



## EVALUATION OF ORAL HYGIENE KNOWLEDGE, ATTITUDE AND BEHAVIOUR AMONG LOCAL AUTO-RICKSHAW DRIVERS IN SODEPUR, KOLKATA, INDIA.

### Dental Science

<b>Dr. Anirban Dey*</b>	B.D.S., Guru Nanak Institute of Dental Sciences and Research, Kolkata, West Bengal, India. *Corresponding Author
<b>Dr. Santanu Sen Roy</b>	Reader, Department of Public Health Dentistry, Guru Nanak Institute of Dental Sciences and Research, Kolkata, West Bengal, India.
<b>Dr. Debarshi Jana</b>	Young Scientist, IPGMR and SSKM Hospital, Kolkata, West Bengal, India.

### ABSTRACT

The aim of the short study is to evaluate self-reported oral health knowledge attitudes and behaviour among local auto-rickshaw drivers in Sodepur, Kolkata, India. **Materials and Method:** A cross-sectional study was conducted on 50 auto-rickshaw drivers and was carried out with the help of 10 questions. Age, gender and level of education data was recorded. Statistical analysis was performed with the help of Epi Info™ 7.2.2.2 EPI INFO is a trademark of the Centres for Disease Control and Prevention (CDC) using the Chi-Square test ( $\chi^2$ ). **Results:** The (mean  $\pm$  S.D.) age of the respondents was (38.62 $\pm$ 14.03) with range 19 – 70 years and the median age was 35.5 years. Most of the participants (56.0%) were with age between 20 - 39 years. About 76.0% of the participants was with the level of education up to middle standard (up to 9th standard). The variation of scores of knowledge and attitude, also showed highly significant with level of education and behaviour being non-significant. While the study in age group among the auto drivers, showed significant on knowledge & behaviour and attitude as non-significant. (Chi Square-test,  $P > 0.01$ ). **Conclusion:** Among auto-rickshaw drivers oral health knowledge, attitude and behaviour showed improved results in relation to level of education and age, although there were deficits in behaviour in relation to level of education and attitude in age wise co-relation. For better future of population, it can be improved with awareness programmes.

### KEYWORDS

Oral hygiene, Knowledge, Attitude, Behaviour, Auto-rickshaw Drivers, Age group, Level of education.

#### Introduction:

In 21<sup>st</sup> century oral health is known and accepted as important in relation to overall general body health<sup>10, 11</sup>. For maintaining better general health, a good oral health is important<sup>8</sup>. As many of the general and systemic diseases of the body are directly or indirectly related to the oral health care and conditions, due to which the overall personal health needs an effort from both the medical and dental health care professionals<sup>7, 8, 10, 11</sup>. For ensuring better oral health, preventive measures taken for oral diseases and problems are the most accepted, affected and efficient method. The personal healthcare comprises of knowledge, attitude and behavior. As defined by "Oxford dictionary" "knowledge is expertise and skills acquired by a person through experience or education"<sup>1</sup>. Knowledge involves perception, learning, communication, association and reasoning<sup>1</sup>. Attitude is composed of characteristics and personality of a person<sup>4, 1</sup>. Society and community demonstrate a vast variety of attitude on oral and dental care and dentists. Health behavior is the individual action taken to maintain promote health and better lifestyle<sup>7</sup>. It helps in preventing different diseases in human daily life. Auto-rickshaw drivers spend 10-12 hours on the road to carry passengers towards their destination thus they play a very important role in our society and community. It is important to know their knowledge, attitude and behavior towards their own health, which shows the understanding capacity of the preventive measures towards oral health that is beneficial in maintaining and improving individual's oral health<sup>7</sup>. Hence, this case study was done to gain the oral health knowledge, attitude and behavior among the auto rickshaw drivers.

#### Materials and Method

This cross-sectional study carried out on total 50 voluntarily participated local auto rickshaw drivers in Sodepur, Kolkata. The study was done at the end of the month of September 2020. It includes 50 male auto rickshaw drivers. The study was carried out using a self-administered format questions written in local language (Bengali) and was later added to the study group in English. Standard procedure of informed consent was taken from the selected population (auto-rickshaw drivers). A total of 10 questions were designed to evaluate the oral health knowledge, attitude and behaviour of auto rickshaw drivers. The questionnaires were in the format of multiple objective questions and closed ended of question. The local auto rickshaw drivers were told to pick up only one answer for each question.

#### Questionnaires and Scoring criteria

This question is composed of 10 items for the evaluation of oral health knowledge, attitude and behaviour.

#### 1. Oral health knowledge

It includes two basic question on the basic knowledge of the oral health practice and purpose of maintaining oral health care. The questionnaire was in the form of multiple objective questions and the participant were told to choose and tick on the correct option. Each correct answer is given "one" score and for the wrong answer or don't know were given zero.

#### 2. Attitude towards oral health

It includes three questions. In this section only yes/no type of questions were given. And for answering yes option is given score "one".

#### 2. Behaviour towards oral health

It includes five questions. Out of five some were multiple choice type and each correct answer were given "one" score. Some questions were also in yes/no type and only given score "one" for answering yes option.

#### Statistical Analysis:

Scores are given according to the options selected by the participants. The statistical analysis was performed with the help of Epi Info™ 7.2.2.2 EPI INFO is a trademark of the Centres for Disease Control and Prevention (CDC). Descriptive statistical analysis was performed to calculate mean, median, range, standard deviations and frequency to compare the difference proportions, chi square test.

The difference of the oral health knowledge, attitude and behaviour between the local auto-rickshaw drivers according to age group was assessed by chi square test. The variation of the scores from the level of education among the auto-drivers knowledge, attitude and behaviour using the chi square test.

#### Results:

A total of 50 local auto-rickshaw drivers participated in the study, of which 22 (44%) were equal and above 35 years of age and 28 (56%) were below 35 years of age. The age group ratio was 1:1.27 and most of the study group drivers belong to the age between 19 and 35 years. The distribution of the drivers according to the level of education was primary (20, 40%), secondary (22, 44%) and, higher secondary and

above(8, 16%) respectively.

The (mean ± S.D.) age of the respondents was (38.62±14.03) with range 19 – 70 years and the median age was 35.5 years. Most of the participants (56.0%) were with age ranging between 20 - 39 years. About 76.0% of the participants were with level of education up to middle standard (up to 9<sup>th</sup> standard).

The difference between each of knowledge, attitude and behaviour scores among below 35 years of age and equal & above 35 years of aged drivers was analysed, which had shown statistically highly significant in all the cases (chi square test; P<0.001) except the attitude scores which was non-significant.

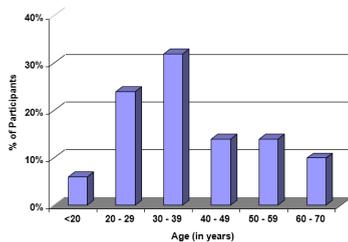
The difference of total scores of primary, secondary and higher secondary & above on auto-rickshaw drivers according to the level of education, on knowledge, attitude and behaviour was analysed. The analysis was found to be statistically non-significant in behaviour (chi square test, P> 0.001) and highly significant in knowledge and attitude (P< 0.001).

**Discussions:**

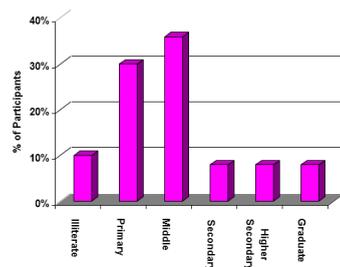
Education of oral health of the individual and community has a major impact. As a dental professional it is important to make population aware of oral health among masses. In India auto-rickshaws is one of the main mode of public transport in urban areas. Health has always been closely linked with occupation. Auto drivers are exposed to harmful environment like pollutant gases, continuous noise and whole-body vibration as well as harmful lifestyle like irregularity of meals, bad posture while driving and stressful occupational conditions due to their working conditions. A harmful lifestyle may lead to poor overall health as well as oral health. Thus, the aim of the study is to evaluate self-reported oral health knowledge attitudes and behaviour among the local auto-rickshaw drivers in Kolkata, India.

The (Mean ± S.D) age of the respondents was (38.62±14.03) with a range 17 – 70 years and the median age was 35.5 years. Most of the participants (56.0%) was with age between 20 - 39 years (Figure 1). About 76.0% of the participants was with level of education up to middle standard (up to 9<sup>th</sup> standard) which was significantly higher and 24.0% was from secondary level to graduate level (Figure 2).

**Figure 1: Age of the participants.**



**Figure 2: Level of education of the participants.**



In the present study, the scores of the knowledge, attitude and behaviour of the drivers on the basis of age (Chi-square (x<sup>2</sup>) test) showed that there was significant association between age and knowledge about oral hygiene of the participants (P=0.0025). Excellent Knowledge was significantly higher among the older participants (age≥35 years) (61.5%) as compared to participants (age<35 years) (38.5%) (Z=3.39; P<0.0001). However, excellent attitudes were observed more among participants (age<35 years) (52.6%) as compared to older participants (age≥35 years) (47.4%). And, there was no significant association between age and attitude towards oral hygiene of the participants (P=0.21). Thus, the attitudes

were more or less equally distributed over age. Excellent behaviour was observed with significantly higher proportion among older participants (age≥35 years) (68.8%) as compared to participants (age<35 years) (31.2%) (Z=5.37; P<0.0001). There was significant association between age and practice towards oral hygiene of the participants (P=0.018). Thus, the difference in age group between auto-drivers knowledge and behaviour being significant and attitude as non-significant (Table 4).

**Table 4. Chi square test for comparison of KAB scores of <35 years and ≥35 years of age group.**

Questionaries	Age Group	N	P value	Chi-square x <sup>2</sup>	Significance
Knowledge	<35	22	0.0025	11.98	P<0.001
	≥35	28			
Attitude	<35	22	0.21	3.14	P>0.001
	≥35	28			
Behaviour	<35	22	0.018	10.03	P<0.001
	≥35	28			

In the present study comparison was done on level of education and knowledge about oral hygiene of the participants. Test showed that there was significant association between level of education and knowledge about oral hygiene of the participants (P<0.001). Knowledge were significantly higher among the participants with level of education with secondary & above (69.2%) as compared to the participants with level of education up to primary (30.8%) (Z=5.37; P=0.0001). Level of education and attitude towards oral hygiene of the participants test showed that there was significant association between level of education and attitude towards oral hygiene of the participants (P=0.012). And attitudes were significantly higher among the participants with level of education up to primary (57.9%) as compared to the participants with higher level of education (42.1%) (Z=2.26; P<0.001). The level of education and behaviour towards oral hygiene of the participants test showed that there was non-significant association between level of education and practice towards oral hygiene of the participants (P=0.39). Thus, behaviour did not depend on level of education. This indicated that participants with lower level of education were more cautious about oral hygiene than educated participants. Work load among the educated might be one of the causes towards the poor attitudes (Table 5).

**Table 5. Chi square test for comparison of KAB scores of primary, secondary and higher secondary & above group.**

Questionaries	Level of education	N	Chi-square value (x <sup>2</sup> )	P value	Significance
Knowledge	Primary	20	13.75	0.0001	P<0.001
	Secondary	22			
	Higher secondary and above	8			
Attitude	Primary	20	12.82	0.012	P<0.001
	Secondary	22			
	Higher secondary and above	8			
Behaviour	Primary	20	5.37	0.39	P>0.001
	Secondary	22			
	Higher secondary and above	8			

The study showed that the mean percentage of the scores including standard deviation of overall KABIN maintain oral hygiene of the respondents was (56.20±22.12) and the median was 60. Most of the auto-drivers (62.0%) had excellent over KABIN maintain oral hygiene. And almost 86.0% of the participants was from good to excellent in maintain oral hygiene. Only 14.0% of them had poor KABIN maintain oral hygiene (Table 6) (Figure 3).

Akila Ganesh, (2017) S et.al did a study on Oral Health-Related Knowledge, Attitude, and Practices among Auto Drivers in South Chennai where they found out about 47.1% of the subjects knew that tooth decay is a disease that destroys the tooth. About 63.7% of the subjects were aware that tobacco consumption causes oral cancer. The

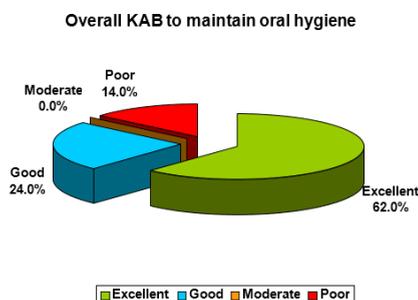
importance of oral health was perceived by 96.1% of the participants. While 61.8% of the subjects performed toothbrushing once a day, 50% of the auto drivers changed their toothbrush once in 3 months.

Yadav Kopula et.al (2018) did a study on Attitudes of Auto-rickshaw Drivers Towards Oral Health Care, Barriers of Dental Service Utilization in Vikarabad, Telangana, India.<sup>4</sup> where they found among 200 male participants, mean age was found to be 32 years. 79.5% knew that tobacco consumption causes cancer. 56.5% had a tobacco-related habit. Of them, 45.1% were not willing to quit. 55.0% did not visit the dental hospital as they did not experience any dental problem.

Veeresh DJ et.al (2019) did a study Self-Perceived Oral Health among Autorickshaw Drivers in Davanagere City- A Cross Sectional Survey where they found Majority of the study population perceived their teeth status as average and above (97%) whereas only 6.7% of them perceived it as poor<sup>7</sup>.

Various previous researchers showed conflicting results of the studies on oral health knowledge, attitude and behaviour among different professionals<sup>7</sup>, but the results of these studies can be helpful in the planning of different oral health education programs, preventive measures and other activities related to the improvement of the community level oral health. These studies can be taken as a guide to improve the oral health among different professionals, which ultimately helpful at the community level.<sup>8</sup>

**Figure 3: Overall KAB to maintain oral hygiene.**



### Conclusion:

Our study reflects knowledge, attitude and behaviour among auto-rickshaw drivers. In this era where everything is expected in an instant, transportation system needs to be improved. Auto rickshaw drivers form a broad part of public transport systems, providing them social security through various schemes should be an essential venture of the government. There is need for creating awareness regarding oral health promotion and regular dental check-up.

### Questionnaires

#### Knowledge Questions:

- What is the main purpose of tooth brushing?
  - Prevention of tooth decay.
  - Achievement of cleaner and brighter teeth.
  - To remove stain on teeth.
  - Don't know.
- Effect of retention of sweet food on teeth.
  - Can lead to decay of teeth.
  - Calcium deficiency.
  - Leads to bleeding gum.
  - Don't know.

#### Attitude Questions

- Guttika and Tobacco chewing is a bad habit? YES/NO
- Smoking in any form is bad for health? YES/NO
- Well cleaning to teeth can be done without using tooth paste? YES/NO

#### Behaviour Questions

- Minimum brushing of teeth?
  - Once a day.
  - Twice a day.
  - Thrice a day
- Ideal brushing material?
  - Finger and tooth paste.
  - Brush and tooth paste.

iii. Don't know

8. Cleaning of tongue? YES/NO

9. Use of mouthwash? YES/NO

10. Bleeding of gums while brushing? YES/NO

### Reference:

- Archana J Sharda, Srinath Shetty, A Comparative Study of Oral health Knowledge, Attitude and Behavior of First and Final Year Dental Students of Udaipur City, Rajasthan. *J Oral Health Comm Dent* 2008;2(3):46-54
- Veena Melwani, S et.al. Study to assess the socio-demographic profile, health status and working conditions of auto-rickshaw drivers in Bhopal. *International Journal of Community Medicine and Public Health Int J Community Med Public Health*. 2018 Apr;5(4):1323-1326.
- Akila Ganesh, S et.al. did a study on Oral Health-Related Knowledge, Attitude, and Practices among Auto Drivers in South Chennai. *Journal of Indian Association of Public Health Dentistry* | Volume 15 | Issue 4 | October-December 2017
- Yadav Kopula, S et.al (2018). Attitudes of Auto-rickshaw Drivers Towards Oral Health Care, Barriers of Dental Service Utilization in Vikarabad, Telangana, India. *Journal of Oral Health and Community Dentistry*, September-December 2018; 12(3):79-84
- Veeresh DJ, S et.al. Self-Perceived Oral Health among Autorickshaw Drivers in Davanagere City- A Cross Sectional Survey. *Acta Scientific Dental Sciences* 3.9(2019):86-91.
- Dr. Mohit Mangla, S et.al. Oral Health Awareness Among Different Professionals. *Int. J. Adv. Res.* 5(7), 1529-1541.
- Shabeer Ahamed, S et.al (2008). Evaluation of the Oral Health Knowledge, Attitude and Behaviour of the Preclinical and Clinical Dental Students. *Journal of International Oral Health* 2015; 7(6):65-70
- Shiraz Usman, Bhatt SS, Sargod SS. Oral Health Knowledge and Behavior of Clinical Medical, Dental And Paramedical Students In Mangalore. *J Oral Health Comm Dent* 2007;1(3):46-48
- Steph A, Wardle J, Vinck J, S et.al. Personality and attitudinal correlates of healthy and unhealthy lifestyles in young adults. *Psychology and Health* 9:331-43
- Baseer MA, S et.al (2012). Oral Health Knowledge, Attitude and Practices among health professionals in King Fahad Medical City, Riyadh. *Dent Res J (Isfahan)* 2012;9(4):386-93.
- Mumtaz R, S et.al. A comparative evaluation of oral health knowledge, attitude and practices of dental and pharmacy students of Riphah International University. *Pak Oral Dent J* 2009;29(1):131-6.