

Study to Assess the Knowledge of Adults Regarding Passive Smoking Awareness and Exposure

Shalini Pathania

Abstract: *Passive smoking is the involuntary inhalation of smoke called second hand smoke or environmental tobacco smoke, industrial smoke etc. This study aims to assess the level of exposure and awareness regarding passive smoking among the adults. Material and methods: Non experimental descriptive survey design was adopted to collect data from 300 adults by using non probability convenience sampling technique, The data was collected by using exposure awareness structure questionnaire consists of sample characteristics. Conclusion: The study concluded that most of the adults have medium to high exposure to passive smoking and majority of adults had good level of awareness to passive smoking.*

Keywords: passive smoking, Exposure, adults, mullanaawareness

1. Introduction

Smoking is a practice in which a substance is burned and the resulting smoke breathed in to be tasted and absorbed into the bloodstream. Most commonly the substance is the dried leaves of the tobacco plant which have been rolled into a small square of rice paper to create into a small, round cylinder called a "cigarette". Cigarettes do not just harm the people who smoke they also harm the people who are near cigarettes and breathe the smoking. This includes fetus and small children. Passive smoking is the involuntary inhalation of smoke called second hand smoke, or environmental tobacco smoke, home chulla smoke, industrial smoke etc. Breathing other people's smoke is known as involuntary or passive smoking. Passive smoke is also called 'environmental tobacco smoke' (ETS). Inhaling passive smoke is an unavoidable consequence of being in a smoke-filled environment.¹

2. Material method

The data collection procedure of the final study was carried out through structured exposure and awareness questionnaire using paper pencil technique. Written informed permission for final study was taken from Sarpanch of village Mullana. Self-introduction and introduction of the study were given to the subject, establishment of rapport with the subject was done and purpose of the study was explained. Written consent was obtained from the study subjects and assured about the confidentiality of their response. Data was collected at village Mullana, Ambala, Haryana. Tools were administered to adults and time taken by each subject was 20-25 minutes. The obtained data was analysed by using descriptive and inferential statistics so as to reduce, organize and give meaning to the data.

3. Result

Table 1.1: Frequency and percentage distribution of adults in terms of sample characteristics, N=300

Sr. No.	Sample characteristics	f	%
1	Age in years		
1.1	18-27	121	40.3
1.2	28-37	66	22
1.3	38-47	45	15
1.4	>48	68	22.6
2	Gender		
2.1	Male	149	49.7

2.2	Female	151	50.3
3	Marital status		
3.1	Unmarried	99	33
3.2	Married	180	60
3.3	Divorced/Separated	8	2.6
3.2	Widow/Widower	13	4.3
4	Education		
4.1	Non-literate	54	18
4.2	Up to primary	95	31.6
4.3	Up to secondary	79	26.3
4.4	Graduate and above	72	24
5	Occupation		
5.1	Self Employed	67	22.3
5.2	Labourer	49	16.3
5.3	Govt. job	21	7
5.4	Private Job	72	24
5.5	Housewife	69	23
5.6	Student	22	7.3
6	Religion		
6.1	Hindu	257	85.6
6.2	Sikh	27	9
6.3	Muslim	16	5.3
7	Type of family		
7.1	Nuclear	104	34.6
7.2	Joint	185	61.6
7.3	Extended	11	3.6
8	No. of family member		
8.1	3-Jan	22	7.3
8.2	7-Apr	195	65
8.3	11-Aug	52	17.3
8.4	>11	31	10.3
9	No. of family member who are smoker		
9.1	0	140	46.6
9.2	1	124	41.3
9.3	2	25	8.3
9.4	>2	11	0.36
	Monthly income (Rs.)		
10	2001-4000		
10.1	4001-6000	11	3.6
10.2	6001-8000	48	16
10.3	>8001	31	10.3
10.4		210	70
11	Earlier knowledge about passive smoking		
11.1	No	9	3
11.2	Yes	291	97
	If, yes sources of information		
11.2.1	Television	181	62.2
11.2.2	Radio	25	8.6
11.2.3	News paper	40	13.7

11.2.4	Communication	45	15.7
--------	---------------	----	------

Data presented in table 4.1 shows that most of the adults (40.3%) belong to the age group 18-27 years, 22% belong to the age group 28-37 years and 15% belong to the age group 38-47 years.

In majority of the adults 151 (50.3%) were female and 149 (49.7%) were male

Majority of the adults 180 (60%) were married and minority 8 (2.6%) were divorced/ separated.

Among education most of the adults were educated 95 (31.6%) up to primary and list were 54 (18%) not literate.

Among occupation most of the adults belongs 69 (23%) housewife, 21(7%) were govt. employer.

Among religion majority of the adults were 257 (85.6%) Hindu, 16 (5.3%) were Muslim.

Most of the adults 185(61.6%) belongs to the joint family, 11(3.6%) belongs to the extended family.

In majority of adults 195(65%) had 4-7 no. of family members and 22(7.3%) had 1-3 no. of family members.

Most of the adults 140 (46.6%) had 0 no. of family member who were smoker and 11 (0.36%) had >2 no. of family member who were smoker. Among adults most of the monthly income was above 8001. Most of the adults 291 (97%) had earlier knowledge about passive smoking, majority with the 181(62.2%) from television.

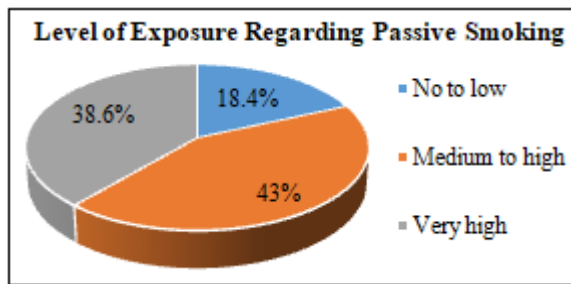


Figure 1.1: Pie chart showing Percentage distribution in terms of level of exposure regarding passive smoking among adults

Table 1.2: Frequency and Percentage distribution in terms of level of awareness scores of adults regarding passive smoking, N=300

Sr. No.	Level of awareness	Range of score	Frequency (f)	%
1.	Very Good	>23	36	12.1
2.	Good	16-23	157	52.3
3.	Average	8-15	100	33.3
4.	Below Average	0-7	7	2.3

Maximum score= 30
Minimum score=0

Table 1.2 shows the Frequency and Percentage distribution of adults in terms of awareness. The data reveals the majority 52.3% of the adults were having good awareness, followed by 33.3% adults were having average level of awareness regarding passive smoking, followed by 12.1% of adults were having very good level of awareness regarding passive smoking and least 2.3% of adults were having below average awareness regarding the passive smoking

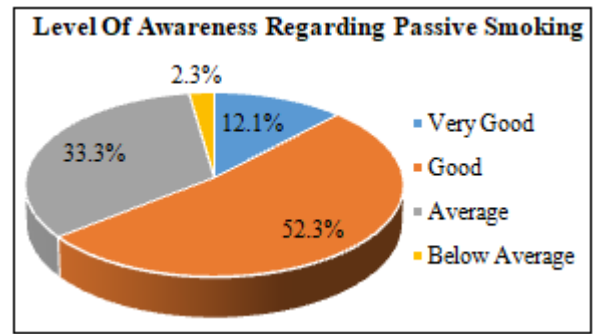


Figure 1.2: Pie chart showing Percentage Distribution in terms of awareness regarding passive smoking among adults.

Table 1.3: To assess the correlation between exposure and awareness score regarding passive smoking, N=300

Score	Mean Score	r
Exposure score	6.5	0.26NS
Awareness score	17.4	

r (300)= .26 p 0.05* (* Significant)
p>0.05 (NS= Non Significant)

Finding in table 4.9 indicates that in the study, the coefficient of correlation between exposure and awareness score was (0.26).

Data present in the table shows that there was a **Positively Negligible Non-Significant** correlation (0.26) between the exposure and awareness scores of adults regarding passive smoking.

H₁ There will be significant co-relationship between mean exposure score and mean awareness score regarding the passive smoking among the adults residing in Mullana, Ambala, Haryana.

Hence, research hypothesis. H₁ was not accepted.

Table 1.4: Chi square value showing Association between exposure scores with selected sample characteristics regarding passive smoking among adults, N=300

Sr. no	Sample characteristics	Exposure score		X ²	df	p Value
		Below to median and equal to median	Above the median			
1	Age in years			4.292	3	0.23 ^{NS}
	18-27 year	67	54			
	28-37	32	32			
	38-47	19	31			
	>48	32	33			
2	Gender			2.621	1	0.10 ^{NS}
	Male	72	86			
	Female	78	64			
3	Marital status			10.35	3	0.01*
	Unmarried	59	42			
	Married	86	101			
	Divorced/ Separated	5	2			
	Widow/ Widower	0	5			
4	Education			15.152	3	0.00*
	Non-literate	13	30			
	Up to primary	51	48			
	Up to secondary	33	43			
	Graduate and above	53	29			

5	Occupation					10.628	5	0.59 ^{NS}
	Self employed	40	25					
	Labourer	17	31					
	Govt. job	14	7					
	Private job	28	29					
	Housewife	40	47					
Student	12	10						
6	Religion					5.301	3	0.07 ^{NS}
	Hindu	129	2					
	Sikh	18	2					
	Muslim	3	1					
7	Type of family					2.598	2	0.45 ^{NS}
	Nuclear	51	3					
	Joint	95	3					
	Extended	3	1					
8	No. of family member					2.495	3	0.47 ^{NS}
	1-3	10	12					
	4-7	107	95					
	8-11	27	33					
	>11	6	10					
9	No. of family member who are smoker					55.793	3	0.00*
	0	105	42					
	1	38	79					
	2	5	26					
	>2	2	3					
10	Monthly income(Rs.)					10.416	3	0.01*
	2000-4000	2	9					
	4000-6000	21	34					
	6000-8000	12	15					
	>8000	115	92					
11	Earlier knowledge about passive smoking					0.000*	1	1.00 ^{NS}
	No	5	5					
	Yes	145	145					
12	Source of information					10.617	3	0.01*
	Television	87	90					
	Radio	6	20					
	NEWS paper	24	18					
	Communication	28	18					

p<0.05* (* significant)
 p>0.05 (NS= Non-Significant)

Table 4.10 this data revealed that the computed Chi square value of the variables (Age, Gender, Occupation, Religion, Type of family, Number of family member and Earlier knowledge about passive smoking) with exposure of adult's were found to be statistically non-significant at 0.05 level of significance indicating these variables had no association with exposure toward adults regarding passive smoking.

The computed Chi square value of variable (Marital status, Education, Number. of family member who are smoker, Monthly income, Source of information) with exposure of adult's were found to be statistically significant at 0.05 level of significance because computed p value is less than 0.05 level of significances. This data shows that the above variables directly affect the level of exposure.

4. Discussion

The purpose of present study was to assess the level of exposure and awareness regarding the passive smoking among the adult in Mullana, Ambala, Haryana.

Present study regarding sample characteristics reveals that 48.6% male and 50.3% female were exposed to passive smoking.

This study is supported by **Seinn A.A. et al** to conduct on exposure to second-hand tobacco smoke among adults in Myanmar. The results show that 52.2% male and 57.3% were exposed to second-hand smoke.

Present study regarding awareness of passive smoking reveals that 12.1% very good awareness, 52.3% good awareness, 33.3% average awareness and 2.3% below average awareness about passive smoking.

5. Conclusion

The following conclusion drawn from the study findings:

- Most of the 43% adults have medium to high exposure in passive smoke and 38.6% of adults have very high exposure in passive smoking.
- Majority 52.3% of the adults were having good awareness regarding passive smoking followed by other 33.3% adults were having average level of awareness regarding passive smoking.
- There is no correlation between exposure and awareness.

References

- [1] Lesage Ois- Xavier, Deschampd Frederic, Jura Densula.US Environmental Protection Agency Respiratory Health effects of Passive smoking. Advance in Preventive Medicine. Available from: <https://oaspub.epa.gov/.../eimscomm.getfi net> 2014. doi: 10.4061/2011/975678
- [2] Jarvis MJ, Mindell J, Gillmore A. Smoke free homes in England: prevalence, trends and validation by cotinine in children. Tobacco Control. 2009;18:491-495. doi: 10.1136/tc.2009.031328
- [3] Fielding JE, Phenow KL. New England Journal of Medicine. 1988; 319: 1452-60
- [4] Devanesan P. Paul and SelvanA. Awareness of Diseases Caused by Passive Smoking among Students Studying at Collegiate Level International Journal of Educational Research and Technology. Available from: www.soeagra.com/ijert.htm net. 2011; 2:12-15 ISSN 0976-4089
- [5] Respiratory health effects of passive smoking. EPA/600/6-900/006F United States Environmental Protection Agency, 1992
- [6] United State Department Of Health Human Services. The report of the Environment Protection Agency: respiratory health effects of passive smoking; lung cancer and other disorders. Smoking and tobacco control; Monograf4, NIH Publication no. 93-3605, 1993
- [7] WHO International Consultation on Environmental Tobacco Smoke (ETS) and Child Health Consultation Report 1999, Geneva 1999
- [8] Secondhand smoke; Review of evidence since 1998. Scientific Committee on Tobacco and Health (SCOTH), Department of Health, 2004

- [9] Best D. Secondhand and prenatal tobacco smoke exposure. *Pediatrics* 2009;124:e1017-e1044
- [10] Nageris B. Effects of passive smoking on odour identification in children. *J Otolaryngol* 2001; 30(5): 263-5
- [11] Yolton K. Exposure to environmental tobacco smoke and cognitive ability among US children. *Abstracts Online*. May 2002
- [12] Mannino DM, Moorman JE, Kingsley B, et al. Health effects related to environmental tobacco smoke exposure in children in the United States: data from the Third National Health and Nutrition Examination Survey. *Arch Pediatr Med*. 2001;155(1):36-41
- [13] Dietary fruit intake, road traffic exposure and the prevalence of asthma: a cross-sectional study of young children. *American Journal of Epidemiology* 2005; 161(5): 406-411
- [14] Cabana M, Birk N, Sliskin K, et al. Exposure to tobacco smoke and chronic asthma symptoms. *Paediatrics Asthma Allergy and Immunology* 2005; 18 (4): 180-188
- [15] BMA Board of Science. Breaking the cycle of children's exposure to tobacco smoke. *British Medical Association*, 2007
- [16] Albertson CJ, Strickland and MJ, Gilboa SM, Correa. A Maternal smoking and congenital heart defects in the Baltimore-Washington infant study. *Pediatrics* 2011;127, 3:e647-e653. Available from: doi:10.1542/peds.2010-139916. Second-hand smoke tied to birth defects. *Stuff.co.nz* Published online 8 March 2011
- [17] The Gazette of India, Ministry of Law and Justice The Cigarette and other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003; No34, 2003
- [18] Smoking Practices and risk awareness in parents regarding passive smoke exposure of their pre-school children. *2008;62(6):228-235*
- [19] Mittal Srabani, D Samiran, Toward smoke-free homes: A community-based study on initiatives of rural India women, 2011; 18(2):69-73. DOI: 10.4103/2230-8229.83371 PMID: PMC3159231
- [20] WHO, Tobacco or Health: A Global Status Report. 1997 <http://www.who.int/2003> 10 17
- [21] Palipudi KM, Sinha DN, Choudhury S, Mustafa Z, Andes L, Asma S. Exposure to tobacco smoke among adults in Bangladesh. *Indian J Public Health*. 2011;55:210-9. [PubMed]
- [22] Salmasi G, Garady R, Jones J, Environmental tobacco smoke exposure and perinatal outcome: a systematic review and meta-analysis. *Acta Obstet Gynecol Scand*. 2010 Jan 20.
- [23] Kristin A. Dillon, Richard A. Chase, PhD. Secondhand Smoke Exposure, Awareness, and Prevention Among African-Born Women. *American Journal of Preventive Medicine*. Published by Elsevier Inc. in December 2010.
- [24] Wang C-P, Ma S J, Xu X F, Wang J-F, Mei C Z, and Yang G-H. The prevalence of household second-hand smoke exposure and its correlated factors in six counties of China. *Fogarty International Center of the National Institutes of Health in the US*. Available from: <http://www.10.1136/tc.2008.024836>, 2009 ; 18(2): 121-126.
- [25] Agrawal D, Aggarwal AK, Goel S. Women exposed to second-hand smoke more at home than at workplace: An analysis of GATS Report, India, 2009-10. *J Family Med Prim Care* [serial online] 2015 [cited 2016 Nov 11];4:293-7. Available from: [Ahttp://www.jfmpc.com/text.asp?2015/4/3/293/161300](http://www.jfmpc.com/text.asp?2015/4/3/293/161300)
- [26] Lushchenkova Oksana, FernándezEsteve, LópezMaría J., Fu Marcela, Sánchez José M. Martínez, Nebot Mane, Gorini Giuseppe, Schiaffino Anna, Borràs Josep M. and Twose Jorge. Servicio de Prevención y Control del Cáncer, Institut Català d'Oncologia, IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain. Secondhand Smoke Exposure in Spanish Adult Non-Smokers. Available from: <http://www.elsevier.es.internet> Rev Esp Cardiol. March 2008;61(7):687-94
- [27] Zhao Wenhua, Gu Dongfeng MD, Wu Xigui MSc, MD, Reynolds Kristi, MPH, Duan Xiufang, MD, Xin Xue, MD, MSc, Reynolds Robert F., ScD, Whelton Paul K., MD, MSc, He Jiang, MD, PhD. Cigarette Smoking and Exposure to passive smoking in Chinese Adult Population. The International Collaborative Study of Cardiovascular Disease in Asia. Available from: circ.ahajournals.org/content/127/AP/8...net [Last assessed on 2013 March 26].
- [28] Bharatwaj R S, Rathod Sitalal Narayan. Perception to Second Hand Smoking Among Adult General Public in Rural Pondicherry. *International Journal of Pharma Research and Health Sciences*. Available from: www.pharmahealthsciences.net. February 2015 ; 3 (1), 522-525
- [29] Sein A A, Than Htike M M, Sinha D N, Kyaing N N. Exposure to second-hand tobacco smoke among adults in Myanmar. *Indian J Cancer* 2012;49:410-8
- [30] Chopra Anita, Dhawan Anju, Sethi MD, Hem, Mohan MSc, Devinder, MD. J. Prevalence of Environmental Smoke Exposure in Households with Children in Jodhpur District, India. *Indian Assoc. Child Adolesc. Ment. Health* 2008; 4(3):67-70.
- [31] Vyas Dr. Sheetal, Nayak Dr. Himanshu. A Study Of The Prevalence, Pattern And Health Effects Of Passive Smoking In A Slum Area Of Ahmedabad City. Department of Community Medicine, AMC MET Medical College, Ahmedabad. Available from: <http://www.scope.med.org/termsare.net> [Last assessed on 2012 August 3].
- [32] Patel Roshni, Kegler Michelle, Babb Steven D. and King Brian. Perceptions of harm from secondhand smoke exposure among U.S. adults, 2009-2010. *Tobacco Induced Diseases*. 2016-02-02, 3-3. DOI: 12.1186/s12971-016-0069-8
- [33] Zhang L, Hsia J, Tu X, Xia Y, Zhang L, Bi Z, et al. Exposure to Secondhand Tobacco Smoke and Interventions Among Pregnant Women in China: A Systematic Review. *Prev Chronic Dis* 2015;12:140377. DOI: <http://dx.doi.org/10.5888/pcd12.140377> .
- [34] Lappas Andreas s, tzortz Anna s, Konstantinidiefstathia M, dimouniki I, Behrakis Panagiotis. Factors Associated with Exposure to Passive Smoking among 12-18 year-old Students in Athens and Thessaloniki, Greece. *Tobacco Prevention cessation*. Available from:

<http://dx.doi.org/10.18332/tpv/60652net> [Last assessed on 2015 November 7].

[35] US Environmental Protection Agency Respiratory Health effects of Passive smoking. Advance in Preventive Medicine. Available from: https://oaspub.epa.gov/.../eimscomm.getfi_net Lesage Ois- Xavier, Deschampd Frederic, JuraDensula. [Last assessed on 2014 September 16].

[36] <http://www.ntr.oxfordjournals.org>

[37] Yang Tingzhong, Cao Chengjian, Cottrell Randall R. Wu, Dan, Yu Lingwei, Lin Haoxiang, Jiang Shuhan and. Young Kathleen J. Second hand smoke exposure in public venues and mental disorder. Center for Tobacco Control Research, Zhejiang University School of Medicine. Available from: <https://tobaccoinduceddiseases...net> [Last assessed on 2015 July 17]

[38] Polit F. dense and Beck Tatano Cheryl. Nursing research. Generating and assessing evidence for Nursing Practice. 8th edition. Wolters Kluwer Private limited. 2008:58-59, 105-107, 132, 248-250, 337-339, 331, 556-583