

Stages of Change among the Adult Tobacco Users in Rural Bihar: A Cross-sectional Study

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Almost half of all tobacco users – Precontemplation and contemplation phase
 Among current tobacco users – Two out of Five have no intention of quitting
 Adequate knowledge on harms of tobacco use improves intention to quit

BACKGROUND

There is a very high prevalence of tobacco use in India [28.6%] among adults. Despite tobacco control efforts from government and other stake holders, the rate of quit and quit attempts is not encouraging [<50%]. Motivation to stop tobacco use drives successful tobacco quit attempts and quit. The very first step in motivation is felt need. The impact of health education interventions for motivation to quit depends upon the stage in which a tobacco user is present. Bihar is one of the states in India with high prevalence of tobacco use [26%]. This study was planned to find out the proportion of adults in various stages of change as proposed by Prochaska and DeClemente, proportion of current tobacco users who have intention to quit, and the determinants of intention to quit in rural population of Bihar.

METHODS

Study design: Community based cross sectional study

Study duration: 1 year [June 2023 – May 24]

Study setting: Naubatpur Block, Patna Dist., Bihar, India

Study population: Adults [18 years and above] tobacco users with no documented

psychiatric morbidity and able to communicate

Sample size: 294

Sampling technique:

Study tool: pretested semi-structured questionnaire

Data collection: direct face-to-face interview

Statistical analysis: Descriptive and Inferential statistics

using SPSS software

Multivariable logistic regression for

determinants of quit attempts

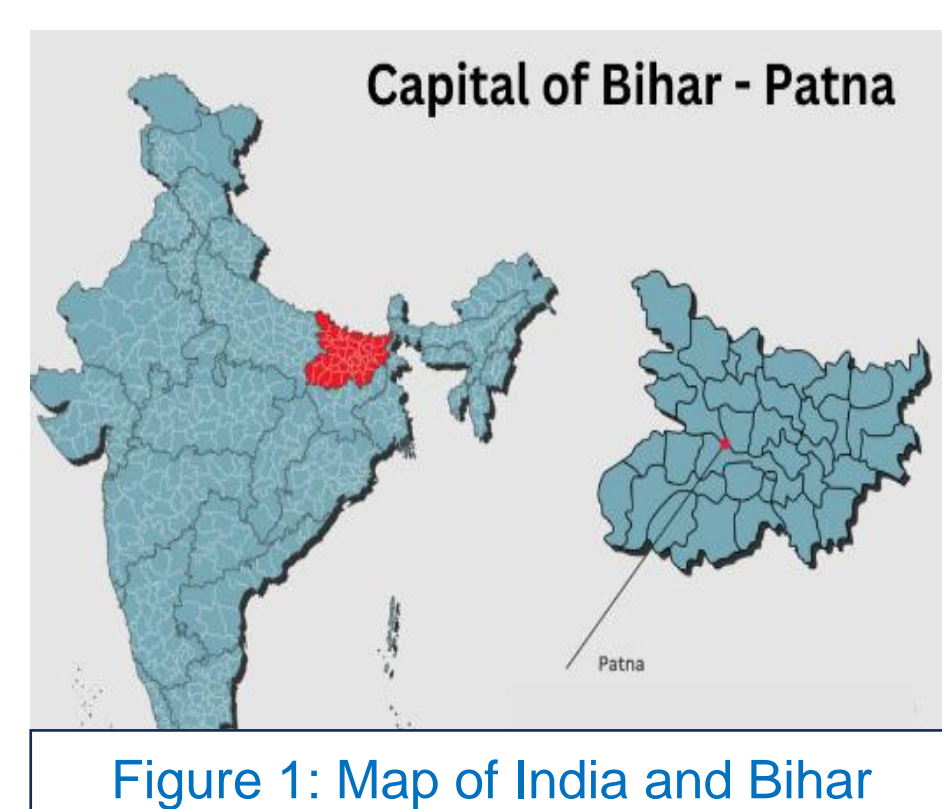
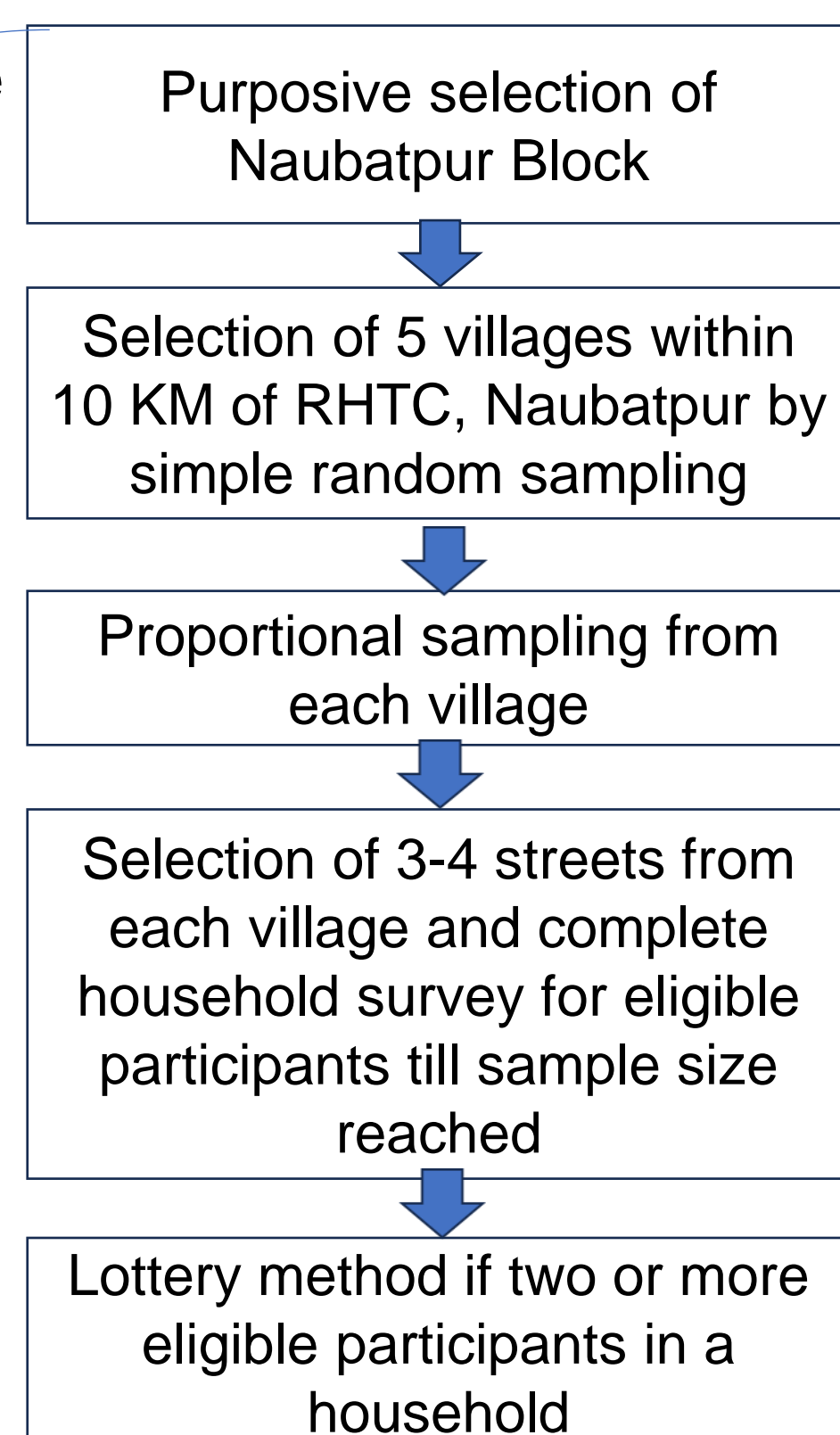


Figure 1: Map of India and Bihar



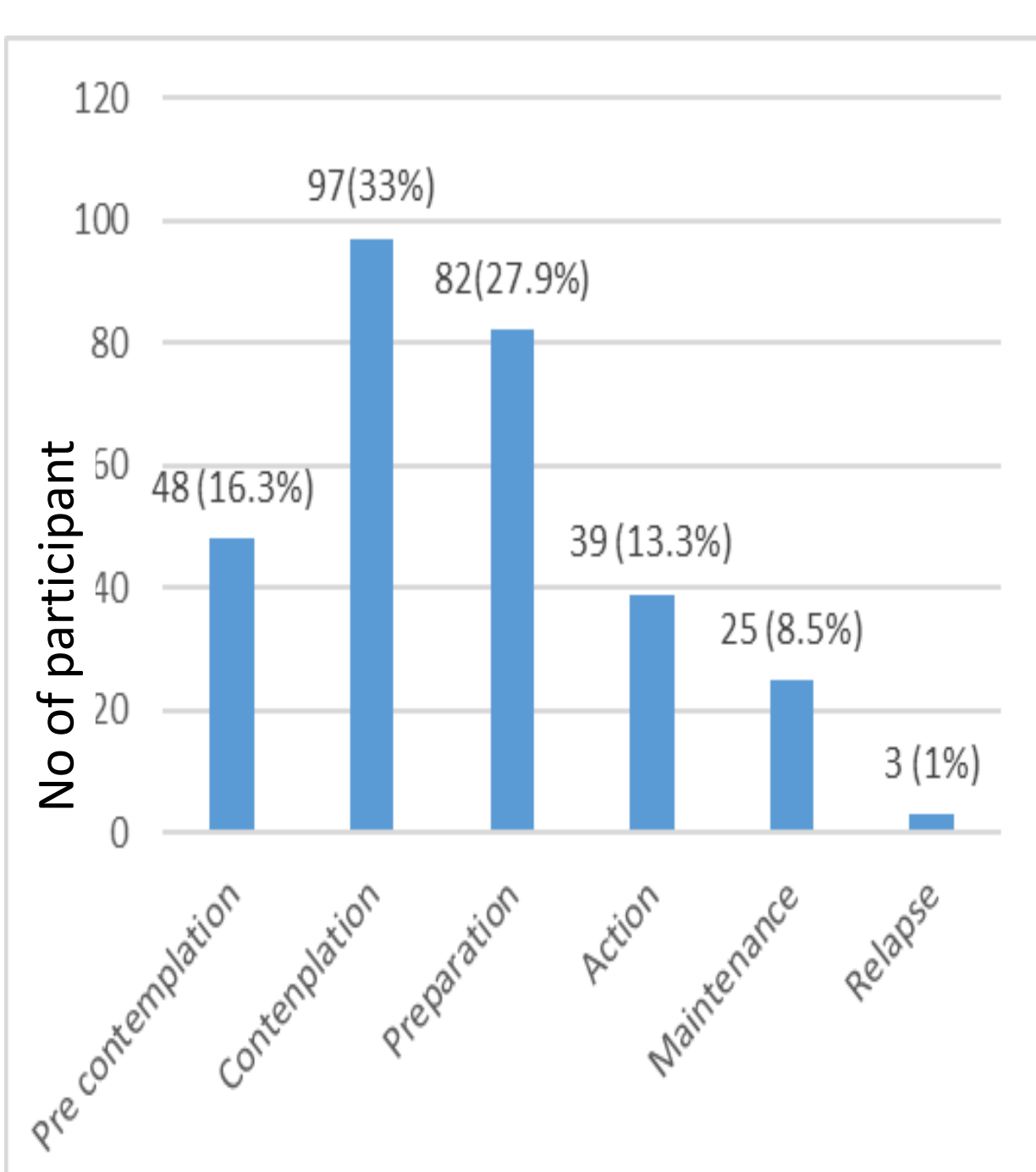
RESULTS

Majority of the participants were in 30 – 59 years age group (63%), Male (83%), studied up to high school (52%), employed (84%), married (90%), belonged to lower socio-economic class (63%) and extended family (72%).

Maximum tobacco users were in contemplation phase (33%) followed by preparation (28%) and pre-contemplation (16%). Less than 10% were in maintenance phase. Stages of change was found to be significantly associated with age ($p < 0.001$), gender ($p < 0.001$), socio-economic status ($p = 0.027$) and type of family ($p = 0.001$). [Table 1]

Figure 2: Tobacco users in various stages of Change (N=294)

Table 1: Association of sociodemographic factors with stages of change (N=294)



Variable	Stages of change				
	Precontemplation N (%)	Contemplation N (%)	Preparation/action/relapse N (%)	Maintenance N (%)	
Age (in years)*	less than 30	0 (0)	15 (55.7)	10 (37)	2 (7.3)
	30 - 59	28 (15.1)	58 (31.4)	88 (47.6)	11 (5.9)
	60 and above	22 (26.8)	24 (29.3)	24 (29.3)	12 (14.6)
Gender*	Male	36 (14.8)	82 (33.4)	113 (46.4)	13 (5.4)
	Female	12 (24)	15 (30)	11 (22)	12 (24)
Education	Illiterate	13 (20.6)	19 (30.2)	22 (34.9)	9 (14.3)
	Up to 10 th class	29 (15.1)	64 (33.3)	85 (44.3)	14 (7.3)
	Above 10 th class	6 (15.4)	14 (35.9)	17 (43.6)	2 (5.1)
Occupation	Unemployed	10 (20.8)	20 (41.7)	13 (27.1)	5 (10.4)
	Employed	38 (15.4)	77 (31.3)	111 (45.1)	20 (8.2)
Marital status	Married	46 (17.4)	84 (31.8)	112 (42.5)	22 (8.3)
	Unmarried	0(0)	8 (53.3)	6 (40)	1 (6.7)
	Others#	2 (13.3)	5 (33.4)	6 (40)	2 (13.3)
Family Type*	Nuclear Family	5 (6)	30 (36.2)	46 (55.4)	2 (2.4)
	Joint Family	43 (20.3)	67 (31.8)	78 (37)	23 (10.9)
	Socio-economic Status (SES)*	Upper class	3 (7.1)	20 (47.6)	18 (42.9)
Middle class	7 (10.6)	24 (36.4)	31 (46.9)	4 (6.1)	
Lower class	38 (20.4)	53 (28.5)	75 (40.3)	20 (10.8)	

*statistical significant association [p value < 0.05] #Divorces/separated/Widow

RESULTS CONTINUED

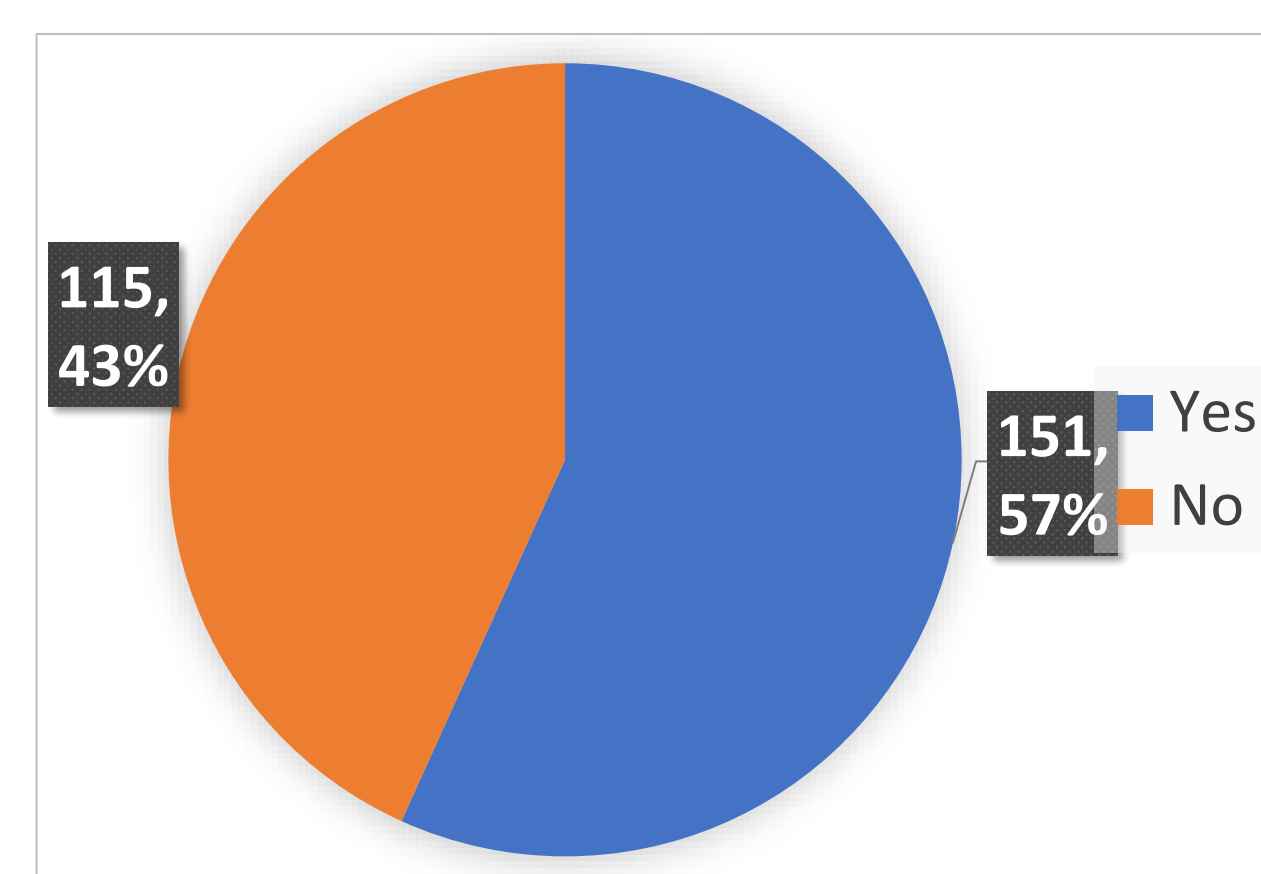


Figure 3: Intention to quit (N=266)

Table 2: Predictors of intention to quit tobacco using multivariable logistic regression (N=266)

		cOR	p-value	aOR	p-value	
Gender	Female	1.76 (0.88-3.51)	0.008	2.16 (0.97-4.82)	0.059	
	Male	1		1		
Age	Less than 30 years	1.47 (0.63-3.42)	0.003	2.02 (0.80-5.06)	0.132	
	60 years and above	1.88 (1.05-3.27)		1.81 (0.95-3.41)		0.068
	30-59 years	1		1		
Education	Up to 10 th class	1.15 (0.61-2.17)	0.134	1.51 (0.71-3.18)	0.27	
	Passed 10 th class	1.48 (0.73-3.02)		2.65 (0.97-7.24)		0.056
	Illiterate	1		1		
Occupation	Employed	1.01 (0.52-1.98)	0.356			
	Unemployed	1				
Socio economic status	Upper class	1.66 (0.75-3.70)	0.161	2.52 (1.05-6.08)	0.277	
	Lower class	1.02 (0.56-1.85)		0.64 (0.32-1.27)		0.056
	Middle class	1		1		
Type of family	Joint family	1.91 (1.10-3.30)	0.002	2.40 (1.25-4.60)	0.008	
	Nuclear Family	1		1		
Knowledge of harmful effects of tobacco	Yes	2.56(1.50-4.37)	<0.001	2.81 (1.53-5.15)	0.001	
	No	1		1		

cOR = crude ODDs Ratio, aOR = adjusted ODDs Ratio

CONCLUSIONS

- One in Six tobacco users were not aware of harms of tobacco use [Pre-contemplation]
- One in three tobacco users had not thought of quitting despite knowing harms of tobacco use. [Contemplation]
- Less than One in Ten individuals have sustained quit
- Adequate knowledge of harms of tobacco use was found to be significantly associated with intention to quit tobacco

Intervention for quitting tobacco use should be tailor made and case specific. Resources should be mobilized and utilized in the form of mass media campaign to one-to-one health worker-tobacco user interaction for improving knowledge on harms of tobacco and benefits of quitting, rendering self-efficacy on sustaining quit attempts and quit.

ADDITIONAL KEY INFORMATION

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