ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 8, Issue, 05, pp.31997-32001, May, 2016

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

A STUDY OF KF SCORE AND AUDIT SCORE AMONG TRIBAL ADULTS IN A TRIBAL BLOCK OF CENTRAL INDIA

***Dr. Rahul KewalKumar, Dr. Vishnu Gupta, Dr. Shirish Tiwari, Dr. Rajesh Tiwari and Dr. Asha Ram Tyagi**

Department of Community Medicine, NSCB Medical College, Jabalpur, M.P, India

ARTICLE INFO

Article History:
Received 27th February, 2016
Received in revised form
23rd March, 2016
Accepted 05th April, 2016
Published online 31st May, 2016

Key words:

KF score,
AUDIT Score,
Tribal.

ABSTRACT

Tobacco Consumption & Alcohol Consumption is widely prevalent habit among Tribals. Awareness about it is important to reduce the number of users and its dependency in them. Study was conducted to find out the dependency status of Tobacco & alcohol Consumption among Tribals which was measured by KF SCORES & AUDIT SCORES respectively. A cross sectional study using Multi stage Sampling Method with house to house visits. Sample size came out 300. Study was conducted in Narayanganj block of Mandla District.182 (60.7%) of the tribals were consuming smokeless tobacco in various forms. The trend of Karl Fagersrom Score was shifted more towards tribals. *29.3% of the subjects consumed alcohol, higher AUDIT score in Tribal people & hence their dependence & high risk behaviour.*Our study shows that the habit of Tobacco & Alcohol Consumption & its dependency is on the higher side among Tribals.

Citation: Dr. Rahul Kewal Kumar and Dr. Vishnu Gupta. 2016. "A study of KF score and audit score among tribal adults in a tribal block of central India", *International Journal of Current Research*, 8, (05), 31997-32001.

INTRODUCTION

Tobacco Consumption Scenario

Tobacco Consumption in any form is widely prevalent &socially accepted behavior in society. India being the second largest consumer and the third largest producer of tobacco products in the world (Jayakrishnan, 2012). Tobacco use is the leading cause of preventable deaths and one of the biggest threats to public health globally. The major burden of tobacco related health problems are faced by low and middle income countries. The Global adult tobacco survey conducted in 2009-10 published by WHO reveals that the prevalence of overall tobacco use among males in India is 48 percent and that among females is 20 percent (WHO**,** 2011) According to WHO, 90% of smokeless tobacco users live in South-East Asia (http://www.searo.who.int/mediacentre/releases/2013/pr1563/en/) NFHS-3 conducted in the years 2005-2006 puts the prevalence rate of current tobacco use at 57% and 10.8% among males and females aged 15-49 years (NFHS, 2005) Long use of Tobacco makes the individual dependent on it. Tobacco/nicotine dependence has been included in standardized psychiatric diagnostic criteria such as ICD-10 (World Health Organization, 1992) & DSM-III-R (American Psychiatric Association, 1994). According to American Psychiatric Association 1994, Tobacco/nicotine dependence is defined as a cluster of cognitive, behavioral, and physiological symptoms for which the individual attributes use of tobacco despite significant tobacco-related problems. The Fagerstrom Test for Nicotine Dependence (FTND), a 6 item questionnaire, was introduced and has gained wide popularity since 1991. The FTND is considered as easy to obtain self-reporting tool that conceptualize dependence through physiological and behavioral symptoms (Perez-Rios, 2009). Studies conducted in different contexts had shown high test, reliability and consistency for the FTND scale (Weinberger, 2007).

Alcohol Consumption Scenario

NNMB in its Rural-Third Repeat Survey 2011-12 also found about 30 % respondents consumed alcoholic beverages (NNMB, 2012). Alcohol Intake with rest of the population was statistically significant in tribal population as revealed in the studies conducted by Mohindra, (2011) among poorer and socially marginalized groups, notably Scheduled Tribes (STs) (Mohindra, 2011), Manimunda *et al*. (2011) in Car Nicobar tribal population (Manimunda, 2011). V. S. Sreeraj, Surjit Prasad, Christoday Raja Jayant Khess, and N. A. Uvais, (2012) study conducted among the Tribals of Jharkhand (Sreeraj,

Corresponding author: Dr. Rahul Kewal Kumar,
Department of Community Medicine, NSCB Medical College, Jabalpur, M.P, India

2012). The AUDIT was developed by the World Health Organization (Saunders, 1993), (WHO) as a simple method of screening for excessive drinking and to assist in brief assessment. It can help in identifying excessive drinking as the cause of the presenting illness. It also provides a framework for intervention to help hazardous and harmful drinkers reduce or cease alcohol consumption and thereby avoid the harmful consequences of their drinking. The first edition of this manual was published in 1989 (WHO, 1992).

Rationale

Tobacco & Alcohol Consumption in any form is Increasing in rural as well as in tribal pockets of the country, therefore we opted for this study to explore the magnitude of the problem in tribal people of this backward tribal district of Madhya Pradesh – Mandla.

MATERIALS AND METHODS

Ethical Consideration

This study plan has got Ethical clearance from the Institutional Ethical Committee of NSCB Medical College Jabalpur & Informed Written Consent was taken from each participating subjects and in case of any illiterate subjects this consent was read out to him/her.

Methodology

A cross sectional study was conducted in Narayanganj block of Mandla Tribal District of Madhya Pradesh during 01 October 2014 to 30th September 2015. Multistage Simple random sampling method was used to select the study subjects. The sample size was drawn by applying calculation method for qualitative data with average 25 % prevalence rate & with 5 as allowable error (taking 20% of the prevalence) that came out to be 288 that was rounded to 300 total subjects. A pretested & pre- designed questionnaire was filled with house to house method. Having chosen the block on first stage , 20 villages were selected randomly and lastly from every village 15 tribal & 15 non tribal adults were chosen randomly by house to house visit method where a pre tested & pre designed questionnaire were filled.

For Nicotine Dependency

Study subjects was assessed by means of the six-item Fagerström Test for Nicotine Dependence (FTND) translated into Hindi language Dependency for nicotine was measured. Tobacco consumption and the Fagerstrom Nicotine Tolerance Questionnaire– This is a set of 6 questions having a maximum score of 10 which categorizes the consumers of tobacco into various grades of dependence (0-3 = Low; 4-6= Medium; 7-10= High) (Perez-Rios, 2009).

AUDIT Score - Study subjects was assessed by means of a set of 10 Questions translated into Hindi language and score was calculated. In most cases the total AUDIT score will reflect the patient's level of risk related to alcohol. In general health care settings and in community surveys (Saunders, 1993).

The AUDIT categorizes consumers of alcohol into four different risk levels (Saunders, 1993).

0-7 = Low-risk;
8-15 = Risky or hazardous level
16-19 = High risk or harmful level
20 or more = High – risk

Score Interpretation

- Total scores of 8 or more are recommended as indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence.
- Scores between 8 and 15 are most appropriate for simple advice focused on the reduction
- of hazardous drinking.
- Scores between 16 and 19 suggest brief counseling and continued monitoring.
- AUDIT scores of 20 or above clearly warrant further diagnostic evaluation for alcohol dependence (Saunders, 1993)

Inclusion Criteria

All the subjects above 18 years of age.

Exclusion Criteria

Adults not willing to be the part of study / Those who denied.

Statistical analysis

Analysis was done using SPSS (Version 20, IBM, USA) & Epi Info 7 (CDC, Atlanta, USA)

RESULTS

About the age wise distribution (Table No. 1), The majority (31.6%) of the subjects were found to be in the age group of 18-29 years & least number were found in the age group of above 60 years (7.0%). Mean age were observed at 40.03(±4.02) years. The gender distribution revealed a total of 127 (42.3%) males & 173 (57.7%) females Regarding distribution of smokeless tobacco consumption in any form among study subjects (Table No.2) Smokeless tobacco chewing in plain form or other forms such as Khaini or Gutkas whether daily or occasional was found to be 60.7% and this was high. About the Tobacco Smoking in any form such as Bidi, Cigarettes, Gudaku & Chilam etc (Table No.2) were found to 6.3%. About the finding of the Karl Fagerstrom nicotine score (Table No. 4) 27.2% cases were found with 0-3 score, 55.9% with 4-6 score and 16.9% with 7-10 score category.

Among tribal study subjects about 29.3% of the subjects consumed alcohol in any form whereas (Table No 2.) In the Distribution of AUDIT (Alcohol use disorders identification test) score among study subjects who consumed alcohol (Table No.3). 0-7 score was present in 73.7%, 8-15 score was present in 21.05%, 16-19 was present in 3.94% & 20 in 1.31% of the tribals who consumed alcohol.

Table 1. Distribution of Socio Demographic Variables

S.No.	Socio-DemographicVariables of the subjects		Distribution (n = 300)
1.	Age in years	a) 18 – 29	95 (31.6%)
		b) 30 – 39	76 (25.3%)
		c) 40 – 49	62 (20.6%)
		d) 50 – 59	46 (15.3%)
		e) ≥ 60	21 (7.0%)
			Mean Age = 39.07 ±4.25
2.	Gender	a) Male	127 (42.3%)
		b) Female	173 (57.7%)
3.	Education	a) Illiterate	79 (26.3%)
		b) Primary	50 (16.7%)
		d) Middle	98 (32.7%)
		e) High School & Higher Secondary	58 (19.3%)
		f) Graduate & Above	15 (5.0%)
4.	Socio-economic class (According to Modified B.G Prasad's Classification)		
		a) Class III	19 (6.3%)
		b) Class-IV	148 (49.3%)
		c) Class-V	133 (44.4%)
5.	BMI (Kg/M^2)		
		a) ≤ 18.49	64 (21.3%)
		b) 18.5-24.99	219 (73.0%)
		c) 25.0-29.99	16 (5.3%)
		d) ≥ 30	1(0.34%)

Table 2. Distribution regarding consumption of addiction substances among study subjects

S.No.	Substance of Addiction	Distribution (n= 300)
1	Alcohol	Yes - 98 (29.3%)
		No - 202 (70.7%)
2	Tobacco Smoking	Yes - 19 (6.3%)
		No - 281 (93.7%)
3.	Smokeless Tobacco	Yes - 182 (60.7%)
		No - 118 (39.3%)

Table 3. Distribution of audit (alcohol use disorders identification test) score among study subjects who consumed alcohol

AUDIT Score	Tribals (N = 98)
0-7	70 (73.7%)
8-15	24 (21.05%)
16-19	3 (3.94%)
≥ 20	1(1.31%)
TOTAL	98 (100%)

Table 4. Distribution of karl fagerstrom nicotine score (kf score) among subjects who consumed tobacco in any form (smokeless & smoking)

KF Score	Tribals (n = 195)
Low (0-3)	53 (27.2%)
Medium (4-6)	109 (55.9%)
High (7-10)	33 (16.9%)
TOTAL	195 (100%)

DISCUSSION

Our study showed that majority of the subjects were found to be in the age group of 18-29 years 31.6% and least numbers of people were found in the age group of above 60 years i.e 7.0%. Mean age were observed at 40.03(±4.02) years. The gender wise distribution A total of 127 (42.3%) males & 173 (57.7%) females were found among Tribals population and among Non Tribal subjects males were 139 (46.3%) & females were 161 (53.7%).

The higher proportion of female subjects were only due to their availability at home at the time of interview/survey and most of the time males of these families have temporarily migrated for their wage earning.

Prevalence of Smokeless tobacco use was overall 60.7 % among Tribals, (Table 2). *NNMB survey report of 2011-12 found 51 % men & 17% women were consuming tobacco in any form* (NNMB, 2011). *IDSP NCD Risk Factor survey found smokeless tobacco users in MP was 39 %* (Integrated Disease Surveillance Project (IDSP)) The National Household Survey of Drug and Alcohol Abuse in India (NHSDAA), conducted in 2002 among males, covered over 40,000 individuals aged 12.60 years in nearly 20,000 households in 25 states. The overall prevalence of current tobacco use from the NHSDAA was 55.8% (Manimunda, 2011). Manimunda *et al.* (2011) found that in both males & females Tribal about 88 % consumed tobacco in Car Nicobar Island (Manimunda, 2011). We found that among tribals 6.3% were tobacco smokers,

(Table 2). In IDSP NCD risk factor Survey Report M.P, 2005-06 the prevalence of smoking tobacco among adults was 12 % (Integrated Disease Surveillance Project, 2015) S.K. Jindal *et al* (2006) found about prevalence of smoking as 15% (Jindal, 2006). Anshuman *et al* found about 28 % smoking among a rural population of MP. Mrudu Herbert *et al*, (2012) found in a study at Bangalore that 54 % smokers & 63 % smokeless tobacco users had moderate to high levels of Nicotine Dependency score (Mrudu Herbert, 2012). Manimunda *et al*. (2011) used KF score in tribal population, Nicobarese tribe living in Car Nicobar Island, India (Manimunda *et al*., 2011). NNMB in its Rural-Third Repeat Survey 2011-12 found about 30 % respondents consumed alcoholic beverages (IDSP, 2005). Integrated Disease Surveillance Project (IDSP) Non-Communicable Disease Risk Factors Survey 2005-06, Madhya Pradesh, (NHSDAA, 2002) found About 14% respondents had consumed alcohol in past 30 days and 19% consumed in past 12 months. V. S. Sreeraj, Surjit Prasad, Christoday Raja Jayant Khess, and N. A. Uvais, (2012) study conducted among the Tribals of Jharkhand also found that the consumption of alcohol was greater in Tribals compare to Non Tribals (Sreeraj *et al*., 2012). Manimunda *et al*. (2011) also found that Alcohol Intake with rest of the population was statistically significant in tribal population.[11] Mohindra (2011) also found Alcohol consumption in India is disproportionately higher among poorer and socially marginalized groups, notably Scheduled Tribes (STs) (Mohindra, 2011). Manimunda *et al*. (2011) used AUDIT SCORE in Nicobarese tribe living in Car Nicobar Island, India (Manimunda, 2011). M C Gulliford *et al*. (2004) in his study 'Socioeconomic inequality in blood pressure and its determinants: cross-sectional data from Trinidad and Tobago' used AUDIT score (Gulliford, 2004)

Conclusion

Our study shows that Smokeless tobacco & alcohol consumption & The Nicotine Dependency / KF Score & AUDIT Score is on the higher side in the tribal population of this Tribal / Rural Block. Addiction & dependence on these addiction substances is emerging as a significant health problem among the both the Tribals. The problem needs to be addressed at this incipient stage to prevent its long term effects.

Acknowledgement

We would like to thank Dr. Pradeep Kumar Kasar, Professor & Head, Dept. of Community Medicine, NSCB Medical College, Jabalpur for his always available guidance to us.

Declarations

Funding: None

Conflict of interest: None

Ethical approval: Yes

REFERENCES

Anshuman Sharma, Sanjay Kumar Gupta, Sanjay S Agarwal, Manmohan Gupta, Shweta Shrivastava, a study of pre hypertension & hypertension and its associated risk factors in a rural area of Madhya Pradesh, *National Journal of Community Medicine*, Volume 6,Issue 2,Apr – Jun 2015.

Diagnostic and Statistical Manual of Mental Disorders third edition revised and fourth edition (DSM-III-R, American Psychiatric Association, 1987; DSM-IV, American Psychiatric Association, 1994)

Gulliford, M. C. *et al*, *Journal of Human Hypertension* (204) 18, 61–70.

http://www.searo.who.int/mediacentre/releases/2013/pr1563/en / accessed on 8 jan 2015.

Integrated Disease Surveillance Project (IDSP) Non-Communicable Disease Risk Factors Survey in Madhya Pradesh Conducted By ICMR,[MP-IDSP-NDC] 2005-06.

International Classification of Diseases 10th revision (ICD-10; World Health Organization, 1992 ,

International Institute for Population Sciences. National Family Health Survey (NFHS-3) 2005-06, Mumbai, 2007, Survey Report

Jayakrishnan, R. *et al*. 2012. Nicotine Dependence among Smokers in a Selected Rural Population in Kerala, India APJCP, 13.6-2663

Jindal, S.K. *et al*. 2006. Tobacco smoking in India: prevalence, quit-rates and respiratory morbidity Indian J Chest Dis Allied Sci, 48: 37-42.

Manimunda, *et al*. Association of hypertension with risk factors & hypertension related behaviour among the aboriginal Nicobarese tribe living in Car Nicobar Island, India. Indian *J Med Res* 133, March 2011, pp 287-293

Mohindra, K, Drug and alcohol dependence (Impact Factor: 3.42). 08/2011; 117(1):70-3

Mrudu Herbert *et al*; 2012. Improving Physician Referral for Tobacco Cessation Clients of Tobacco Cessation Clinic in South India; *International Journal of Public Health Research,* Vol 2 No 2 2012, pp (161-167).

NNMB third repeat survey conducted in 10 stated in 2011-12 Rural-Third Repeat conducted in 10 states Survey 2011-12, pg no 39

NNMB Technical Report No. 26, National Nutrition Monitoring Bureau Diet and Nutritional Status of Rural Population, Prevalence of Hypertension & Diabetes among Adults and Infant &Young Child Feeding Practices-Report of Third Repeat Survey NATIONAL Institute Of Nutrition Indian Council of Medical Research Hyderabad - 500 007. INDIA 2012.

Perez-Rios M, Santiago-Perez MI, Alonso B, *et al* (2009) Fagerstrom test for nicotine dependence vs. heavy smoking index in a general population survey. BMC Public Health,9; 493

Saunders, J.B., Aasland, O.G., Babor, T.F., de la Fuente, J.R. and Grant, M. Development of the Alcohol Use Disorders Identification Test (AUDIT):WHO collaborative project on early detection of persons with harmful alcohol consumption. II. Addiction, 88, 791-804, 1993.

Sreeraj, V. S. 2012. Surjit Prasad, Christoday Raja Jayant Khess, and N. A. Uvais, Reasons for Substance Use: A Comparative Study of Alcohol Use in Tribals and Non-tribals. *Indian J Psychol Med*. Jul-Sep; 34(3): 242–246.

The National Household Survey of Drug and Alcohol Abuse in India (NHSDAA Survey Report, 2002)

Weinberger AH, Reutenauer EL, Allen TM, *et al.* 2007. Reliability of the Fagerstrom test for nicotine dependence, Drug Alcohol Depend, 86, 278-82.

WHO Document No. WHO/MNH/DAT/89.4) and was subsequently updated in 1992 (WHO/PSA/92.4), www.who.int (Accessed on 8th June 2014)

WHO, 2014. Factsheet on Tobacco. N 339 May 2011 [cited 2014 Oct 24] Available from http://www.who.int/ mediacentre/factsheets/fs339/en/ index.html.

****