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Journal of Vibration Engineering

ISSN:1004-4523

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PREVALANCEOFTOBACCOCONSUMPTIONINRURALPOPULATIONOFPUDUCHERRY

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Abstract

Tobaccosmokinghasbeenassociatedwithmultiplehealthproblemsandisconsidered to be a preventable risk factor for six of the eight leading causes of morbidity andmortality at the global level. The aim of this descriptive cross-sectional research study was toassesstheprevalenceoftobaccoconsumptioninruralpopulationofPuducherry.Atotalof 255ruralpopulationswereselectedbyusingamultistagerandomsamplingtechnique.

Assessment of the smoking and smokeless tobacco consumption, awareness and knowledgeregardingtobaccoconsumptionweredonebyusingaModifiedGATS(GlobalAdultsTobacco Survey) questionnaire. The collected data were computerized andanalyzed usingSPSS version 25. The data were analyzed using the descriptive statistics (distribution, mean,standard deviation) and inferential statistics (Chi square test).The result shows that the ruralpopulation40(15.7%)wereconsumedsmokingtobaccoand36(14.1%)wereconsumedsmokeless tobacco. The factors influencing smoke and smokeless tobacco consumption weredue to low socio economic status (11.6%), peer pressure (10.1%) and tobacco consumptionhabits of family members (7.8%). None of the demographic variables had shown statisticallysignificantassociationwiththeprevalenceoftobaccoconsumption.Thestudyconcludesthat

tobaccoconsumptionprevalencewasincreasinginruralareas.Womenusedmainlysmokeless tobacco. Tobacco control programmes need to develop strategies to address thedifferent subgroups among tobacco users.Public healthfacilitiesneed toexpand smokingcessationcounsellingservicesaswellasprovidepharmacotherapywherenecessary.

Keywords:Prevalence,tobaccoconsumption,ruralpopulation,Puducherry.

INTRODUCTION

Tobaccoisoneofthemostreadilylegallyavailable,andaccessiblesubstanceprimarily contributing to death, suffering and being one of the major causes of various NCDs.Chillum, cigars, cheroots, chuttas, hookah, and pipes are different types of smoking forms oftobacco.Morethan 40types ofsmokelesstobacco (SLT) likepaan, paanmasala,khaini,zarda, mawa,gutka andmishri and gudakhu are used in chewing, snuffing and applying inteethandgums.At individual-level,thedeterminantsincludegender,wealth index,caste,parental-use, and peer-use, impact of advertisement, education, and place of stay (**Bharati B,Sundar KSandPatiS, 2021).**

Prevalence of tobacco use was higher in the elderly group and males. Women mainlyconsiderusingsmokelesstobacco.Sincetobaccouseisoneoftheavoidablecausesofmorbidityandmortality, effortsshould be made to control tobacco use inthe country byimproving the number and quality of facilities of tobacco cessation treatment, implementingusage based intervention strategies with counselling facilities and rigorous implementation oftheprohibitionofsmokinginpublicplaces(**BarathalakshmiJ,SivapragasamRandTamilselviV, 2019).**

NEEDFORTHESTUDY

Worldwide,consumptionofsmokedandSmokeLessTobacco(SLT)isaconsiderable threat to public health, leading to eight million deaths every year and is in theprioritylistofmanycountries. More than two-thirdofthedeathin developingcountriesisduetonon-communicablediseasesandconsumptionoftobaccoisaleadingriskfactor**(BharatiB, Sundar KS andPatil S,2021).**Globallytobacco use alone ranks fourth intermsofcontributiontoyearsoflifelost;alsoworldwidesmokingcausesabout71%oflungcancer, 42% of chronic respiratory diseases, 10% of cardiovascular disease and is responsiblefor 12% and 6% of male and female deaths respectively (**Vinothkumar G et al 2020).**ThetobaccousesituationinIndiaiscomplexowingtotheavailabilityofvariousformsoftobacco. An adolescentsand early adulthood, aged 15 to 24 years,are considered to be themostsusceptiblephaseoflifeforinitiationoftobaccouseinIndia.Basedonavailableevidence, it is estimated that 5% to 25% of Indian adolescents currently use or have ever usedtobacco. Even though smokeless tobacco is used less commonly and high rates of its use havebeenreportedinIndiaamongadolescentsaged13to15yearsi.e.15%ofboysand5%ofgirls (**Shekhar Grover et al 2020).**A study conducted in Puducherry and found that 90 %currenttobaccousersand95%weredailytobaccousers.Amongcurrenttobaccousers,48.8%, 45.6%, and 5.6% were smokers, smokeless tobacco users, and dual users respectively.Themajorityofthesmokers(61%)andmostofthesmokelesstobaccousers(41%)hadmedi umdependencefortobaccouse**(NandaNBetal2017)**.

LITERATUREREVIEW

Relatedliteraturereviewdoneinthefollowingheadings,

1) Prevalenceoftobaccoconsumptionamongruralpopulation

A community based cross sectional study on prevalence and determinantsof tobaccouseinaremoteruralareaofChunampet,ChengalpattuDistrictofTamilnaduamong14925

population.Thedatawerecollectedbyusingcurrentsmokersandtobaccochewer'squestionnaire. The resultsshowed that6% of themwere tobacco users,3.5% were smokersand3%weretobaccochewers.Therewasasignificationassociationbetweentobaccochewing and alcoholic, female, increase in age illiteracy, open defecation, having kutcha orsemi-puccahouse,hypertension,marriedandwidow($p<0.05$).Thestudyconcludedthattobaccouseinadistantruralplacewasgreater(**VinothkumarGetal2020).**

Theprevalenceoftobaccouseamongmenwas45.5%,smokingwas24.6%,smokeless tobacco use was 29.1%, and both smoked and smokeless tobacco use were 8.4% in112,122 men aged 15–54 years inIndia**(SharifulMI et al 2020)**. Theprevalence of smokewas 5% and smokeless tobacco usage was 10.9%among the 13329 youth in India of evidencefrom Global Adult Tobacco Survey-2 **(Grover S et al 2020)**. A cross-sectional study did ontobacco usage 200 among rural population of Puducherry and the results showed that 28%belonged to 16–35 years of age, 42.5% belonged to 35–55 years, and 29.5% belonged to 55years and above. There was a significant association between gender and smokeless tobacco**(BarathalakshmiJetal 2019)**.

2) Factorsinfluencingtobaccoconsumptionamongruralpopulation

Radhaetal(2019)didastudytoestimatefactorsinfluencingtheprevalenceoftobaccouseamong13-15yearsoldhighschoolchildrentoassesstheirknowledge,attitude,andbehaviourregardingtobaccousein210schoolsbyaconvenientsamplingtechniqueusing youth tobacco questionnaire. The result found that 12.9% used chewing tobacco, 15.2%usedsmokingand3.3%ofparticipantsusebothforms.Theassociationwasfoundtobemore

significant with knowledge (p=0.003) and attitude (p<0.001). The study results revealed thattobacco use by parent, siblings & teachers influences to use. Knowledge about the harmfuleffectsoftobaccouse inchildren waspoor.

Vermaetal(2019)preformedacross-sectionalstudytoassessthеprevalence,patternelementsinfluencingthe habit of tobaccoconsumption to see the correlation betweenthe habit of tobacco consumption and education to evaluate the tobacco induced oral lesionamong 500 students aged between 8 and14 years using a structured, close-ended pre validatedquestionnaire.Influencingfactorsfortobaccoconsumptionwerestudents16.4%,friends78.4%,familymembers12.2%,andmedia9.7%.**Sharmaetal(2015)**carriedacross-sectionalstudyonperceptionsandfactorsinfluencingtobacco useamong15-20years of2400 college students in Bangalore city using a Global Youth Tobacco Survey with randomsampling. The study result revealed that smokeless among upper-middle-class people were19.3% smoke because of fathers, 28.4% with friends, 38.8% with TV videos, movies, andmedia. They concluded that factors influencing were a family influence, parental tobacco use,usebyfriends,advertisementsinmedia&community,access&availabilityoftobaccoproductsnear theresidential area.

OBJECTIVES

- Toassesstheprevalenceoftobaccoconsumptionamongruralpopulation
- Toassessthefactorsinfluencingtobaccoconsumptionintheruralpopulation
- Tofindanassociationbetweentheprevalenceoftobaccoconsumptionandtheirselecteddemographic variables.

RESEARCHMETHODOLOGY

Ethical permission was obtained from the Institutional Human Ethics committee ofVinayakaMission'sCollegeofNursing,VMRF(DU),Puducherrydated12/02/2021.Theformalpermissionhadbeenobtainedfromtheauthority.Amultistagerandomsamplingtechniquewasusedtoselectthesampleswhofulfiltheinclusioncriteriasuchastheparticipantswhowerewillingtoparticipateintheestudy,whospeakTamilorEnglishandwhowereavailableintheareaduringdatacollection.Ruralpopulationwhowerementallyill /impairedhearingandresidingoutofruralfieldpractice areas ofAVMC&HPuducherrywereexcluded.Thewritteninformedconsentwasobtainedfromeachstudyparticipant.

Inthefirststage,alotterymethodofsamplerandomsamplingtechniquewaschosento select the first house and followed by a systematic random sampling was employed underwhicheveryeighthousewasselectedintheareas,tillthedesiredsamplesizewasobtained.In the second stage, house to house survey was done. If there was more than one adult agedbetween 18 and 60 years in the house, a lottery method of simple random sampling techniquewasusedtorecruitoneeligibleadult.Incase,therewasnoeligibleadultinthehouse,theverynext housewasselected.Datasuchas demographic variablesand a modifiedGATSsurveyquestionnairewhichconsistedofquestionsrelatedtothecurrentconsumptiontobacco, the practice of tobacco and cessation of tobacco, awareness about tobacco products,knowledgeaboutdiseasescausedbytobacco,andinfluencingfactorsfortobaccoconsumptionwerecollected.Identifiedtobaccousersweretaughtabouttheilleffectsoftobacco and then they were referred to the rural health centre of AVMC&H, Puducherry forscreeningand furthermanagement.

DATAANALYSISANDINTERPRETATION

Table1:Distributionofdemographicvariablesofruralpopulation

Thetable1showsthatmostoftheruralpopulation,106(41.6%)wereagedbetween38and47yea rs,121(47.5%)weremale,92(36.1%)wereunmarried,108(42.4%)were Hindus,76(29.8%)hadhighschooleducation,112(43.9%)wereprivateemployee,146(57.3%)belong edtonuclearfamily,101(39.6%)hadafamilyincomeofRs.16,020-32,049and Rs.8,010-12,019 respectively and 114 (44.7%) had media as a source of getting healthinformation.

Table2:Distributionofprevalenceoftobaccoconsumptionamongruralpopulation

N=255

Sl.No.	PrevalenceofTobaccouse	n	%
1.	**Currentuseofsmokingtobacco**		
	Daily	25	9.8
	Lessthandaily	15	5.9
	Notatall	215	84.3
2.	**Currentuseofsmokelesstobacco**		
	Daily	26	10.2
	Lessthandaily	10	3.9
	Notatall	2	0.8
	Refused	217	85.1

The table 2 shows that 40 (15.7%) were consumed smoking tobacco and 36 (14.1%) wereconsumedsmokelesstobacco.

Table3showsthatmostoftheruralpopulation25(9.8%)consumedsmokedtobaccodaily,15(5.9%)we reconsumedsmokedtobaccolessthandaily.About26(10.2%)weremedsmokelesstobaccodailyand1 0(3.9%)wereusedlessthandaily.

Table 4showsthat5.8%ofthe peoplewere purchasedloose bidis,5.9%were purchasedlooseproductsofsmokelesstobacco,7.4%weretriedtostopusingsmokelesstobaccoand5.4 % were thinkingtostop smokelesstobaccoformanydays.Regard tohealth warming,68.6%ofthemsaidthatwerenoticedtobaccohealthwarming,52.5%wereheardadvertiseme ntaboutsmokingorsmokelesstobaccoproductonradio.About29%werebelievedthatsmokingtobacc ocausesseriousillnesstohealth.

Table5revealedthat5.9%ofthepopulationweresayingthateachcigarettepacketcontain15cigarettes. Regardtoimpactofsmokingtobacco,59.2%ofthemwasansweredheatattack, stroke (38.4%) and lung cancer(2.4%).About 59.2% answered dentaldiseasescanoccurduetosmokingtobacco.

Table6:Distributionofinfluencingfactorsfortobaccoconsumptionamongruralpopulation

N=76

SI.No.	**InfluencingFactors**	**n**	**%**
1.	Lowsocioeconomicstatus	30	11.6
2.	Influenceoffamilymembers	20	7.8
3.	Peerpressures	26	10.1
Total		76	29.8

Thetable6depictstheinfluencingfactorsamongruralpopulationwhoconsumingsmokeandsmo kelesstobacco.About30(11.6%)wereusedtobaccoduetolower

socioeconomic status,10.1% wereusingdueto peerpressureand7.8% ofthemwere usedduetotobaccoconsumptionhabitsoffamilymembers.

Table7:Association

None of the demographic variables had shown statistically significant association betweencurrentuseofsmokingorsmokelesstobaccoandtheirselecteddemographicvariablesofruralpopulation.

THEMAJORFINDINGOFTHESTUDY

Findingrelatedtodemographicvariables

Themajorityoftheruralpopulation,106(41.6%)wereagedbetween38and47years,121(47.5%)weremales,92(36.1%)wereunmarried,108(42.4%)wereHindus,76 (29.8%)hadhighschooleducation,112(43.9%)wereprivateemployees,146(57.3%)belongedtonuclearfamily,101(39.6%)hadafamilyincomeofRs.16,020-32,049andRs.8,010-12,019respectivelyand114(44.7%)hadmediaasasourceofgettinghealthinformation.

Theprevalenceoftobaccoconsumptionamongruralpopulation

About 40 (15.7%) were consumed smoking tobacco and 36 (14.1%) were consumedsmokeless tobacco. The study findings were supported by **Grover S et al (2020)** conducted across-sectionalGATS-2surveyandfoundthattheprevalenceofsmokewas5%andsmokeless tobacco usage was 10.9%. There was a higher significant association between anyform of tobaccoand aged 20 to 24 years.**Chethana KV and Ramesh (2016)**foundthatcurrent smoking-26.72%(male-48.5%, female-0%),currentsmokeless tobacco use 12.5%(male-15.8% and female 8.5%).**Kumar RG et al (2016**) found that the overall prevalence oftobaccoconsumptionwas19.7%.Thestudyconcludedthatthereisterriblerequireforsmokingcessationcounsellingassistanceacrossthecountry.**NdugwaSKetal(2016**)

revealedthat9.2%,7.4%and2.9%weredailytobaccousers,dailysmokedtobaccousersanddaily smokelesstobacco usersrespectively.

Influencingfactorstoconsumetobaccoamongruralpopulation

The factors influencing smoke and smokeless tobacco consumption, about 26 (10.1%)were consuming tobacco due to peer pressure, 30 (11.6%) were due to low socio economicstatus, 20 (7.8%) were due to tobacco consumption habits of family members. These findingsweresupportedby**HossainSetal(2017)**dida cross-sectionalsurveyon prevalence oftobacco smoking and factors associated with the initiation of smoking among 264 UniversitystudentsinDhaka,Bangladeshandfoundthattheinfluenceoffriendswasthemostsignificant reason for initiating tobacco smoking.**Verma et al (2019)** did a cross-sectionalstudy and found that the influencing factors for tobacco consumption were students (16.4%),friends (78.4%), familymembers (12.2%),andmedia (9.7%).**Etuet al (2018)** found that ahigh social pressure factors independently associated with smokeless tobacco use in Ethiopia.**Myint et al (2016)** study found that factors influencing for betel nut chewing among 420participants in Myanmar was family & peer pressure. A Global Youth Tobacco Survey withrandomsamplingwasconductedinBangalorecityamong2400collegestudentsagedbetween15and20yearsandrevealedthatinfluencingfactorsforsmokelesstobaccoinupper-middle-classwere19.3%becauseoffathers,28.4%duetofriends,38.8%duetovideos, movies and media. They concluded that factors influencing were a family influence,parentaltobaccouse,usebyfriends,advertisementsinmedia&community,access&availabilityoftobaccoproductsneartheresidentialarea.

CONCLUSION

The main objective of the study was to find the prevalence of tobacco consumptionamongruralpopulationinPuducherry.Thestatisticalanalysisrevealedthattobacco

consumption prevalence was higher in rural areas. Women used mainly smokeless tobacco.Tobacco control programmes need to develop strategies to address the different subgroupsamong tobacco users. Public health facilities need to expand smoking cessation counsellingservices aswellasprovidepharmacotherapywherenecessary.

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