



LIP LACERATION ASSESSMENT AMONG STUDENTS OF DELTA STATE UNIVERSITY IN ABRAKA, NIGERIA

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ABSTRACT

The human lip is a highly visible aesthetic feature due to its positioning on the face, therefore, laceration of the lip may be viewed as a form of cosmetic deformation. This study is aimed at evaluating the prevalence level of lip laceration among Delta State University undergraduates in Abraka, Nigeria. Descriptive cross-sectional study design was employed with data obtained via self-administered questionnaire. Respondents were Undergraduates of Delta State University, Abraka, and aged 15-30 years. Data were analysed for inferential statistics using chi-square test tool. Females 198 (51.6%) constituted majority of the respondent as against males 186 (48.4%). Majority of the respondents were within the ages of 18-20 years (210, 54.7%) with the least age group been those of 26-30 years (28, 7.3%). The study reveals a low prevalence of lip laceration amongst the population (79, 19.8%). A significant association was observed between age (0.020), gender (0.030) and lip laceration prevalence level. The study revealed that the female gender 49 (62%) had a higher prevalence of lip laceration alongside individuals within the ages of 15-20 years 47 (59.5%). Overall, the study concludes that prevalence of lip laceration among students of Delta State University in Abraka, Nigeria as at the time of study is low and this a significant literature data.

Keywords: Age, Laceration, Lip, Prevalence, Gender

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INTRODUCTION

According to Moore *et al.*, (2014), Lip can be defined as a mobile sphincter with its muscular movements controlled by the maxilla and mandible. Embryologically, upper lip is developed from the joining of the lateral maxillary processes and midline frontonasal process with the lower lip formed from a fusion between both mandibular processes at the midline (Moore *et al.*, 2014). The lip musculature comprises levator group of muscles, orbicularis oris, depressor angulioris, depressor labii inferioris, mentalis, risorius, zygomaticus major and minor (Williams *et al.*, 1995). Its neurovasculature structure comprises of the facial nerve (lip depressors and levators), mental nerve (lower lip), infraorbital nerve (upper lip), facial artery and vein for vascular supply and the submental and submandibular nodes for lymphatic drainage (Williams *et al.*, 1995).

As stated by William *et al.* (1995), the lip is an anatomical feature that has been observed to be commonly associated with laceration which is also referred to as lip injury or lesion. With one of the lip functions been aesthetic balance, this condition has proven to be a major challenge. Infections, trauma, autoimmune disease and tumour have been observed to be associated with the lip, and have been classified as etiological factors in the development of lip laceration (Constantinidis *et al.*, 2000). Other etiological factors for lip laceration include road traffic accident, human bite, home accidents, and interpersonal violence (Bansal *et al.*, 2017).

Adeyemo *et al.*, 2018 stated that in every healthcare facility, accident and emergency room, traumatic injuries to the cranio-maxillofacial region soft tissue (lips) are the most commonly encountered pathological problems. Various studies have also shown environmental effects on the lips; such as sun, wind and extreme temperatures due to reduction in skin barrier function and its water retention capacity (Fomete *et al.*, 2018). Treatment and management techniques have been improvised to help combat lip laceration and they include reconstructive operative surgeries, with pharmacological management techniques which are strictly dependent on the etiologic of the laceration (Nabili and Knott, 2008). For example, some authors have advised prophylactic antibiotics for management of lip laceration caused by human bites since pathogens such as *Staphylococcus aureus* and *Eikenella corrodens* are suspected to lead to lip laceration (Olaitan *et al.*, 2007).

AIM OF THE STUDY

The purpose of this study is to assess and evaluate the prevalence level of lip laceration among Delta State University undergraduates in Abraka, Nigeria.

MATERIALS AND METHODS

A descriptive cross-sectional study design was adopted for this study. Data collection was carried out via a self-administered questionnaire consisting of respondent's demographics (age and gender) and lip was observed physically for any presence of laceration. All activities pertaining to this study were carried out within the time frame of three (3) months from the month of December 2019- February 2020. Ethical consent was obtained from the Ethics and Research Committee of the Department of Human Anatomy and Cell Biology, Faculty of Basic Medical Sciences, College of Health Sciences, Delta State University in Abraka. The population location 'Abraka' is a town in Delta state, Nigeria. It is commonly referred to as a University town because it's the home of the University, currently with

a student population of about 36,000 students. Inclusion criteria for this study were respondents who were undergraduates in the Delta State University in Abraka, Participant’s personal details and private interaction were kept in utmost secrecy with only the age and gender of participants been used in order to ensure confidentiality of respondent’s information. Data analysis eventuated via the chi-square test tool for inferential statistics. Analysed data were presented in tables and charts and significance level was attributed to $p < 0.05$.

RESULTS AND DISCUSSION

Table 1: Gender distribution of respondents

Gender	Frequency (%)
Male	186 (48.4)
Female	198 (51.6)
Total	384 (100.0)

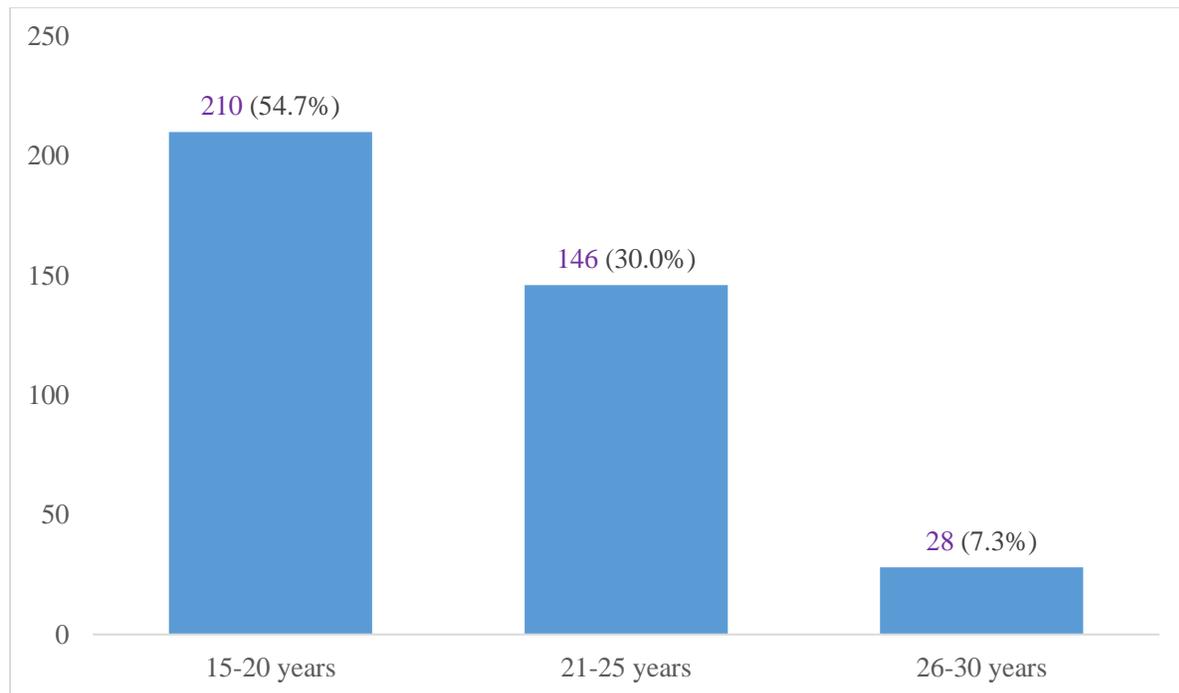


Figure 1: This bar chart illustrates the age distribution of the respondents

Table 2: Prevalence of Lip laceration among respondents.

Prevalence of Lip laceration	Frequency (%)
Yes	79 (19.5)
No	305 (80.5)
Total	Anibor et al., 2021

Table 3: Test of Association between gender and prevalence of lip laceration among respondents

Gender	Yes	No	Chi-square	df	P-value
Male	30 (38%)	156 (51.1%)	4.359	1	0.037
Female	49 (62%)	149 (48.9%)			
Total	79 (100%)	305 (100%)			

Table 4: Test of Association between age and prevalence of lip laceration among respondents

Age group	Yes	No	Chi-square	Df	P-value
15 – 20 years	47 (59.5%)	163 (53.4%)	7.056	1	0.029
21 – 25 years	22 (27.8%)	124 (40.7%)			
26 – 30 years	10 (12.7%)	18 (5.9%)			
Total	79 (100%)	305 (100%)			

Table 1 depicts the gender distribution of the respondents in the studied population from which it was deduced that most of the respondents were female with a frequency of 198 (51.6%) and males had a prevalence of 186 (48.4%).

From figure 1 above it can be observed that most respondents in the study were within the age range of 15-20 years with a frequency of 210 (54.7%), which was closely followed by those aged 21-25 years (146, 38.0%) with the least age group been those 26-30 years with a frequency of 28 (7.3%).

Evaluation from table 2 has shown the distribution of lip laceration among the observed respondents with the incidence level of this condition been $n = 79/384$ (19.8%), majority of the respondents without the lip laceration constituting a frequency of 305 (80.5%) of the observed respondents.

Results observed from table 3 showed gender and the prevalence of lip laceration depicting a significant association with a p-value of 0.037. In this study, age groups and the prevalence of lip laceration had a significant association with a p-value been 0.029 (table 4).

Lip laceration as a medical condition has posed a major challenge of aesthetic alongside digestive functions (Williams *et al.*, 1995). Studies over the years have observed various etiological factors responsible for this condition which range from human bites, animal bites, developmental, inflammatory, potential malignant disorders, infection, allergic and immunological factors etc. (Olaitan *et al.*, 2007). Despite the feature of this condition, several management techniques have been innovated over the years one of which is reconstructive surgery which has proven to be appropriate (Nabili and Knott, 2008). Other management techniques developed have been found to be accustomed to distinct causative factors of lip lesions (Olaitan *et al.*, 2007).

On investigation of results from this study, similarity was observed on comparison of results obtained from a retrospective study conducted by Adeyemo *et al.*, 2012, among Nigerians; it was observed that females were more with lip laceration compared to males. Sami *et al.*, (2018), also showed similarity with findings from this study, conducting a retrospective study, sampling 231 patients precisely 102 (57.3%) females and 76 (42.7%) males. Despite the agreement of the result from this study with other studies, it depicted dissimilarity with results obtained from a study conducted by Bansal *et al.* (2017) among Indians; they observed that 309 (62.4%) were males and 185 (31.9%)

females. Similar disagreement was observed in results obtained from a study conducted by Patil and Maheshwar, (2014) among Indians depicting the males (629, 63.9%) were more with lip laceration than females (355, 36.1%).

Our finding is tandem with a study conducted by Osterne *et al.* (2011), among Brazilians who showed similar findings with those observed in the current study, prevalent age being those in late teens and early twenties. But these results varied from those obtained from studies conducted by Ntomouchtsis *et al.*, 2010; Fomete *et al.*, 2018 which both depicted the most affected age group as those in their 3rd and 4th decades respectively.

Finding from this study is in keeping with studies conducted by Adeyemo *et al.* (2012) (37.0%), Bansal *et al.* (2017) (16.4%), Patil and Maheshwari, (2014) (18.8%) which all showed low prevalence levels of lip laceration. But their findings were in disagreement with those obtained from studies conducted by Sami *et al.* (2018) (77.1%) which indicated lip laceration having a high prevalence among the Lebanese.

Similar submission to the result of the present study was reported by Osterne *et al.* (2011) who reported that age depicted a significant association with lip laceration prevalence with a p-value of 0.040 which were similar to results obtained from this study (p=0.029), but on comparison with results obtained from a study conducted by Sami *et al.* (2018), dissimilarity was observed (p=0.645). It was also observed from the submission of Fomete *et al.* (2018) who reported same results with our study that there exist a significant association between gender and lip laceration but these finding is in disparity with those by Sami *et al.* (2018) which depicted that gender had an insignificant association with lip laceration.

CONCLUSION

Conclusively, this study depicted the female gender 49 (62%) having a higher prevalence of lip laceration alongside individuals within the ages of 15-20 years 47 (59.5%) with the least affected age group been those aged 26-30 years with a frequency of 10 (12.7%). It was also observed that both gender and age depicted significant association with the prevalence level of lip laceration.

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