



# Health related quality of life among Tobacco consumers and Tobacco non-consumers living in urban permanent slums of Jaipur city, Rajasthan

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**Abstract:** The aim of the present study is to assess Health related quality of life among tobacco consumers and non-consumers residing in urban permanent slums. The present study was carried out in Jaipur city of Rajasthan State. It is a Cross-sectional descriptive questionnaire study. Sampling Technique was Systematic stratified random sampling. among all, those who had given informed consent was included in the study to make up the total sample size. Health related quality of life status among 132 (42%) tobacco consumers was poor as compared to non-consumers in which status was fair: current tobacco consumers {206 (65.6%)}, there was high tobacco intake. Overall, Health related quality of life was significantly ( $p=0.027^*$ ) poor among tobacco consumer. From above, it was concluded that health related quality of life was poor among Tobacco consumers as compared to non-consumers.

**Keywords:** Health, Quality, Tobacco, slums.

## 1. INTRODUCTION:

Tobacco smoking is defined as the practice of burning tobacco and the smoke that is produced is ingested. While using cigarettes, the smoke may be inhaled, while in pipes and cigars, it is simply released from the mouth.<sup>1</sup> World-wide, India stands third as tobacco producing nation and second in consumption of tobacco. Mortality due to impact of tobacco consumption in India is projected at upwards of 1.3 million.<sup>2</sup> In India, tobacco use accounts for half of all the cancers in men and a one fourth of all cancers in women, and also a major risk factor for chronic obstructive pulmonary diseases and cardiovascular diseases.<sup>3</sup> Among low- and middle-income countries, it has been reported that tobacco consumption was highest among low socio-economic people. It has been observed that the poorest quintiles are twice more likely to consume tobacco than the wealthier ones.<sup>4</sup>

Tobacco has harmful effects on human body; this may lead to degradation in Health in related quality of life as reported in study by Strine TW et al.<sup>5</sup> The strength of relationship between tobacco use and Health related quality of life was proven by several other studies.<sup>6,7</sup> Various studies conducted among general population, has shown that current smokers has poor HRQoL than former smokers, who has poorer HRQoL than never smokers.<sup>8,9</sup> Assessment of HRQoL especially among slum dwellers, that are most vulnerable, neglected and marginalized populations can help in determining the burden of injuries, diseases, and disabilities that are preventable. Therefore, the aim of the present study is to assess Health related quality of life among tobacco consumers and non-consumers residing in urban permanent slums.

## 2. MATERIALS AND METHODS :

The present study was carried out in Jaipur city of Rajasthan State. The city is situated in eastern part of Rajasthan. It is a Cross-sectional descriptive questionnaire study. Sampling Technique is Systematic stratified random sampling. In the present study urban permanent slums of Jaipur city will be selected for data collection. 4 permanent slums from all 8 zone were selected. Sample is collected by conducting interview schedule in nearby urban PHC (Primary Health Centre) associated with the slum. 157 respondents coming to PHC accompanying the ill were interviewed. Every alternate respondent was interviewed randomly. Samples were selected on the basis of inclusion



criteria which are, respondents who may or may not consume any form of tobacco (smoke or smokeless). Respondents belong to age group 25 to 45 years. Respondents present on the day of the survey and given their written informed consent to be included in the survey. Respondents accompanying with the ill persons and not suffering from any type of disease at the time of survey. Respondents living in permanent or pucca house.

Interview schedule was conducted and data was collected using a questionnaire which has 3 parts, 1<sup>st</sup> part consists of demographic details of study participants which includes age, gender, educational qualifications, Occupation, income, socio economic status, for income and Socio-economic status, Modified BG Prasad scale 2020<sup>10</sup> was used. 2<sup>nd</sup> part consists of questions related to tobacco history. In the present study tobacco consumption was assessed by using modified Global adult tobacco survey (GATS). The tobacco history consists of 13 items. The final tobacco consumption was calculated by adding the scores of individual items with omission of 1<sup>st</sup>, 2<sup>nd</sup>, 9<sup>th</sup> and 10<sup>th</sup> item. Lower the scores, higher was the tobacco consumption. Final tobacco intake score ranges from 9-24 which was divided into 3 categories that is, high tobacco intake= 9-14= 1, Medium tobacco intake= 15-19=2, Low tobacco intake=20-24=3. 3<sup>rd</sup> part had questions related to Health-related quality of life (HRQoL). In the present study health related quality of life of tobacco consumers and non-consumers was measured using short form-36 (SF-36) questionnaire. HRQoL had 8 domains which were Physical functioning, Role limitations due to physical health problems, Bodily pain, social functioning, General mental health, Role limitations due to emotional problems, Vitality, energy or fatigue, General health perceptions.

For ensuring the validity of a designed scale: The questionnaire was pretested in a pilot survey. Necessary modifications were made in the questionnaire after the responses of pilot study.

### Statistical analysis

The data was collected and entered in Microsoft excel 2021. SPSS version 24 .0 was used for analysis of data. Descriptive analysis was used to measure demographic details, Health related quality of life, tobacco history of study participants and Chi-square test was used to measure association between tobacco history and Health related quality of life.

### 3. RESULTS :

Table 1 shows demographic details of study participants, majority of study participants among tobacco consumers {132(42%)} and non-consumers {131(41.7%)} belonged to 31-35 years age group. Among all tobacco consumers, male study participants {235(74.8%)} were more than females while among Tobacco non-consumers females {178(56.7%)} were in majority.

Table 2 shows Health related quality of life status and its subscales. It was reported that majority of tobacco consumers {200(63.7%)} had poor general health. As compared to this majority of Tobacco non-consumers {166(52.9%)} had good general health. There were major Physical Health problems among majority of Tobacco consumers {203(64.6%)} and minor problems among Tobacco non-consumers {206 (65.6%)}. Health related quality of life status among 132 (42%) tobacco consumers was poor as compared to non-consumers in which status was fair.

Table 3 shows that among current tobacco consumers {206 (65.6%)}, there was high tobacco intake.

Table 4 shows that, significantly ( $p=0.000^*$ ) poor general health was observed among tobacco consumers as compared to non-consumers who were having good general health. Overall, Health related quality of life was significantly ( $p=0.027^*$ ) poor among tobacco consumer.

### 4. DISCUSSION:

The present study was conducted to assess Health related quality of life among Tobacco consumers and non-consumers. In the present study majority of study participants belonged to age group of 31-35 years of age group and were males. As compared to this, in a study by Choudhary N et al<sup>11</sup>, it was reported that majority of them males and belonged to 36-45 years of age group. Majority of the study participants were having nuclear family had completed primary education. In a study by Choudhary N et al<sup>11</sup> majority of tobacco consumers were illiterate.

In the present study, health related quality of life was poor as compared to study by Wilson et al in which there was a deterioration in General health related quality of life among current smokers as compared to past smokers.<sup>12</sup> It was observed that tobacco consumption has an impact on physical health related quality of life with Tobacco smoking was linked to lower physical functioning. Snuff usage was linked to lower physical component summary.<sup>13</sup> In a study by



Bataineh BS et al., it was assessed that one of the major reasons that contributes towards tobacco consumption, its persistence and escalation is emotional health problems.<sup>14</sup>

Similar to present study, in a study conducted in Urban-Slum Populations in a North Indian Community, it was observed that majority of study participants in urban slums consumes both smoke and smokeless type of tobacco. In this study, majority of study participants from urban slums were daily smokers. Majority of current tobacco consumers were bidi smokers in this study.<sup>15</sup> In a study by Niaz, K et al., it was observed that Khaini and Gutka are the main smokeless tobacco consumed by slum dwellers in New-Delhi. Similar to present study, Bidi is the most common smoke tobacco consumed by study participants.<sup>16</sup>

In a study by arcía-Pérez-de-Sevilla, G et al it was determined that there is negative correlation between physical component of health-related quality of life.<sup>17</sup>

## 5. CONCLUSION :

From above it was concluded that health related quality of life was poor among Tobacco consumers as compared to non-consumers.

## REFERENCES:

1. Chattopadhyaya, A. (1993). Harmful effects of tobacco noticed in history. *Bulletin of the Indian Institute of History of Medicine*, 23(1), 53–58.
2. Malhi, R., Gupta, R., Basavaraj, P., Singla, A., Vashishtha, V., Pandita, V., Kumar, J.K., Prasad, M. (2015). Tobacco Control in India; A Myth or Reality- Five Year Retrospective Analysis Using WHO MPOWER for Tobacco Control. *Journal of Clinical and Diagnostic Research*. 9(11), ZE06-9.
3. World Health Organization. (2004). Code of practice on tobacco control for health professionals' organization. <https://iris.who.int/bitstream/handle/10665/42811/9241591013.pdf?sequence=1> Retrieved 9/8/2020. Geneva.
4. Khan, M. M., Khan, A., Kraemer, A., & Mori, M. (2009). Prevalence and correlates of smoking among urban adult men in Bangladesh: Slum versus non-slum comparison. *BMC Public Health*, 9, 149. <https://doi.org/10.1186/1471-2458-9-149>
5. Strine, T. W., Okoro, C. A., Chapman, D. P., Balluz, L. S., Ford, E. S., Ajani, U. A., & Mokdad, A. H. (2005, February). Health-related quality of life and health risk behaviors among smokers. *American Journal of Preventive Medicine*, 28(2), 182–187. <https://doi.org/10.1016/j.amepre.2004.10.002>
6. de Miguel Díez, J., Esteban y Peña, M. M., Puente Maestu, L., Hernández Barrera, V., Carrasco Garrido, P., Alvarez-Sala Walther, L. A., & Jiménez García, R. (2010). Relationship between tobacco consumption and health-related quality of life in adults living in a large metropolitan area. *Lung*, 188(5), 393-399. doi: <https://doi.org/10.1007/s00408-010-9256-1>.
7. DeSalvo, K. B., Bloser, N., Reynolds, K., He, J., & Muntner, P. (2006). Mortality prediction with a single general self-rated health question. A meta-analysis. *Journal of General Internal Medicine*, 21(3), 267–275. <https://doi.org/10.1111/j.1525-1497.2005.00291.x>
8. Goldenberg, M., Danovitch, I., & IsHak, W. W. (2014). Quality of life and smoking. *American Journal on Addictions*, 23(6), 540–562. <https://doi.org/10.1111/j.1521-0391.2014.12148.x>
9. Guitérrez-Bedmar, M., Seguí-Gómez, M., Gómez-Gracia, E., Bes-Rastrollo, M., & Martínez-González, M. A. (2009). Smoking status, changes in smoking status and health-related quality of life: Findings from the SUN ('Seguimiento Universidad de Navarra') cohort. *International Journal of Environmental Research and Public Health*, 6(1), 310–320. <https://doi.org/10.3390/ijerph6010310>.
10. Singh, T., Sharma, S., & Nagesh, S. (2017). Socio-economic status scales updated for 2017. *International Journal of Research in Medical Sciences*, 5(7), 3264–3267. <https://doi.org/10.18203/2320-6012.ijrms20173029>
11. Choudhary, N., Sangra, S. (2021). Pattern of Tobacco consumption among urban slum population in Jammu region: A cross-sectional study. *Journal of Family Medicine Primary Care*, 10, 1193-6.
12. Wilson, D., Parsons, J., & Wakefield, M. (1999). The health-related quality-of-life of never smokers, ex-smokers, and light, moderate, and heavy smokers. *Preventive Medicine*, 29(3), 139–144. <https://doi.org/10.1006/pmed.1999.0523>.
13. Paharia, PT. (2023). Study examines health impacts of second-hand cigarette smoke exposure. Retrieved from: <https://www.news-medical.net/news/20230829/Study-examines-health-impacts-of-second-hand-cigarette-smoke-exposure.aspx>.
14. Bataineh, B.S., Wilkinson, A.V., Case, K.R., Clendennen, S.L., Sumbe, A., Chen, B., Harrell, M.B. (2021). Emotional symptoms and sensation seeking: Implications for tobacco interventions for youth and young adults. *Tobacco Prevention Cessation*. 21(7),37. doi: 10.18332/tpc/133571.
15. Gupta, V., Yadav, K., & Anand, K. (2010, April). Patterns of tobacco use across rural, urban, and urban-slum populations in a north Indian community. *Indian Journal of Community Medicine*, 35(2), 245–251. <https://doi.org/10.4103/0970-0218.66877>.



16. Niaz, K., Maqbool, F., Khan, F., Bahadar, H., Ismail Hassan, F., Abdollahi, M. (2017). Smokeless tobacco (paan and gutkha) consumption, prevalence, and contribution to oral cancer. *Epidemiol Health*.39, e2017009. doi: 10.4178/epih.e2017009.
17. arcía-Pérez-de-Sevilla, G., Pérez-Chao, E.A., Pareja-Galeano, H., Martínez-Jiménez, E.M., de-la-Plaza-San-Frutos, M., Sánchez-Pinto-Pinto, B., Romero-Morales, C. (2021). Impact of lifestyle on health-related quality of life among young university students: a cross-sectional study. *Sao Paulo Medical Journal*. 139(5), 443-451. doi: 10.1590/1516-3180.2021.0138.R2.120321.

**Table 1: Demographic details of tobacco consumers and non-consumers.**

DEMOGRAPHIC DETAILS		TOBACCO CONSUMERS		TOBACCO NON-CONSUMERS	
		N	%	N	%
AGE	25-30 Years	49	15.6	54	17.2
	31-35 Years	132	42.0	131	41.7
	36-40 Years	92	29.3	92	29.3
	41-45 Years	41	13.1	37	11.8
	<b>TOTAL</b>	<b>314</b>	<b>100.0</b>	<b>314</b>	<b>100.0</b>
GENDER	Male	235	74.8	136	43.3
	Female	79	25.2	178	56.7
	<b>TOTAL</b>	<b>314</b>	<b>100.0</b>	<b>314</b>	<b>100.0</b>
EDUCATION	Illiterate	100	31.8	40	12.7
	Primary	118	37.6	85	27.1
	Secondary	79	25.2	95	30.3
	Senior-secondary	16	5.1	68	21.7
	Graduate	1	0.3	25	8.0
	Post-graduate	0	0.0	01	0.3
	<b>Total</b>	<b>314</b>	<b>100.0</b>	<b>314</b>	<b>100</b>
OCCUPATION	Unemployed	65	20.7	39	12.4
	Workers or laborer	123	39.2	108	34.4
	Private business	70	22.3	103	32.8
	Government servant	50	15.9	53	16.9
	Others	6	1.9	11	3.5
	<b>Total</b>	<b>314</b>	<b>100.0</b>	<b>314</b>	<b>100</b>
INCOME (Rs./Months)	< 1122	31	23.6	11	3.5
	1123–2245	39	22.3	62	19.7
	2246–3742	100	31.8	139	44.3
	3743–7486	70	12.4	64	20.4
	7487 and above	74	9.9	38	12.1
	<b>Total</b>	<b>314</b>	<b>100</b>	<b>314</b>	<b>100</b>
SOCIO-ECONOMIC STATUS	Lower Class	78	24.9	82	26.1
	Lower Middle Class	114	36.3	118	34.4
	Middle Class	72	22.9	64	20.4
	Upper Middle Class	44	14.0	43	13.9
	Upper Class	6	1.9	7	2.2
	<b>Total</b>	<b>314</b>	<b>100</b>	<b>314</b>	<b>100</b>
FAMILY	Nuclear	166	52.9	189	60.2
	Joint	148	47.1	125	39.8
	<b>Total</b>	<b>314</b>	<b>100.0</b>	<b>314</b>	<b>100</b>



<b>MARITAL STATUS</b>	Unmarried	146	19.7	56	17.8
	Married	122	65.6	219	69.7
	Divorcee	26	8.3	22	7.0
	Widow/ Widower	20	6.4	17	5.4
	<b>Total</b>	<b>314</b>	<b>100.0</b>	<b>314</b>	<b>100.0</b>
<b>HEALTH INSURANCE</b>	Yes	52	16.6	50	15.9
	No	262	83.4	264	84.1
	<b>Total</b>	<b>314</b>	<b>100.0</b>	<b>314</b>	<b>100</b>

Table 2: Status of Health-related quality of life and its domain among Tobacco consumers and Non-Consumers.

HEALTH RELATED QUALITY OF LIFE AND SUB-SCALES		TOBACCO CONSUMERS	TOBACCO NON-CONSUMERS
		N (%)	N (%)
<b>GENERAL HEALTH</b>	Poor (6-12)	200 (63.7)	148 (47.1)
	Good (13-18)	114 (36.3)	166 (52.9)
	<b>Total</b>	<b>314 (100)</b>	<b>314 (100)</b>
<b>LIMITATION OF ACTIVITIES</b>	Major (10-20)	216 (68.8)	128 (40.8)
	Minor (21-30)	98 (31.2)	186 (59.2)
	<b>Total</b>	<b>314 (100)</b>	<b>314 (100)</b>
<b>PHYSICAL HEALTH PROBLEMS</b>	Major (4-8)	203 (64.6)	108 (34.4)
	Minor (9-12)	111 (35.4)	206 (65.6)
	<b>Total</b>	<b>314 (100)</b>	<b>314 (100)</b>
<b>EMOTIONAL HEALTH PROBLEMS</b>	Major (3-6)	164 (52.2)	114 (36.3)
	Minor (7-9)	150 (47.8)	200 (63.7)
	<b>Total</b>	<b>314 (100)</b>	<b>314 (100)</b>
<b>SOCIAL ACTIVITIES</b>	Poor (2-4)	185 (58.9)	157 (50.0)
	Good (5-6)	129 (41.1)	157 (50.0)
	<b>Total</b>	<b>314 (100)</b>	<b>314 (100)</b>
<b>PAIN</b>	High (2-4)	188 (59.9)	169 (53.8)
	Low (5-6)	126 (40.1)	145 (46.2)
	<b>Total</b>	<b>314 (100)</b>	<b>314 (100)</b>
<b>ENERGY AND EMOTIONS</b>	Poor (9-18)	226 (72.0)	120 (38.2)
	Good (19-27)	88 (28.0)	194 (61.8)
	<b>Total</b>	<b>314 (100)</b>	<b>314 (100)</b>
<b>HEALTH RELATED QUALITY OF LIFE</b>	Poor (36-60)	132 (42.0)	45 (14.3)
	Fair (61-84)	113 (36.0)	198 (63.1)
	Good (85-108)	69 (22.0)	71 (22.6)
	<b>Total</b>	<b>314 (100)</b>	<b>314 (100)</b>

Table 3: Tobacco intake status among Current Tobacco consumers and Past tobacco Consumers.

TOBACCO INTAKE STATUS		CURRENT TOBACCO CONSUMERS
		N (%)
<b>TOBACCO INTAKE STATUS</b>	High tobacco intake (9-14)	206 (65.6)
	Medium tobacco intake (15-19)	107 (34.1)
	Low tobacco intake (20-24)	1 (0.3)
	<b>Total</b>	<b>314 (100)</b>



Table 4: Association between Tobacco status and Health related quality of life among study participants. (n=628)

HEALTH RELATED QUALITY OF LIFE		TOBACCO STATUS		Total
		Tobacco consumers (n)	Tobacco non-consumers (n)	
<b>GENERAL HEALTH</b>	Poor	200	118	318
	Good	114	196	310
	<b>Total</b>	<b>314</b>	<b>314</b>	<b>628</b>
	<b>Chi-square</b>	<b>125.94</b>		
	<b>P-value</b>	<b>0.000*</b>		
<b>LIMITATION OF ACTIVITIES</b>	Major	216	83	299
	Minor	98	231	329
	<b>Total</b>	<b>314</b>	<b>314</b>	<b>628</b>
	<b>Chi-square</b>	260.75		
	<b>P-value</b>	<b>0.000*</b>		
<b>PHYSICAL HEALTH PROBLEMS</b>	Major	203	108	311
	Minor	111	206	317
	<b>Total</b>	<b>314</b>	<b>314</b>	<b>628</b>
	<b>Chi-square</b>	<b>267.76</b>		
	<b>P-value</b>	<b>0.000*</b>		
<b>EMOTIONAL HEALTH PROBLEMS</b>	Major	164	91	255
	Minor	150	223	373
	<b>Total</b>	<b>314</b>	<b>314</b>	<b>628</b>
	<b>Chi-square</b>	<b>197.02</b>		
	<b>P-value</b>	<b>0.000*</b>		
<b>SOCIAL ACTIVITIES</b>	Poor	185	155	340
	Good	129	159	288
	<b>Total</b>	<b>314</b>	<b>314</b>	<b>628</b>
	<b>Chi-square</b>	<b>91.62</b>		
	<b>P-value</b>	<b>0.000*</b>		
<b>PAIN</b>	High	188	145	333
	Low	126	169	295
	<b>Total</b>	<b>314</b>	<b>314</b>	<b>628</b>
	<b>Chi-square</b>	<b>69.57</b>		
	<b>P-value</b>	<b>0.000*</b>		
<b>ENERGY AND EMOTIONS</b>	Poor	189	120	309
	Good	125	194	319
	<b>Total</b>	<b>314</b>	<b>314</b>	<b>628</b>
	<b>Chi-square</b>	<b>242.63</b>		
	<b>P-value</b>	<b>0.000*</b>		
<b>HEALTH RELATED QUALITY OF LIFE</b>	Poor	183	101	284
	Fair	93	134	227
	Good	69	48	117
	<b>Total</b>	<b>314</b>	<b>314</b>	<b>628</b>
	<b>Chi-square</b>	<b>296.01</b>		
	<b>P-value</b>	<b>0.000*</b>		

p > 0.05: not statistically significant; \*p < 0.05: statistical significance at the 0.05 level; \*\*p<0.01: a higher level of statistical significance; \*\*\*p<0.001: a very high level of statistical significance