures association with prevalence and institutes, although, according with study's findings, there were correlation between gender and the type of removable prosthodontic treatment that is required.

In contrast to Shae Yee Oo *et al.*, 2015 there was no statistically significant correlation between gender and the necessity for a particular type of removable prosthodontic treatment ^[20]. Moreover, there was no discernible difference in the demand for various denture kinds among study locations, revealed by Esan *et al.*, 2004 performed their research in two centers ^[17].

There were a strong distinction between both, at SDC Maxillary complete dentures with Mandibular partial dentures were more reverence within subjects, but in Benghazi university both jaw complete dentures were higher prevalence, Furthermore SDC's pateints had more occurrences Single Maxillary Complete denture, Benghazi university were less recurrences in individuals, thus Maxillary complete/Mandibular partial dentures were less frequency at

BU, as well as Single Maxillary dentures, On the other hand SDC's patients had more occurrences Single Maxillary Complete denture more than B. U and lower incidence Single Mandibular complete dentures in both faculties.

The following illustration by Shae Yee Oo *et al.*, 2015 placed emphasis on assessing, In addition to this finding, single upper or lower partial dentures and complete dentures were the most popular types of therapy, followed by upper and lower removable partial dentures. This may, to some extent, reflect the population's oral health status and treatment trends [20]. Thus according Esan *et al.*, 2004 8. 6% of people had complete dentures while 88. 2% had movable partial dentures and 3. 3% of people obtained upper or lower full dentures [17]. But Taylor *et al.*, 2021 determined that the most common type of dentures were paired full dentures (both jaws), followed by maxillary single complete dentures, and single Mandibular complete dentures were less frequent [19].

Conclusion

This study's findings, that 64. 7% Male Patients are more likely to Have Complete Removable Dentures. Than 35. 3% Female Patients and that Edentulism Starts in the Twenties indicate, that Libyan society has a severe issue with promoting oral health. Regarding denture types, faculty requirements are important, but there is a correlation between gender along with age, reverence of exodontia and types of dentures.

Strengths and limitations

The present study was first time done in Libya among (partial or complete)edentulous patient, with a large sample size from two institutes SDC as well as Benghazi university, But so far, Benghazi-based research has limits since it lacks the entire community of Libya. Both Alkarma War and the Corona Virus Pandemic completely slowed down processes, interfering with the data collection, although at SDC they had worked at those periods with a full function capacity also subjects hadn't been evaluated socioeconomic level situation and regarding of chronological absent teeth weren't gathered due to radiographs weren't taken to cheek impacted or congenitally missing teeth.

Acknowledgements

Research team wanted to thank Professor Weardia Elgarney, Dr. Mona Elbarkey, SDC's general manger Dr. Mohamed Ali and the SDC's vice general manager Mr. Hossein H. Tahir for being so patient with us, while We work through this challenging circumstance. It has been significantly simpler knowing, We haven't had to stress about work. We are more than grateful for your ongoing encouragement and support.

Conflict of interest

Non

Statement of patients consent

The authors attest that they have the necessary patients consent forms.

Patients understand that no names or initials will be published and that every effort will be made to keep their identities hidden, but anonymity cannot be guaranteed, by signing the consent form for the use of their personal information, intraoral, extraoral images and clinical data in the study.

Adherence to moral guidelines

Specialized center for dental treatment and education (SDC)

as well as the Faculty of Dentistry at the University of Benghazi had approved prior research ethical permission and patients consent for publication had also been given.

Statement of patients consent

The authors attest that they have the necessary patients consent forms.

Patients understand that no names or initials will be published and that every effort will be made to keep their identities hidden, but anonymity cannot be guaranteed, by signing the consent form for the use of their personal information, intraoral, extraoral images and clinical data in the study.

Adherence to moral guidelines

Specialized center for dental treatment and education (SDC) as well as the Faculty of Dentistry at the University of Benghazi had approved prior research ethical permission and patients consent for publication had also been given.

References

1. Lee, Damian J, and Paola C Saponaro. Management of Edentulous Patients. Dental clinics of North America 2019;63(2):249-261.
2. Al-Rafee Mohammed A. The epidemiology of edentulism and the associated factors: A literature Review. Journal of family medicine and primary care. 2020;9(4):1841-1843.
3. Reddy SN, *et al.* Epidemiological survey on edentulousness. The journal of contemporary dental practice. 2012;13(4):562-570.
4. Ren Chong., *et al.* Edentulism and associated factors among community-dwelling middle-aged and elderly adults in China. Gerodontology. 2017;34(2):195-207.
5. Supa P, Peltzer K. The prevalence of edentulism and their related factors in Indonesia, 2014/15. BMC oral health. 2018;18(1):118.
6. Erik PP, *et al.* The global burden of oral diseases and risks to oral health. Bulletin of the World Health Organization. 2005;83(9):661-9.
7. Millar, Wayne J, Locker D. Edentulism and denture use. Health reports. 2005;17(1):55-8.
8. Steele JG, *et al.* Dental attitudes and behavior among a sample of dentate older adults from three English communities. British dental journal 1996;180(4):131-16.
9. Ilgi B., *et al.* Socio-demographic and economic factors affecting the acceptance of removable dentures. European journal of dentistry. 2007;1(2):104-10.
10. Ogunrinde TJ, Dosumu OO. The influence of demographic factors and medical conditions on patients complaints with complete dentures. Annals of Ibadan postgraduate medicine. 2012;10(2):16-21.
11. Choudhary S, Kumar A, Arora H. Effect of age, gender, and mental attitude on complete denture satisfaction in north Indian population. Journal of contemporary dentistry, 2019, 9(1).
12. Alcibiades Z, *et al.* Comparison of denture stomatitis prevalence in 2 population groups. The International journal of prosthodontics. 2006;19(6):621-625.
13. Makhviladze G. Evaluation of edentulism, influence of socio-economic, behavioral factors and general health on prosthetic status of adult population. Eursci. J. 2015;2:233-243.
14. Shenoy R, Hegde V. Dental prosthetic status and prosthetic need of the institutionalized elderly living in geriatric homes in Mangalore: A pilot study. ISRN Dent.

- 2011;Article ID987126.
15. Shah V, Shah D, Parma C. Prosthetic Status and Prosthetic Need Among the Patients Attending Various Dental Institutes of Ahmedabad and Gandhinagar District, Gujarat. *J Indian Prosthodont. Soc.* 2012;12(3):161-167.
 16. Shah N. Gender issues and oral health in elder Indians. *International Dental Journal.* 2003;(53):475-484.
 17. Esan TA, *et al.* Socio-demographic factors and edentulism: the Nigerian experience. *BMC Oral Health,* 2004, 4(3).
 18. Soboleva U, Rogovska I. Edentulous Patient Satisfaction with Conventional Complete Dentures. *2Y Medicina.* 2022;58:344.
 19. Taylor M, *et al.* Complete denture replacements: A 20 years retrospective study of adults receiving publicly funded dental care. *J Prosthodont. Res.* 2022;66(3):452-458.
 20. Yee S, Oo N, *et al.* A study on association between age, gender and type of removable prosthodontic treatment needs in University of Dental Medicine, Yangon, Myanmar. *Myanmar Dental Journal,* 2015, 23(1).
 21. Alfadda S, Al-Fallaj H, Al-Banyan H, Al-Kadhi R. A clinical investigation of the relationship between the quality of conventional complete dentures and the patients' quality of life. *The Saudi Dental Journal.* 2015;10:003.
 22. Pan. Sex difference in denture Satisfaction. *Journal of dentistry.* 2008;36:301-308.
 23. Al Moaleem M. Pattern of Partial Edentulism and Its Relation to Age, Gender, Causes of Teeth Loss in Jazan Population. *American Journal of Health Research.* 2016;4(5):121-126.

How to Cite This Article

Ali FM, Lefsaay AM, Mohammed SA, Salim HA, Ragas AF, Abdulsalm RM. Gender distribution of Libyan patients with removable dental prosthesis. *International Journal of Applied Dental Sciences.* 2023;9(4):206-214.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.