Prevalence and Associated Factors to Uvula Cutting on Under Five Children in Amhara Region, Debre Birhan Town, 2016/ 2017

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Abstract: *Background:* Traditional uvula cutting, a procedure which consists of cutting part or the entire uvula, it is a common practice in sub-Saharan Africa. In Ethiopia, studies conducted so far were very limited and focused on adult TMP. uvula cutting is commonly practiced in the northern part of Ethiopia but rarely seen in Gambela region.

Objective: The aim of the study was to assess the prevalence and associated factors on uvula cutting in DBT, in 2015.

Methods: A community based cross-sectional study design was conducted from January seven to February eight2015. The data was collected by trained diploma nurses and was analyzed by using EPI-Info 3.5.4,spss version 16 computer software, the result was presented in the form of text, tables, graphs and pi-chart.

Result: The prevalence of uvula cutting among under five children was 23.7%. In this study occupational status, house wife, farmer and others like bar tender) and current age of child are significantly associated with the practice of uvula cutting.

Keywords: Uvula cutting, under five children, prevalence, associated factors.

1. INTRODUCTION

1.1. BACKGROUND

The uvula is a small soft structure hanging from the free edge of the soft palate in midline above the root of the tongue. Histological it contains muscle, connective tissue and mucus membrane. Its blood supply comes from the ascending palatine branch of the facial artery and ascending pharyngeal artery [1]. It is rarely presents as a problem to the child and infections are infrequent. uvula cutting is a procedure involving cutting of the uvula and sometimes the nearby structures such as tonsils by non trained personnel [2].

For centuries, investigators have attributed various functions and conditions to the uvula, some speculative and others with definitive scientific basis [3]. Some have emphasized its influence in the tone of voice a and others its immunological function [4]. Recently the role of the uvula is moistening of the oro-pharyngeal mucosa, as evidenced by the experience of dryness of the throat following uvulo palatopharyngoplasty (UPPP) in patients [3, 4]. The uvula has been shown to secrete large amounts of thin serous saliva which bathes the oro-pharyngeal mucosa [3].

Traditional uvula cutting, a procedure which consists of cutting part or the entire uvula, is a common practice in sub-Saharan Africa. It is carried out by itinerant traditional practitioner who double as barbers using a sickle knife, performing other procedure, such as incision and drainage of abscesses, circumcisions, and tooth extractions, and so forth [5-7]. The uvula is assumed to be the organ responsible for all throat conditions by these traditional practitioner, therefore, gets amputated. Cutting equipments are not cleaned and/or sterilized, and therefore exposing individuals to complications such as hemorrhage, anemia, septicemia, tetanus, risk of the Human Immuno deficiency Virus (HIV) infection, and death [8-10].

Most Ethiopians believe that if baby has a uvula and as or ethro at develops, they believe that, the baby will suffocate. uvula cutting is thus performed prophylactic ally in the first works of life or subsequent to respiratory infection by a traditional healer known as an karkorach or intil korach (tonsil / uvula cutter) resulting in partial or total removal of the uvula [11].

1.2. Statement of the Problem

Harmful practices based on tradition, culture, religion or superstition are often perpetrated against very young children or infants, who are clearly lacking the capacity to consent orto refuse consent themselves [12].

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The procedure of uvula cutting may easily introduce harmful micro-organisms which could lead to serious complications. These complications could be either local or disseminated (systemic). The local complications are the most prevalent ones and include: Speech problems, Injury to the tongue (e.g. through being pulled), Broken teeth as a result of a struggle, Local infection, possibility of no teeth or deformity of teeth, Excessive bleeding, Long term dental problems. Some of the systemic complications include: Sepsis, Tetanus and HIV/AIDS. Traditional uvula cutting practice is mostly performed in rural parts of Ethiopia but it is also common in urban area and this procedure is prevalent in many parts of Africa. Cutting equipment are not cleaned with disinfectant or sterilized The practice has been endangering thousands of innocent babies to great hazards, yet no civil society or non-governmental organization seems to be fighting against uvula removal whereas giving consideration to issue like this will significantly reduce other issues related to child mortality [15, 16]. Other variations of the practice include using a reed fork in morocco, twisted strands of horsehair in Ethiopian and a hot knife in Egypt [13, 14] complications following the procedure are common and include tetany, hemorrhage and infections [18].

The Ethiopian demographic health survey (EDHS) 2005 showed that the prevalence of uvula cutting increases with woman's age rising from 37% (age 15-19) to 49% (age 45-49), indicating an increasing trend in the practice [36]. uvula cutting is commonly practiced in Ethiopia and involves the removal of the uvula with horse tail hair or thread looped through a bamboo stick. Often, a special knife-like, sharpened iron is used to cut the uvula before it is taken out. Tonsillectomy refers to the removal of the tonsils, often using just the index finger, to treat sore throats and swallowing. These harmful traditional practices may pose a health hazard particularly if carried out with unsterilized instruments or in an unhygienic setting. Large majority of women (84 percent) have heard about uvula cutting. Knowledge of the practice is much higher among women in urban than in rural areas and ranges from a low of 52 percent among women in Gambela to universal knowledge among women in Tigray. Highly educated women and women from the highest wealth quintile are much more likely to have heard of the practice than less educated women and women in the other wealth quintiles. Differences by age are small [17].

Uvula cutting is an unnecessary and potentially dangerous mutilation as it results in various complications including hemorrhage, septicemia, Cellulitis of the neck, peritionsillar abscess, pneumothorax, parapharyn gealabscess [18]. Amputate the uvula with non-sterilized sickle-shaped knives without any form of anesthesia, after which they apply a mixture of herbs to the stump on the soft palate, so severe complications have been found in association with the procedure hemorrhage and anemia, oropharyngeal infection, callulitis of the neck, septicemia, tetanus, risk of HIV, peritonsillar and parapheryngeal abscesses, aspiration with consequent upper air-way obstruction and laryngeal diseases, infant and child morbidity and even death [18]. The dangers associated with traditional uvula cutting have been enumerated; the issue to address is the mode of improving the health care outcomes for the people in the society.

1.3. Significance of the Study

Traditional practices like uvula cutting are the community problems in Ethiopia and it is an important public health problem still. Previous research done in other areas shows there are many health complication related with this traditional practices, this study help to assess these anticipated complications in Debre Birhan Town. The study have very useful to hinder uvula cutting in Debre Birhan Town by raveling the magnitude of the issue to responsible bodies and struggle this Harmful traditional practice.

2. OBJECTIVES

2.1. General Objective

To assess the prevalence and associated factors for uvula cutting on under five children in DebreBirhan Town, 2015

2.2. Specific Objective

To assess prevalence of uvula cutting among under five children in DebreBirhan Town,

To identify the associated factors to uvula cutting for under five children in DebreBirhan Town.

3. METHODOLOGY

3.1. Study Area

The study was conducted in DebreBirhan town which is located 130 kilometer from Addis Ababa in the direction of north east of Amhararegion. Total population of the town is 97,969 and among this male population accounts 44,301 and female is 53,668.

3.2. Study Design and Period

A community based quantitative cross-sectional study design was conducted from January seven to February eight 2015.

3.3. Source Population

Source population were all children aged less than 5 years and their mothers/care givers who were living in the town.

3.4. Study Population

The study population were children of aged less than 5 years and their mothers/care givers who were selected and included in the study.

3.5. Inclusion and Exclusion Criteria

3.5.1. Inclusion Criteria

All women who have a child of less than five years who are permanent residents for at least 6 months.

3.5.2. Exclusion Criteria

Women who are severely ill.

3.6. Sample

3.6.1. Sampling Design

Multi stage sampling was used. First we will stratify the town as Rural and Urban,then using simple random sampling we selected 2 kebeles from Urban and 3 kebeles from Ruralareas.Then quota sampling was used to study households from selected areas.

3.6.2. Sampling Method

DebreBirhan town has nine kebeles, of these kebeles 02, 03, 04 and05 are urbans. Kebele 01,06,07,08.09 Contains both urban and rural population. Generally there are 22,783 households in the town of which 19,462 lives in urban and 3,321 in rural. The data was collected using stratifying sampling by classifying the population into urban and rural strata. By using simple random sampling Kebele 02, 03 from urban and Genet, Faji and Zanjira from rural kebele were selected. By using proportion to population size 344 participants from urban and 112 participants from rural households were selected. House holds was studie during quota sampling and mothers who have at least one child below the age of five yearswas interviewed. (Figure **1)**

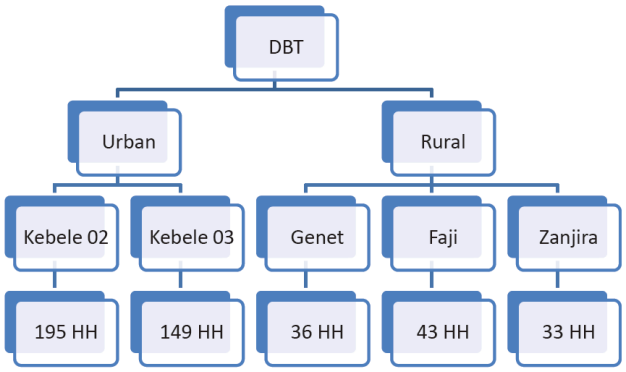

Figure 1: Sampling procedure DebreBerhan town, 2009.

3.6.3. Sample Size Determination

The sample size was calculated using a single proportion formula. The p-value is taken from Tigray region that is 72.8%. Taking the confidence 95% and5 % of error level.

$N=(za/2)^2(pq)/d^2$.

$N=(1.96)^2(0.728)(0.272)/(0.05)^2 =304$.

Taking design effect 1.5.

304*1.5=456.

3.7. Study Variables

3.7.1. Independent Variables

Age of mother.

Occupation.

Marital status.

Educational status.

Residence.

Income.

Current child age.

Child sex.

3.7.2. Dependent Variables

Practice of uvula cutting

3.8. Data Collection Methods

The questionnairewas prepared in English and was translated to Amharic.The data was collected by interview for one month period and was entered by using EPI-Info 3.5.4, SPSS version 16 computer

software's, and then manipulated data was presented in the form of text, tables, graphs and pi-chart.

3.9. Data Quality Assurance

The questionnaire that was prepared first in English then translated to Amharic to check consistency, pre test was done prior to the actual interview. Two days training was given for data collectors. The quality of the data was checked every day for completeness and efficacy.

3.10. Ethical Consideration

First approval from the school of health science department of public health offered, DBU and supervisor was secured. Support letter was written from school of health science to the concerned bodies and we will take willingness of the responders to respond our interview and in form the objective of the study and not to expose their secrete to any other person, other than the principal investigators. All the study units have the right to stop responding to our interview at the time they want.

3.11. Dissimination Of The Result

The result of the study will be distributed to health service providers, DBRH and to other concerning bodies like Non-Governmental Organizations (NGOs). The findings of the study will be presented to DBU societies in seminar and it will be put on health libraries, clubs and different facilities for the sake of awareness and for those who need to proceed with our study.

3.12. Operational Definition

Uvulectomy: Surgical removal of the uvula traditionally

Barbers: Local uvula cutters tradionally

Dysphagia: Difficulty of swallowing or pain during swallowing

4. RESULTS

4.1. Socio Demography

From a total of 456 respondents the mean age of mothers or care takers was 30.298 with minimum age

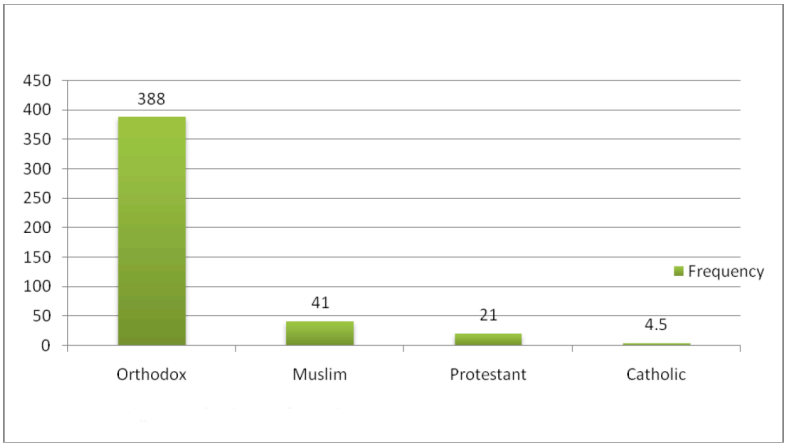

Figure 2: Religion of mothers or care takers Debre Behran town, 2009.

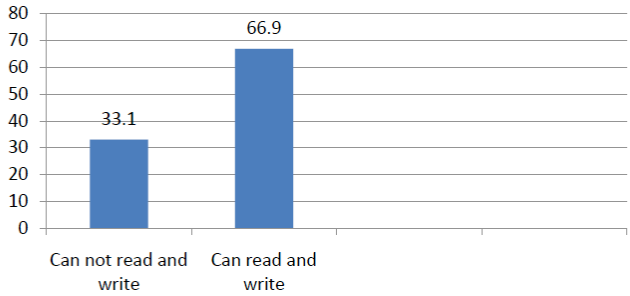

Figure 3: Educational status of mother or care takers Debre Behran town, 2009.

19 and maximum 85. Most of the respondents (85.1%) was Orthodox Religion follower and k followed by Muslim, protestant and Catholic 9%, 4.6% and 1.3% respectively. 87.1% of respondent's ethnicity was Amhara; the rest 12.9 were Oromo, Tigre and Gurage. 33.1% of mothers or care takers cannot read and write, the rest 66.9% can read and write. 76.5% of the respondents are married. (Figure **2,3,4)**

The occupational status of the respondents was governmental employee, housewife, farmer, merchant and others like bar tender accounts 21.1%, 42.3%, 23.5%, 9.0% and 4.2% respectively. The average monthly income of the family was 2094 birr with minimum 166 and maximum 9000 birr. (Figure **5**)

Most respondents 428(93.9%) have only one under five child, while the rest 28(6.1%) have two children in their house. From those who have two children age of older child who are less than or equal to two accounts for 10.7% and those who are greater than two accounts for 89.3%.

4.2. The Practice Of Uvula Cutting

The prevalence of uvula cutting among under five children is 23.7%.

From those who have two child 97.2% practiced on younger child and the rest 2.8% practiced on both. 34.9% of the respondents were stimulated by friend to perform the procedure followed by 50.5%, 13.8% and 0.9% no better cure by medical treatment, traditional uvula cutter and religious leaders respectively. Almost all (88.9) perform the procedure to prevent swelling, pus and rupture of the uvula, others 11.2% to prevent cough and religious factor. The main reason they did not went to health facility was no better cure than uvula cutting, did not know the reason, exacerbates the problem and long distance from health facility accounts 49.5%, 9.5%, 36.2% and 4.8% respectively. 77.8% of uvula cutting performed at traditional uvula cutter and the rest at home. Almost all uvula cutting is done by local uvula cutter (98.1%) and the rest by traditional birth attendant. Instruments they use for uvula cutting are horse hair, blade, knife and others accounts 73.1%,

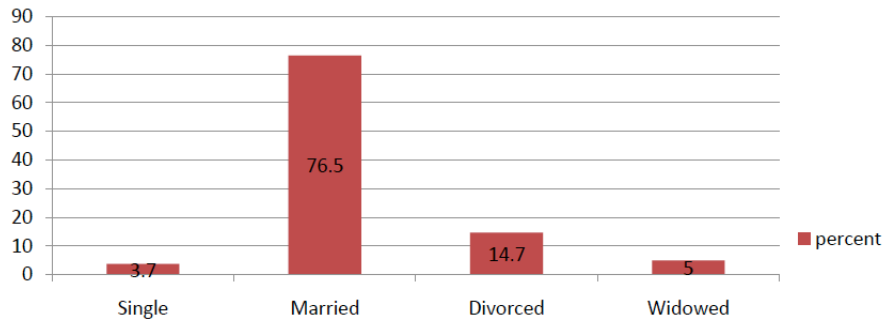

Figure 4: Marital status of mothers or care takers Debre Behran town, 2009.

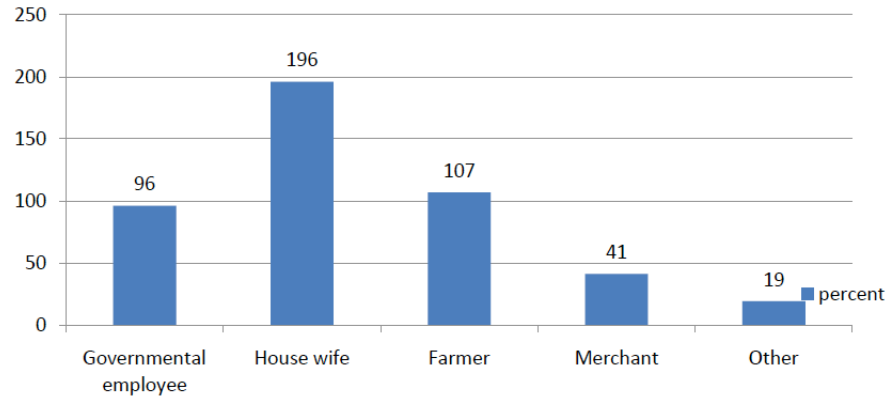

Figure 5: Occupational status of mothers or care takers Debre Behran town, 2009.

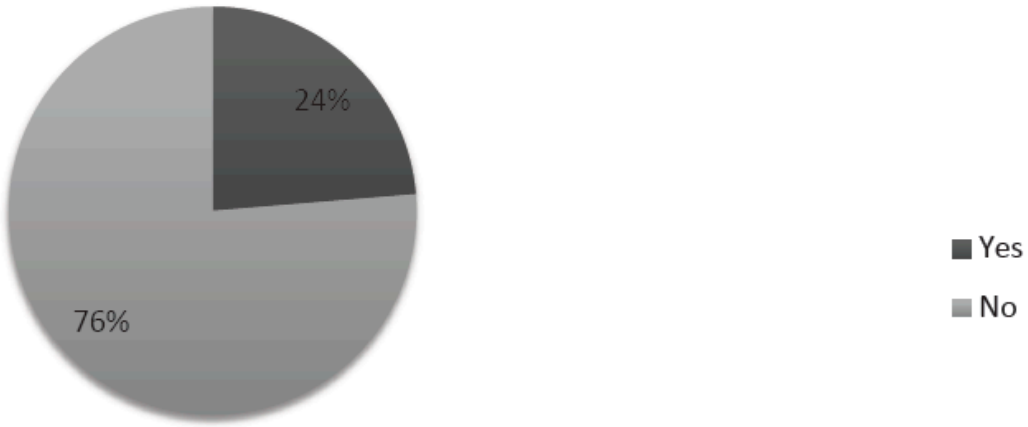

Figure 6: Prevalance of uvula cutting Debre Behran town, 2009.

15.7%, 0.9% and 10.2% respectively. 88.9% of the instruments are cleaned by water, the rest by flame and cloth. From those who practice uvula cutting 35.2% thought that as uvula cutting is not harmful. (Figure **6**)

From those who did not practice uvula cutting 51.2% were told by health extension workers as uvula cutting is harmful. Others 8.1%, 29.9%, 2.0% and 8.1% neighbor's, no one, mother or father, from one to five discussion and through formal education respectively. 88.4 % think as it is harmful.

5. EFFECTS SEEN AFTER UVULA CUTTING

Bleeding, fever, voice or speech problems are mostly observed complications after uvula cutting. 65.7% of the respondents observed physical problems after uvula cutting and from the problems difficulty of swallowing, weight loss, muscle wastage accounts 78.4%, 16.2% and 5.4% respectively. Emotional problems accounts for 66.7%, of the problems irritability accounts for 40.5%; un able to eat or feed, persistent crying and depression accounts 24.3%, 13.5% and 21.6% respectively.

6. ASSOCIATED FACTORS

From our study occupational status (house wife, farmer and others like bar tender) and current age of child are significantly associated with the practice of uvula cutting.

Uvula cutting were practiced children's currently greater than two and above years AOR 2.451(95% CI 1.331-4.514) as likely times children's currently less than or equal to two years.

Regarding to occupational status house wife were AOR 2.969(95% CI 1.346-6.550) times, farmers AOR 2.859(95% CI 1.1.161-7.039) times and others like bar tender AOR 3.858(95% CI 1.164-12.792) times as likely to practice uvula cutting than government employees.

Others like age of mother, religion, ethnicity, residence, marital status, family income and sex of child have no significant association with uvula cutting. (Table **2**)

7. DISCUSSION

The prevalence of uvula cutting among under five years was 23.7 %(95% CI 19.9%-27.9%). This is lower as compared to research conducted in Axum, Gondar, Nigeria, Arabia and mini EDHS 2005. This could be due to time difference in study, deployment of health extension workers, effect of one to five discussions and Media's effect. But it is higher as compared to research conducted in Tanzania. This difference could be due to in Tanzania the ministry of health strictly discourages this harmful traditional practice and those who those who were not recognized by the ministry of health practice the procedure.

The reasons to perform uvula cutting were to prevent swelling, pus and rupture of the uvula (88.9%) and to prevent cough together with religious factor (11.1%). This is relatively high as compared to study conducted in Axum (68.5% to prevent swelling, pus and rupture of the uvula). This difference could be due to our study contains both urban and rural population and it is completely different as compared to research conducted in Nigeria in which the main reason was

Table 2: Associated Factors to uvula Cutting, Debre Birhan Town, 2015

NO	Variable	Category	Uvula cutting		COR	P-value	AOR	P-value
			Yes	No				
1	Residence	Urban	70	274	1		1	
		Rural	38	74	2.010(1.255-3.219)	0.004	1.486(0.854-2.584)	0.161
2	Educational level	Cannot read and write	47	104	1.808(1.159-2.819)	0.009	1.585(0.954-2.634)	0.076
		Can read and write	61	244	1		1	
3	Religion	Orthodox	100	288	1			
		Muslim	4	37	0.311(0.108-0.895)	0.030		
		Protestant	4	17	0.678(0.223-0.062)	0.493		
		Catholic	0	6	0.000(0.000--	0.999		
4	Occupational status	Government employee	9	87	1		1	
		House wife	52	141	3.565(1.73-7.595)	0.001	2.969(1.346-6.550)	0.007
		Farmer	34	73	4.502(2.027-9.999)	0.000	2.859(1.1.161-7.039)	0.022
		Merchant	6	35	1.657(0.549-5.003)	0.370	1.558(0.497-4.884)	0.447
		Others	7	12	5.639(1.772-17.943)	0.003	3.858(1.164-12.792)	0.027
5	Marital status	Single	4	13	1			
		Married	85	264	1.046(0.332-3.295)	0.938		
		Divorced	15	52	0.938(0.0.266-3.303)	0.920		
		Widowed	4	19	0.684(0.144-3.240)	0.632		
6	Ethnicity	Amhara	103	294	1			
		Oromo	5	47	0.304(0.118-0.784)	0.420		
		Tigre	0	2	0.000(0.000--	0.999		
		Gurage	0	5	0.000(0.000--	0.99		
7	Monthly income	<=2500	78	244	1.108(0.686-1.790)	0.675		
		>2500	30	104				
8	Maternal age	<=19	1	3	4.33(0.207-90.847)	0.345	10.856(0.464-254.171)	0.138
		19-45	106	332	4.151(0.537-32.102)	0.173	5.479(0.686-43.757)	0.109
		>=45	1	13	1		1	
9	Current Child age	<=1 year	108	19	1		1	
		1-2	98	29	1.682(0.887-3.190)	0.111	1.845(0.940-3.622)	0.075
		>=2	142	60	2.402(1.354-4.262)	0.003	2.451(1.331-4.514)	0.004
10	Child sex	Male	68	183	1	1		
		Female	40	165	0.652(0.419-1.017)	0.059	0.661(0.413-1.059)	0.085

Variables are statistical significant when p-value are less than 0.05.

culture. This could be due to a cultural difference between countries.

The commonly used instrument used for the procedure was horse hair (73.1%), which is consistent with studies conducted in Jimma and Nigeria.

The commonly used cleansing material after the procedure was water (88.9%). This is in line with study conducted in Nigeria (67.5).

98.1% the procedure was done by traditional uvula cutter. This is higher as compared to study conducted in Nigeria. This could be due to presence of un recognized uvula cutters in the community, who are known by the community but not by the government.

From those who practice this harmful traditional practice (uvula cutting) 35.2% thought as this procedure is not harmful, which is consistent with mini EDHS 2005 in which 29% of the respondents support the continuation of the practice. From those who did

not practice this procedure 88.4% thought as it is harmful. This could be due to the information they got from health extension workers, through their one to five group discussion and through their education process.

Uvula cutting was done on children's currently less than two and above years AOR 2.451(95% CI 1.331-4.514) as likely times children's currently less than or equal to one year, this shows that the prevalence of uvula cutting is decreasing, which could be due to deployment of health extension workers, effect of one to five discussions and Media's effect.

The practice of Uvula cutting was higher among house wife AOR 2.969(95% CI 1.346-6.550) times, farmers AOR 2.859(95% CI 1.1.161-7.039) times and others like bar tender AOR 3.858(95% CI 1.164-12.792) times as likely to practice uvula cutting than government employees. This could be due to at least government employees are educated and can read and write.

CONCLUSIONAND RECOMMENDATION

Even though the prevalence of Uvula cutting is decreasing and low as compared to other studies it is still community problem since the time gap between our study and others. The main reason to perform uvula cutting were to prevent swelling, pus and rupture of the uvula.

There are uvula cutters in a community who are not recognized by the government and ministry of health. Still some respondents have a believe that as uvula cutting is not harmful.

Occupational status and current age of a child is significantly associated with uvula cutting. Others like age of mother, religion, ethnicity, residence, marital status, family income and sex of child have no significant association with uvula cutting.

RECOMMENDATIONS

- Based on the findings, the following recommendations are made,
- Political leaders, Health mangers, NGOs and all stakeholder should work in collaboration to decrease the prevalence of this harmful traditional practice,
- Further research should be done on large scale sampling supported by qualitative data in order to identify other associated factors,
- The community should expose traditional uvula cutters to the government,
- One to five group discussions should be strengthen in the community,
- Heath extension workers should work strongly.

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