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Oral Health Care Status and Barriers to Accessing Oral Health Care Services in Geriatric Population

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ABSTRACT

Objective: To evaluate the oral health status and identify major barriers to accessing dental care among the geriatric population.

Methodology: This descriptive cross-sectional study was conducted at Institute of Health Management and Research Sciences from November 2024 to May 2025, on elderly individuals aged 60 and above attending the dental OPD of LUMHS. Overall 150 elderly individuals aged >60 years, both genders, who were able to respond the study questionnaires were included. After taking demographic information, oral health status and barriers to accessing dental care were evaluated. SPSS version 26 was used for data analysis.

Results: Average age of individuals was 63.9+3.99 years. Males were in majority 56.0%. Oral health was note fair or poor, with half not using any dental prosthetics. Financial barriers (58.7%) and fear of dental visits (56%) were the main barriers. Only 41.3% visited dentists regularly, and preventive services were underutilized (8%). Cost and lack of awareness were key reasons for avoiding dental care. Despite 49.3% considered oral health very important and 82.7% were satisfied with available services.

Conclusion: Most of the elderly individuals observed with poor oral health, with limited access due to financial, social, and awareness-related barriers despite high satisfaction among those receiving care.

Keywords: Aging population, Oral health, Barriers, Services, Satisfaction

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Introduction

The oral health serves as an important reflection of overall a health, particularly overall physical health, and life satisfaction across the communities.[1] Globally, adults frequently facing significant challenges like infection of the gums, raised prevalence of tooth decay, loss of the teeth, oral dryness, and the malignant lesions of oral cavity.[1-2] The aging adults tend to experience a higher burden of oral disorders, mostly due to several contributing influences, which include challenges in maintaining personal oral hygienic status, dry mouth due to usage multiple drugs for comorbidities issues, and the presence of chronic illnesses like diabetes that negatively influence the oral health of individuals.[3,4] Additionally, with an increasing number of elderly individuals keeping their natural teeth later in their life, those with expansively treated or restored teeth demand more ongoing dental care paralleled to younger groups or earlier generations. In the resulting, poor oral health tends to have a more significant effect on their daily performance, frequently contributing to physical weakening, reduced overall resilience, and deficiencies of proper nutrition.[3,5]

Decreasing oral health has also been associated to age-linked prolonged diseases, cognitive decline, and even early mortality. Moreover, it has been correlated with the onset of chronic heart, lung, and metabolic disorders, such

as diabetes and dyslipidemia.[6,8] Reliable access to the dental care is very important for detecting and preventing oral conditions in geriatric population. The oral health professionals play a key role in the maintaining oral health by offering the support for prevention, dental pain management, concentrating dry mouth and teeth loose, early detection of the oral lesions, and appropriate dentures providing.[9,10] Regardless of its importance, several barriers delay the access to dental services properly like as higher expense of treatment, difficulties in the transportation, emotional challenges like fear or depression, and the very limited availability or approach to the oral healthcare clinics.[11,12] Furthermore, how a person views their own oral health greatly influences their likelihood of seeking services for dental care.

The status of the oral health care in geriatric populations is also significantly affected by access barriers and the socioeconomic factors. According to a study revealed that 73.4% of higher socioeconomic elderly estimated their oral health as good, compared to only 52.5% peoples with lower socioeconomic status. In addition, 38.5% of the lower group was edentulous, emphasizing significant inconsistencies in the status of oral health.[13] Likewise the geriatric population in poor income regions, including Pakistan, faces significant difficulties in gain access to oral healthcare services due to a combination of limited availability of dental care, lower level of the education, limited monthly incomes, and lack of awareness regarding oral health in general population.[1,14,15] Though addressing these challenges through improved infrastructure of the healthcare services, educational movements, and inexpensive services for oral health is very important to improving the oral healthcare status of this vulnerable peoples. However, as the access to oral health care among elderly populations in developing countries like Pakistan is significantly restricted by several barriers, like economic, geographic, and systemic challenges. Despite the recognized importance of oral health in aging populations, there is a substantial gap in the understanding of this particular public health concern. Hence this study has been planned to evaluate the current oral health status of the aging population, and challenges faced by them in accessing dental care services.

Methodology

This Descriptive cross-sectional study was conducted by the Institute of Health Management and Research Sciences and data were collected from elderly patients aged 60 and above at Dental outpatient department of Liaquat University Hospital, Hyderabad. Study duration was from November 2024 to May 2025. A sample size of 150 individuals was calculated by using Rao soft software with an estimated prevalence 11% of poor oral health among elderly.[16] The elderly individuals aged 60 years and above, ability to comprehend and respond to study questionnaires and assessments and both genders were included.

Individuals who were not willing to participate in the study, severe cognitive impairment or dementia, inability to provide informed consent or participate in the study and individuals with debilitating diseases or conditions that significantly affect mobility or Communication were excluded. After obtaining demographic information including age, gender, occupational status, marital status, and educational level, the oral health care status was assessed by recording the prevalence of oral health conditions like as dental caries, periodontal disease, tooth loss, and oral cancers, along with the use of dental prosthetics including dentures and implants. Furthermore, the barriers to accessing oral health care were assessed across multiple domains, like financial barriers (cost of treatment and lack of dental insurance), transportation barriers (distance to dental facilities and lack of transport), physical barriers (mobility issues and disabilities), psychological barriers (fear and anxiety related to dental procedures), and service-related barriers such as limited availability of dental providers and long waiting times in the dental OPD. Moreover, the dental clinic visit frequency and reasons for non-utilization of dental services, were also recorded. Additionally, perceptions and satisfaction of the individuals about oral health were measured by estimating the perceived importance of oral health and satisfaction with available oral health care services in the dental clinic. All the demographic and clinical information was conducted after obtaining written informed consent from all the individuals. The structured questionnaire was used for the data collection and SPSS version 23 was used for data analysis.

Results

The mean age of study population 63.9+3.99 years, with 56% males and 44% females. Over half (57.3%) were unemployed, and most participants resided in rural areas (65.3%). Additionally, 72% of the participants had no health insurance coverage. The majority of participants (84%) were married. Overall 46.7% of participants reported having poor health, 33.3% described their health as fair, and only 20% considered their health to be good. Among the aging population, only 9.3% reported having no chronic illness. The most prevalent conditions were

diabetes (25.3%) and diabetes with hypertension (24.0%), followed by hypertension alone (16.0%) and asthma (13.3%), while few individuals had multiple conditions like diabetes, CVD, and asthma (4.0%) or MI and hypertension (4.0%). Out of all 41.3% of cases used tobacco and 41.3% betel nut. The 41.3% cases visited regularly dental clinics, 32% occasionally, and 26.7% not ever. According to the dental services, 57.3% used restorative care, 8% used care of prevention and 34.7% did not use any services as shown in table I.

Table 1: General health status clinical information of the study population. (n=150)

Variables		N	%
General health status			
Good		30	20.0
Fair		50	33.3
Poor		70	46.7
Chronic health condition			
No any		14	9.3
Diabetes		38	25.3
Diabetes, CVD and Asthma		6	4.0
Diabetes and Asthma		6	4.0
Diabetes and Hypertension		36	24.0
MI and Hypertension		6	4.0
Asthma only		20	13.3
Hypertension only		24	16.0
Addictive habits			
Use of tobacco	Yes	62	41.3
	No	88	58.7
Use of betel nut	Yes	62	41.3
	No	88	58.7
Dental Visits	Regular	62	41.3
	Occasional	48	32.0
	Never	40	26.7
Types of Dental Services Used	Preventive	12	8.0
	Restorative	86	57.3
	None	52	34.7

The most common barrier to accessing oral health care was financial, reported by 58.7% of participants, followed by fear of dental visits (56.0%) and transportation issues (42.7%). Notably, none of the participants reported physical disabilities as a limiting factor. In terms of service availability, 41.3% found services adequate, while 28.0% reported limited access and 30.7% indicated no availability in their area. (Table II)

The poor oral health status revealed significant correlations with female gender, lower educational status and education, residential status and use of tobacco/betel nut p=<0.05. (Table III)

Table II: Barriers to accessing oral health care in the study population. (n=150)

Oral health status	N	%
Financial Barriers (Cost of Care		
Yes	88	58.7
No	62	41.3
Transportation Barriers		
Yes	64	42.7
No	86	57.3
Physical Disabilities Limiting Access		
Yes	00	0.00
No	150	100.0
Fear of Dental visit		
Yes	84	56.0
No	66	44.0
Availability of Services in the Area		
Adequate	62	41.3
Limited	42	28.0
None	46	30.7

Table III: Oral health status according to genders. (n=150)

Variables	Oral health status			Total	p-value
	Good	Fair	Poor		
Gender					
Male	12	44	28	84	
	8.0%	29.3%	18.7%	56.0%	
Female	18	6	42	66	0.001
	12.0%	4.0%	28.0%	44.0%	
Educational status					
Un-educated	0	0	56	56	
	0.0%	0.0%	37.3%	37.3%	
Primary	6	20	0	26	
	4.0%	13.3%	0.0%	17.3%	
Secondary	0	18	8	26	
	0.0%	12.0%	5.3%	17.3%	0.001
Higher	24	12	6	42	
	16.0%	8.0%	4.0%	28.0%	
Residential status					
Urban	12	6	34	52	
	8.0%	4.0%	22.7%	34.7%	
Rural	18	44	36	98	0.001
	12.0%	29.3%	24.0%	65.3%	
Use of tobacco					
Yes	0	6	56	62	
	0.0%	4.0%	37.3%	41.3%	
No	30	44	14	88	0.001
	20.0%	29.3%	9.3%	58.7%	
Use of betel nut					
Yes	0	6	56	62	
	0.0%	4.0%	37.3%	41.3%	
No	30	44	14	88	0.001
	20.0%	29.3%	9.3%	58.7%	

Discussion

Oral health is of key concern for socioeconomic and psychosocial well-being for an individual, interpersonal level (friends and family), and community at large.[17] This study was done to evaluate oral health care status and barriers to accessing oral health care services in geriatric

population on 56% males and 44% females with an overall mean age of 63.9±3.99 years, most of the cases 82.7% were living with their families and participants resided in rural areas were 65.3%. In line with our findings, Gaszynska et al[18] reported age range between 65 to 99 years, with females in majority, vocational/primary education in 73%. However, the Crocombe et al[19] reported age range between 15 to 60 years and above, with majority of patients aged below 45 years (52.5%), female in slight majority (50.2%), most participants belonged to high socioeconomic class (37.1%), and large proportion (69.7%) had attained education up to 10 years or below. The disparities in demographic characteristics of the study participants may because disparities in selection criteria and socioeconomic cultures of the studies.

In this study 46.7% of cases reported poor general health, 33.3% fair, and only 20.0% found with good health, while according to oral health, 41.3% had fair oral health, 29.3% reported good and 29.3% had poor oral health. In aligns to our findings Subedi et al20 reported 66.9% of participants with poor or fair oral health. Conssitently, Petelin et al[21] reported poor oral health among Slovenian elderly, with a mean DMFT of 30.75; 78.3% required scaling and root planning, 21.6% required periodontal surgery, and nearly 20% were unable to perform adequate oral hygiene individually.

In this study most of the individuals had comorbidities which was comparable with studies by Guo et al.[22] and Marino et al.[23] In this series around 41.3% of the cases were using tobacco or betel nut, which was consistent to previous studies,[22,24] as smoking was linked poorer oral health consequences, with additional factors like as poor oral hygiene status, alcohol consumption, and the inadequate preventive dental care further worsening the health of oral cavity.

According to this study the most common barrier to accessing oral health care was financial, reported by 58.7% of participants, followed by fear of dental visits (56.0%) and transportation issues (42.7%). In terms of service availability, 41.3% found services adequate, while 28.0% reported limited access and 30.7% indicated no availability in their area. Correspondingly, a recent study from Pakistan by Akram et al[25] majority of 64.75% participants reported that costly treatment was a common barrier in oral healthcare access; followed by 27.75% reported difficulty of accessing dental clinics and 20.25% stated fear of pain was the most common barrier in accessing the oral healthcare. Likewise, in the study of Crocombe et al[19] financial constraints and avoiding or delaying dental treatment due to cost were the most common barriers to periodontal care.

In current study, out of all 150 individuals, 41.3% reported visiting the dentist regularly (at least once a year), 32% did so occasionally, while 26.7% had never visited a dentist. Regarding the types of dental services used, the majority (57.3%) utilized restorative services, only 8% used preventive services, and 34.7% reported not using any dental services. Consistently Akram et al.[25] reported that the regular routine check-up visits at dental clinic were reported by only 13% of participants, and they observed that demographics variables including education, rural residence and socioeconomic status were significantly association influenced that choice of dental clinic visits ($p<0.05$). In present study, most frequently reported reason for not seeking dental care among participants was cost alone (24.0%), followed by a combination of cost, lack of awareness, and fear (21.3%). Only 18.7% reported no barriers to seeking care. Other common reasons included cost with lack of awareness (8.0%), lack of awareness alone (8.0%), and fear alone (4.0%), highlighting the multifactorial nature of access issues. These findings were supported by the studies of Nagarjuna et al.,[26] Heyman et al.,[27] and Velez et al [28] where costly dental services, fear of dental procedure and pain, location of dental facility, and services availability were the key barriers in acquiring dental treatments and visiting dental clinics. According to this study, nearly half (49.3%) perceived oral health as very important, while 24% considered it somewhat important, and 26.7% did not consider it important.

Despite varied perceptions, a majority of participants (82.7%) expressed satisfaction with the available oral health services, whereas 17.3% were dissatisfied. In agreement with our results, in the study of McGrath et al.,[29] general public ranked importance of oral health using various physical, psychological and social domains and a large proportion (75%) of participants reported that oral health is as important factor of QoL, out of these, 53% positively perceived oral health as an important factor of QoL. In another study by Yaddanapalli et al[30] a large number of participants (34.06%) reported oral health's importance comparable to general health, while 24.5% reported moderately important, 7.3% stated it as of little importance, and 20.73% of participants reported that oral healthcare is not of the same importance as the of general health. Overall for the oral health care for the geriatric population should be integrated into all routine health programs so that screening, prevention, and treatment are part of standard elderly care. Financial barriers should be

minimized by expanding insurance schemes and providing subsidized dental services, especially for low-income and rural older adults.

Conclusion

A significant proportion of the elderly population observed with fair to poor oral health status, with many reporting existing dental conditions and reliance on prosthetics, highlighting ongoing oral health challenges. Multiple barriers including financial constraints, transportation difficulties, fear of dental visits, and limited availability of services were identified as major difficulties preventing adequate access to oral health care. Furthermore, socioeconomic factors such as lower education levels and limited income significantly influenced the ability to seek care, while perceptions of oral health importance varied, affecting utilization of services despite a generally high satisfaction rate among those who accessed care. Future efforts should focus on improving affordability and accessibility of oral health services for the elderly, increasing awareness about oral health importance, and addressing fears related to dental care to enhance service utilization and overall oral health outcomes.

References

1. Akram SJ, Yasmin R, Atif S, Rathore A, Anjum O, Arshad MB, Khaliq IH. Barriers to the access of oral health care facilities among adults: an exploratory study from Lahore. J Fatima Jinnah Med Univ. 2020;14(3):105-9. https://doi.org/10.37018/iyvh7026
2. de Sam Lazaro SL, Nitschke Durben AM, Kline JJ. Barriers and opportunities to support the oral health of older adults: a rapid review of health policy and systems. Int J Aging Hum Dev. 2023;96(1):51-62. https://doi.org/10.1177/00914150221106098
3. Beaven A, Marshman Z. Barriers and facilitators to accessing oral healthcare for older people in the UK: a scoping review. Br Dent J. 2024 Aug 16:1-7. https://doi.org/10.1038/s41415-024-7740-x
4. Alpert PT. Oral health: the oral-systemic health connection. Home Health Care Manag Pract. 2016;29:56-9. https://doi.org/10.1177/1084822316651658
5. Tanaka T, Takahashi K, Hirano H, et al. Oral frailty as a risk factor for physical frailty and mortality in community-dwelling elderly. J Gerontol A Biol Sci Med Sci. 2018;73:1661-7. https://doi.org/10.1093/gerona/glx225
6. De Rubeis V, Jiang Y, de Groh M, Dufour L, Bronsard A, Morrison H, Bassim CW. Barriers to oral care: a cross-sectional analysis of the Canadian longitudinal study on aging (CLSA). BMC Oral Health. 2023;23:294. https://doi.org/10.1186/s12903-023-02967-3
7. Zhang Y, Wang J, Zhao J, Tanimoto T, Ozaki A, Crump A, et al. Association between quarantined living circumstances and perceived stress in Wuhan City during the COVID-19 outbreak: a rapid, exploratory cross-sectional study. Rochester, NY: Social Science Research Network; 2020. https://doi.org/10.2139/ssrn.3556642
8. Baldomero AK, Siddiqui M, Lo CY, Petersen A, Pragman AA, Connett JE, et al. The relationship between oral health and COPD exacerbations. COPD. 2019;23:881-92. https://doi.org/10.2147/COPD.S194991
9. UK Government. Oral cancer in England: a report on incidence, survival and mortality rates of oral cancer in England, 2012 to 2016. 2020. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891699/Oral_cancer_report_170420.pdf
10. Thomson W, Ma S. An ageing population poses dental challenges. Singapore Dent J. 2014;35:3-8. https://doi.org/10.1016/j.sdj.2014.10.001
11. Molete M, Stewart A, Bosire E, Igumbor J. The policy implementation gap of school oral health programmes in Tshwane, South Africa: a qualitative case study. BMC Health Serv Res. 2020;20:338. https://doi.org/10.1186/s12913-020-05122-8
12. Wen PC, Lee CB, Chang YH, Ku LJE, Li CY. Demographic and rural-urban variations in dental service utilization in Taiwan. Rural Remote Health. 2017;17:4161. https://doi.org/10.22605/RRH4161
13. Berg-Warman A, Kermel-Schiffman I, Zusman SP, Natapov L. Oral health disparities among the 65+ age group. Quintessence Int. 2023;54(4).
14. Javed U, Zafar S, Javed S. Genderwise comparison of barriers to accessing oral healthcare facilities in peri-urban communities of Sargodha, Pakistan. J Basic Clin Med Sci. 2022;1:29-36. https://doi.org/10.58398/0002.000005
15. Fahim A, Mahmood R, Haider I, Luqman M, Ikhlaq I, Mahmood T, Alam MK. Association between clinical oral health status and perceived oral health in different age groups. PeerJ. 2022;10:e14152. https://doi.org/10.7717/peerj.14152
16. Glick M, Williams DM, Kleinman DV, Vujicic M, Watt RG, Weyant RJ. A new definition for oral health developed by the FDI World Dental Federation opens the door to a universal definition of oral health. J Am Dent Assoc. 2016;147:915-7. https://doi.org/10.1016/j.adaj.2016.10.001
17. Fisher-Owens SA, Mertz E. Preventing oral disease: alternative providers and places to address this commonplace condition. Pediatr Clin North Am. 2018;65:1063-72. https://doi.org/10.1016/j.pcl.2018.05.011
18. Gaszynska E, Szatko F, Godala M, Gaszynski T. Oral health status, dental treatment needs, and barriers to dental care of elderly care home residents in Lodz, Poland. Clin Interv Aging. 2014;9:1637-44. https://doi.org/10.2147/CIA.S69790
19. Crocombe LA, Chrisopoulos S, Kapellas K, Brennan D, Luzzi L, Khan S. Access to dental care barriers and poor clinical oral health in Australian regional populations. Aust Dent J. 2022;67:344-51. https://doi.org/10.1111/adj.12930
20. Subedi K, Shrestha A, Bhagat T. Oral health status and barriers to utilization of dental services among pregnant

women in Sunsari, Nepal: a cross sectional study. Int J Dent Hyg. 2024;22:209-18. https://doi.org/10.1111/idh.12728
21. Petelin M, Cotič J, Perkič K, Pavlič A. Oral health of the elderly living in residential homes in Slovenia. Gerodontology. 2012;29:e447-57. https://doi.org/10.1111/j.1741-2358.2011.00497.x
22. Guo D, Shi Z, Luo Y, Ding R, He P. Association between oral health behavior and chronic diseases among middle-aged and older adults in Beijing, China. BMC Oral Health. 2023;23:97. https://doi.org/10.1186/s12903-023-02764-y
23. Marino R, Albala C, Sanchez H, Cea X, Fuentes A. Prevalence of diseases and conditions which impact on oral health and oral health self-care among older Chilean. J Aging Health. 2015;27:3-16. https://doi.org/10.1177/0898264314533723
24. Crocombe LA, Stewart JF, Brennan DS, Slade GD, Spencer AJ. Is clinical oral health poorer in regional areas compared to major city areas? Aust J Rural Health. 2013;21:150-7. https://doi.org/10.1111/ajr.12034
25. Akram SJ, Yasmin R, Atif S, Rathore A, Anjum O, Arshad MB, Khaliq IH. Barriers to the access of oral health care facilities among adults: an exploratory study from Lahore. J Fatima Jinnah Med Univ. 2020;14(3):105-9. https://doi.org/10.37018/iyvh7026
26. Nagarjuna P, Reddy VC, Sudhir KM, Kumar RK, Gomasani S. Utilization of dental health-care services and its barriers among the patients visiting community health centers in Nellore District, Andhra Pradesh: a cross-sectional, questionnaire study. J Indian Assoc Public Health Dent. 2016;14:451-5. https://doi.org/10.4103/2319-5932.195844
27. Heyman RE, Slep AM, White-Ajmani M, Bulling L, Zickgraf HF, Franklin ME, Wolff MS. Dental fear and avoidance in treatment seekers at a large, urban dental clinic. Oral Health Prev Dent. 2016;14(4).
28. Velez D, Palomo-Zerfas A, Nunez-Alvarez A, Ayala GX, Finlayson TL. Facilitators and barriers to dental care among Mexican migrant women and their families in North San Diego County. J Immigr Minor Health. 2017;19:1216-26. https://doi.org/10.1007/s10903-016-0467-2
29. McGrath C, Bedi R. A national study of the importance of oral health to life quality to inform scales of oral health related quality of life. Qual Life Res. 2004;13:813-8. https://doi.org/10.1023/B:QURE.0000021696.05528.4c
30. Yaddanapalli SC, Sultana SP, Lodagala A, Babu PC, Ravoori S, Pachava S. Oral healthcare-seeking behavior and perception of oral health and general healthcare among WHO indexed age groups in East-Coast India. J Fam Med Prim Care. 2020;9:3600-6. https://doi.org/10.4103/jfmpc.jfmpc_350_20