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# **ASSESSMENT OF ORAL HEALTH STATUS AMONG RURAL POPULATION OF NEPAL**

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## BACKGROUND AND OBJECTIVE

- Oral disease is a major health burden for many countries. <sup>1</sup>
- It affects nearly 3 million people throughout their lifetime, causing pain, discomfort, disfigurement and even death. <sup>1</sup>
- According to WHO prevalence of oral diseases (2019); prevalence of untreated caries of deciduous teeth was 51.2 %, permanent teeth among 5 years and above was 31.5%. Prevalence of severe periodontal disease in people above 15 years was 14.8 % and prevalence of edentulism in people above 20 years was 1.4%.

- Dental caries is one of the leading causes of toothache and dental health problems worldwide. <sup>2</sup>
- The most common problem according to the World Health Organization (WHO) report in 2022, were untreated carious lesion, periodontal disease, edentulism and cancer of the lip and oral cavity. <sup>3</sup>

- Due to educational, cultural and socioeconomic burdens, at present the prevention and treatment of oral diseases is virtually unavailable to the rural and underprivileged population although significant amount of dental problems has been identified since the commencement of National Oral Health policy in year 2004 A.D. <sup>4</sup>

- Since, no any research has been done in past regarding the oral health status of Manang people, this study will provide us a baseline data regarding the oral health status of people residing in rural areas of Nepal, so that preventive as well as curative programs can be planned in future.

- The main objectives of this research were:
  - To identify the prevalence of dental caries among the community people.
  - To identify the prevalence of gingivitis and periodontal status of the community people.
  - To determine the prevalence of edentulism among community people.
  - To determine the oral hygiene knowledge and practices of community people.

# METHODOLOGY

- A *descriptive cross sectional study* was conducted in *Chame, Manang district* after taking ethical approval from institutional review committee of Kantipur Dental College( Ref no 16/025).
- Informed consent was obtained from each participants before participating them in the study.
- Those participants who were willing to participate in the study were included.
- Participants below 15 years were excluded from the study.

- Convenient sampling technique was used for data collection.

- Sample size was calculated by using the formula

$N = Z^2 pq / e^2$  Where,

$P = 80\%$  Kaphle et al<sup>5</sup>)

$q = 1 - p, e = 5\%, Z = 1.96$   $N = 246 = 250$

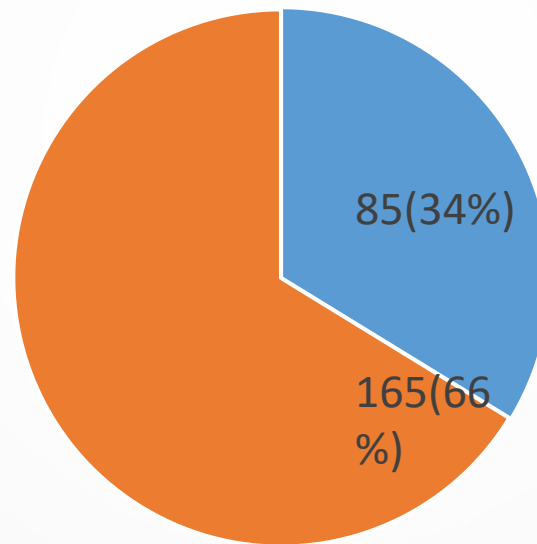
- Data was collected using a standard questionnaire which was administered to the participants by a single trained dentist.
- The first section of the questionnaire consisted of demographic details.
- The second section of the questionnaire was about oral health behavior and knowledge.

- The third section of the questionnaire was related to oral health care seeking and access.
- The fourth section of the questionnaire had oral health assessment section which was adopted from WHO basic oral health survey form 2013 for adults.

- Data was entered in epidata and analyzed using SPSS version 21.
- Descriptive statistics like percentage and frequency were calculated.
- Chi square test was used to test the association of variables.
- $P < 0.05$  was considered statistically significant.

# RESULTS

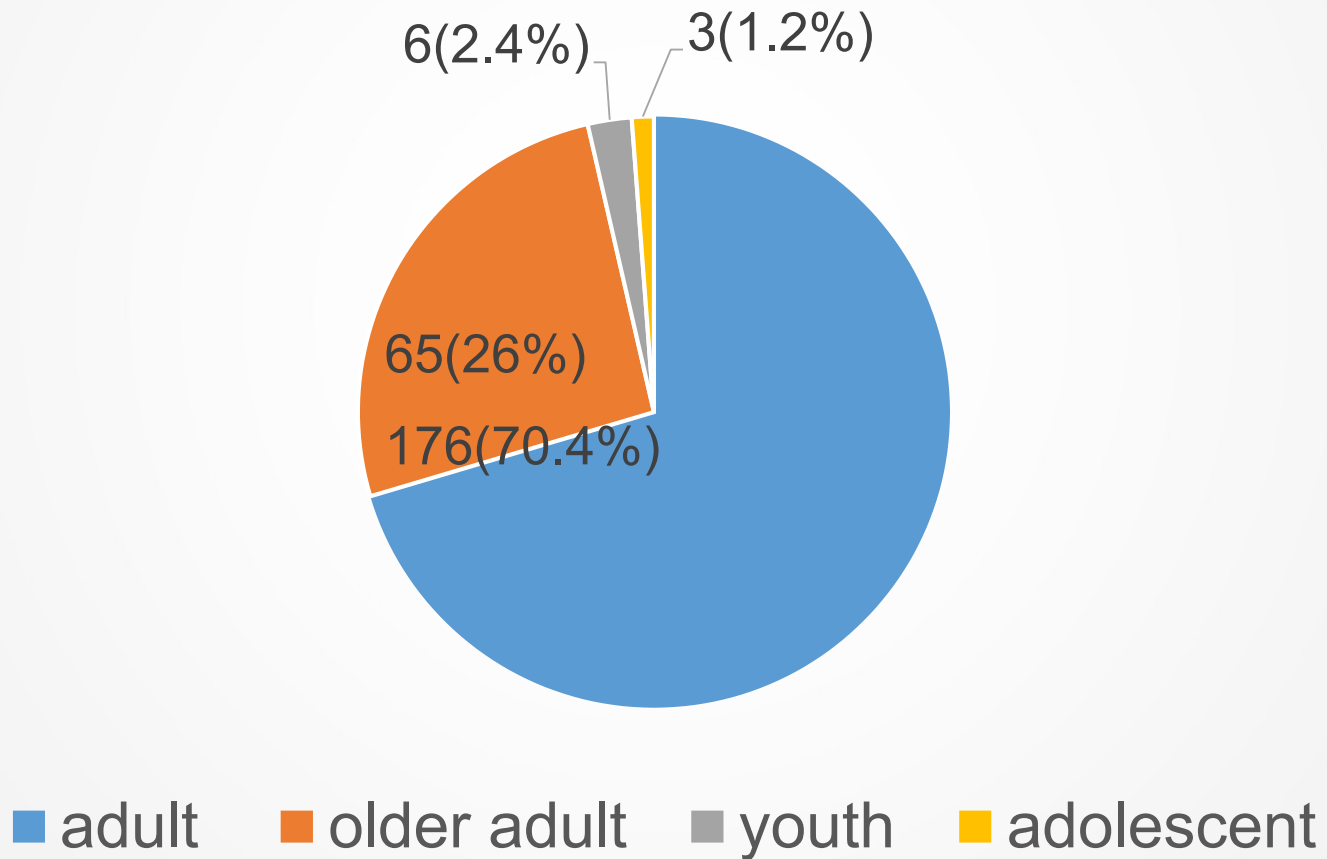
➤ Altogether 250 participants were there.



■ Male ■ Female

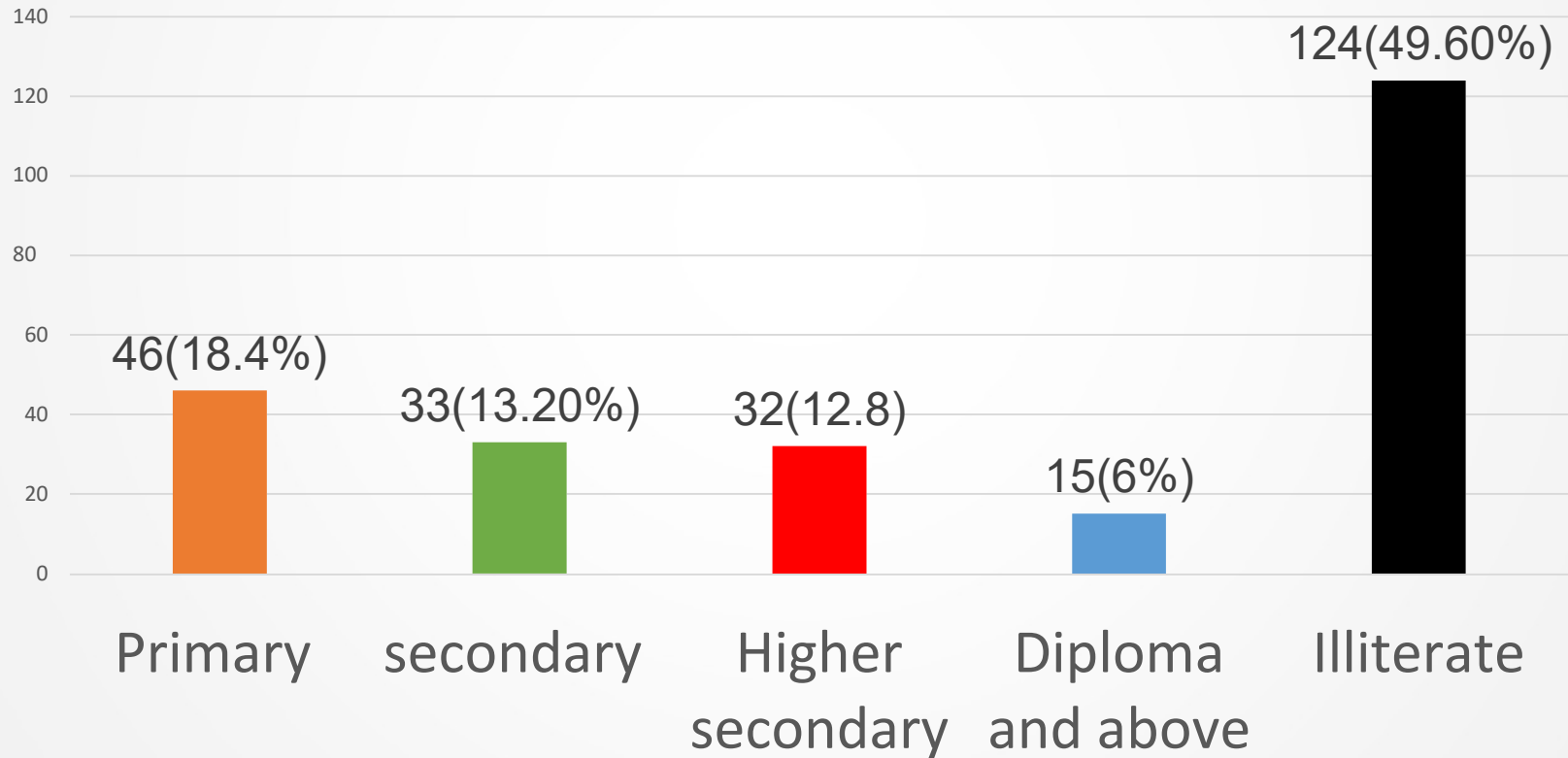
- The mean age of the participants was  $48.40 \pm 14.76$ .
- Majority were Mongoloids 215(86%) followed by Aryan 22(8.8%), Thakuri 9(3.6%) and Dalits 4(1.6%)

## *Age wise distribution of participants*

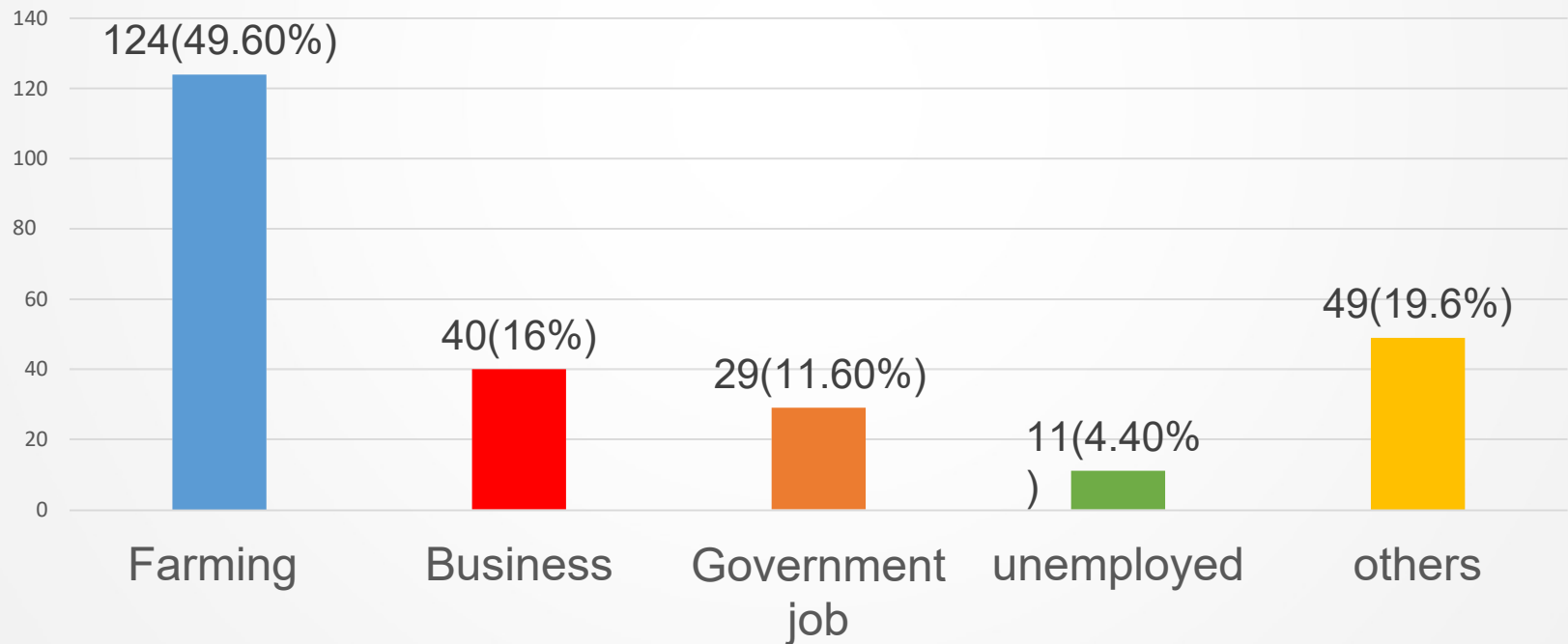


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## *Educational level of the study participants*

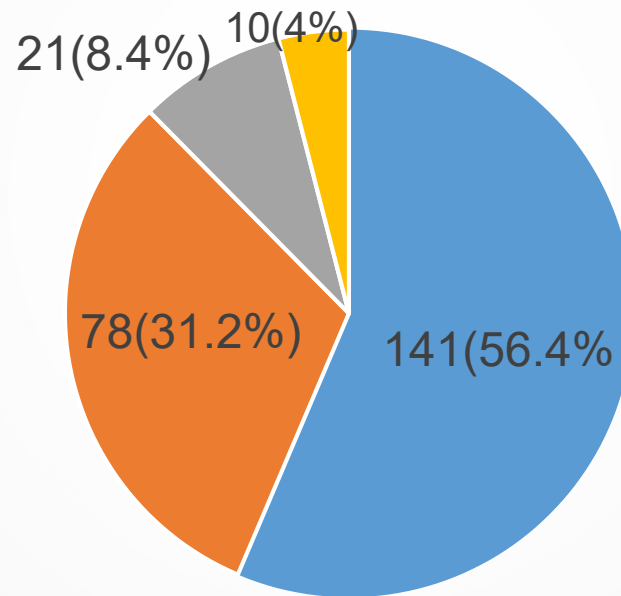


## *Distribution of participants according to job category*



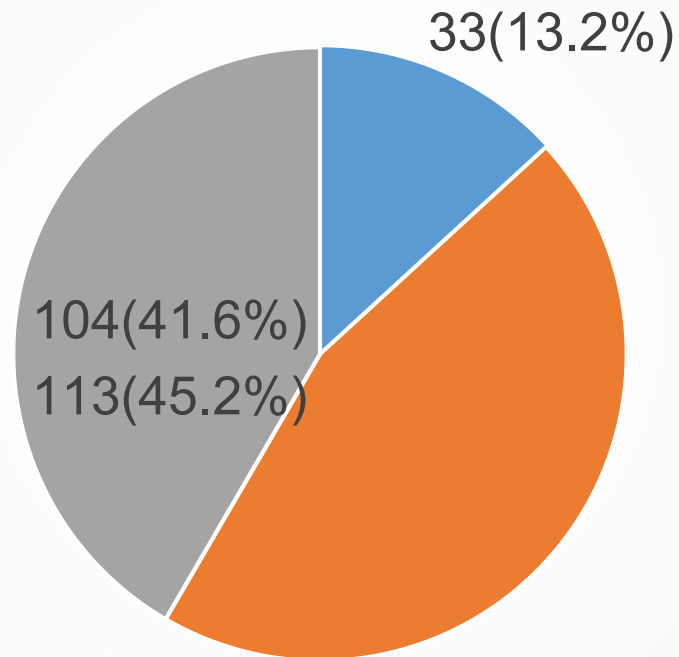
- When asked about oral hygiene practices majority used toothbrush to clean their teeth 236 (94.4%).
- Majority 231(92.4%) used toothbrush and toothpaste to clean their teeth.
- Apart from tooth brush and toothpaste 200(80%) didn't use any other oral hygiene aids.

## *Brushing frequency of the participants*



■ once daily ■ twice daily ■ occasionally ■ never

19 *Use of fluoridated toothpaste among the participants*



■ Non fluoridated toothpaste ■ Flouridated toothpaste use  
■ Don't know about fluoride

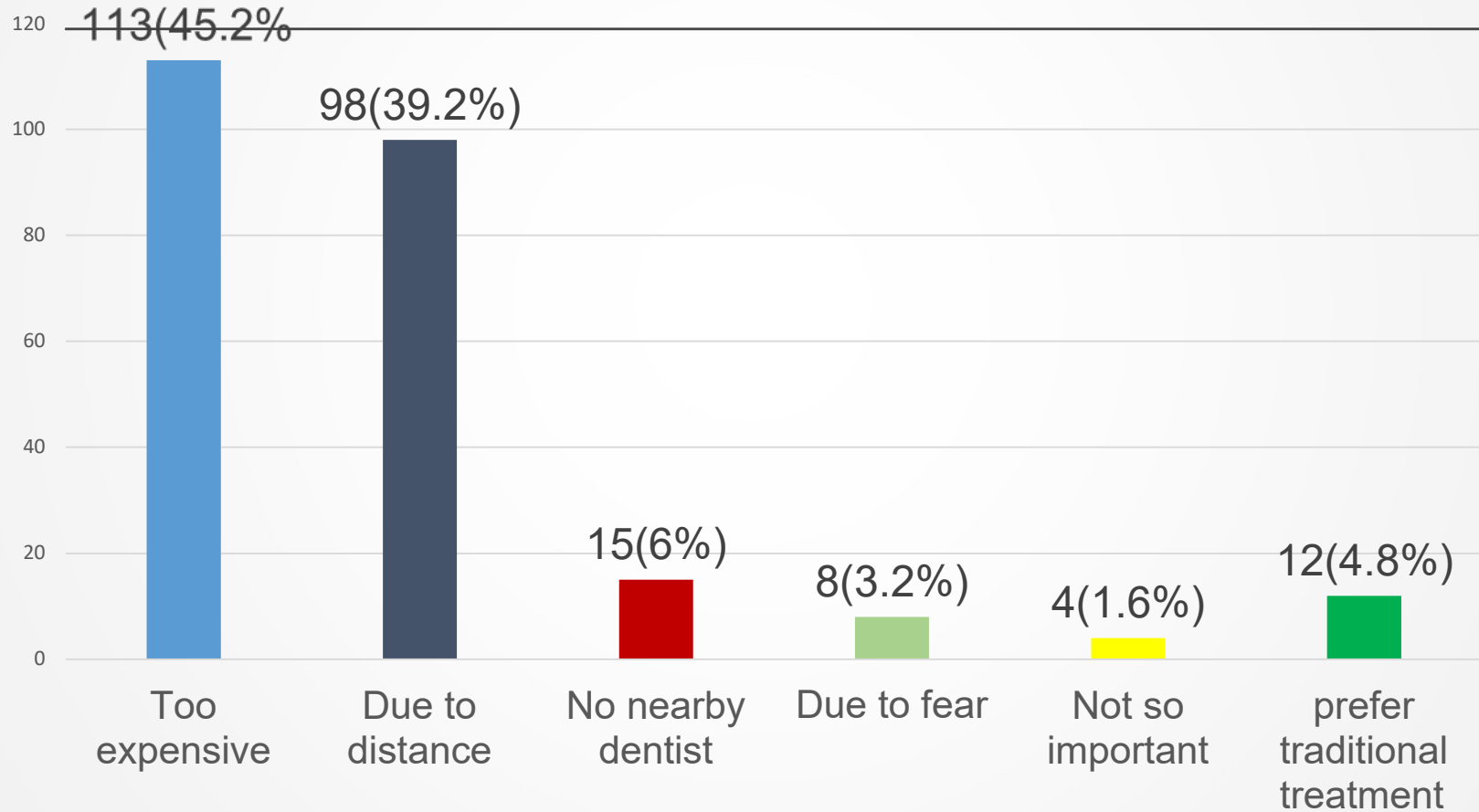
## *Tobacco/alcohol consumption*

- Tobacco consumption habit was found in **37(14.8%)**.
- Alcohol consumption habit was found in **105(42%)**.

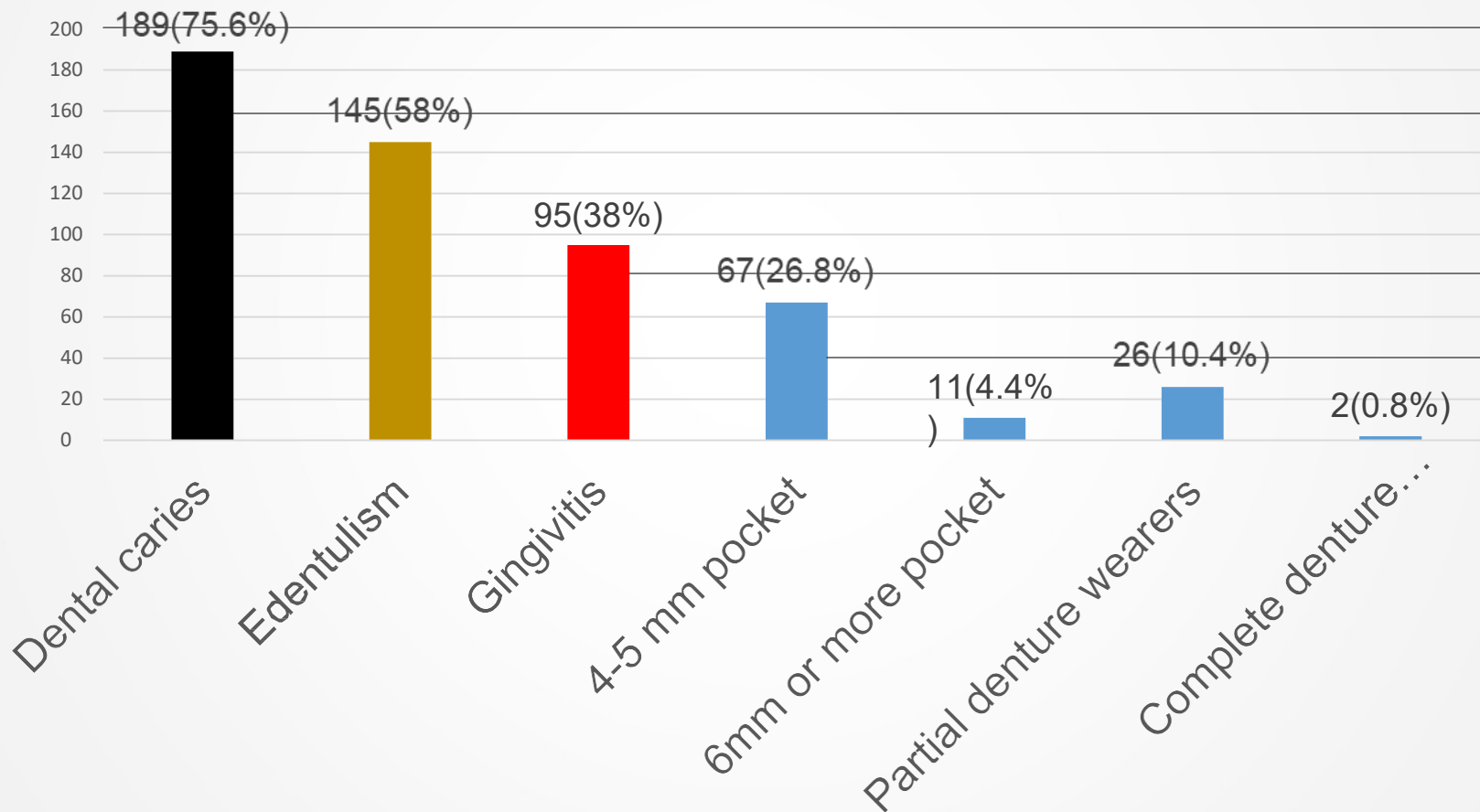
## 21 *Care seeking/access and reasons for past dental visit*

- About 120(48%) never received oral health education and 150(60%) thought oral health affects general health.
- On questions related to care seeking and access 175(70%) had dental visits in the past and 75(30%) never visited to dentist.
- Majority visited dentist in the past for pain due to caries 84(33.6%), tooth extraction 65(26%) and remaining for other reasons like prosthesis, general check up etc.

## *Reasons for not seeking dental care*



# *Distribution of dental disease and conditions in the participants*



24 *Gender wise comparison of gingival status*

Gender	Absence of condition	Presence of condition	P value
Male	47	38	0.131
Female	108	57	

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## *Gender wise comparison of gingival pocket*

Gender	Absence of condition	Pocket 4-5mm	Pocket 6 mm or more	P value
Male	49	29	7	0.010*
Female	123	38	4	

- Gender wise comparison of gingival status showed no statistically significant association( $p=0.131$ ).
- Gender wise comparison of pocket depth showed statistically significant difference( $p=0.010$ ).

# CONCLUSION

- The findings of the study shows that the oral health of the people residing in Manang was poor.
- For the improvement of oral health of those people, government should plan and organize oral health awareness programs, dental camps on a regular basis.
- The government should make oral health services accessible for those people by involving the local government there.

# REFERENCES

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- 3.Li Y, Xiang Y, Ren H, Zhang C, Hu Z, Leng W, et al. Association between periodontitis and dental caries: a systematic review and meta-analysis. *Clin Oral Invest*. 2024 May 10;28(6):306

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## Educational Qualification

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