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Strategies and Practice of Smoking Cessation Among Older Adults: A Cross-Sectional Study from a Healthcare Facility in South Punjab, Pakistan

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ABSTRACT

Background: Tobacco smoking remains a major public health challenge and is associated with cardiovascular disease, respiratory disorders, and malignancies. Smoking cessation reduces disease risk and improves health outcomes, yet sustained abstinence remains difficult in many settings. Objective: To assess smoking behavior, cessation intentions, quit attempts, and cessation practices among adult smokers attending a healthcare facility in South Punjab, Pakistan. Methods: A cross-sectional observational study was conducted among adult smokers using a structured questionnaire capturing demographic characteristics, smoking history, initiation context, smoking intensity, household exposure, quit intentions, quit attempts, prior abstinence duration, motivations for quitting, and cessation methods. Data were analyzed using SPSS with descriptive statistics, ANOVA for group associations, and Pearson correlation for selected cessation-related indicators. Results: Among 60 participants, 96.7% were male and 58.3% were aged ≥60 years. Most initiated smoking at 20 years (53.3%), commonly at the workplace (35.0%). Daily smoking of 15–20 cigarettes was reported by 40.0%, and 46.7% lived with a partner who smoked. Quit intention within one month was reported by 45.0%, and repeated quit attempts were common (10 attempts: 41.7%). Cold turkey was the most frequent cessation method (51.7%). Age was not significantly associated with the cessation outcome ($p=0.676$), while gender showed a significant association ($p<0.001$). Conclusion: Quit intention was common, but sustained abstinence was limited and unassisted quitting predominated, highlighting the need for strengthened cessation support services. Keywords: Smoking cessation; quit attempts; nicotine replacement therapy; motivation; South Punjab; tobacco use.

Keywords

Life expectancy; Health expenditure; Education; Per capita income; Population; Cointegration; Dynamic Ordinary Least Squares; Pakistan.

INTRODUCTION

Tobacco smoking remains a major preventable cause of morbidity and mortality globally and continues to contribute substantially to cardiovascular disease, respiratory disease, malignancies, and premature death. Despite growing public health initiatives, tobacco use persists as a complex behavioral and addiction-driven phenomenon influenced by nicotine dependence, social norms, occupational exposures, and limited awareness of cessation services. Smoking cessation is defined as the intentional discontinuation of tobacco smoking, and it is one of the most effective strategies to reduce the long-term risk of smoking-related diseases, improve pulmonary and cardiovascular function, and enhance overall quality of life across adulthood. Evidence consistently demonstrates that quitting smoking produces measurable health benefits even after prolonged exposure, and long-term cessation is associated with a risk reduction that gradually approaches the health profile of never-smokers over time, emphasizing the clinical value of supporting cessation at all ages (1,2).

The burden of smoking remains notable in Pakistan, where tobacco use is widespread among males and continues to be shaped by social acceptability, workplace exposure, and insufficient public health reinforcement in many communities. Exposure to second-hand smoke further increases population-level harm, particularly in households and shared indoor environments, thereby extending the impact beyond smokers to non-smokers. In addition to physical health consequences, tobacco smoking has been identified as a modifiable factor contributing to worse outcomes in individuals with comorbid somatic and mental health conditions, yet quitting remains difficult due to withdrawal symptoms, reinforcement cycles, and relapse triggers (1,3). The addictive properties of nicotine, through dopamine-mediated reward pathways, contribute to habitual reinforcement and increase dependence severity, which limits spontaneous quitting and increases repeated unsuccessful quit attempts (4).

International evidence supports several cessation strategies, most commonly including behavioral counseling, nicotine replacement therapy (NRT), pharmacotherapy, and combined approaches, with integrated programs often demonstrating better success rates than single-method attempts. Health professional advice and structured cessation support can substantially increase quitting motivation and improve sustained abstinence (1,5). However, the real-world adoption of evidence-based cessation strategies varies substantially across settings, especially where cessation services are limited, anti-smoking messaging is inconsistent, and the health system lacks standardized protocols for tobacco dependence treatment. In Pakistan, anti-tobacco regulations exist, including restrictions on smoking in enclosed public spaces and protection of non-smokers, but implementation remains uneven and may not translate into structured cessation support within routine healthcare services (6).

Although multiple studies have reviewed cessation interventions and policy frameworks internationally, there remains limited field evidence from secondary healthcare settings in South Punjab regarding patterns of smoking behavior, exposure contexts, quit intentions, relapse patterns, and practical cessation strategies used by adult populations presenting for healthcare. Moreover, occupational influences, household exposure, and limited access to structured cessation counseling may shape cessation practices in ways that are context-specific and require local data to inform

service development. Therefore, this study aimed to assess smoking history, cessation intentions, quit attempts, motivational factors, and cessation methods among adults attending a healthcare facility in South Punjab, Pakistan, and to explore relationships among selected behavioral indicators relevant to cessation readiness and exposure to anti-smoking messaging. The study hypothesized that quit intentions and cessation attempts would be common among smokers, and that cessation-related behavioral indicators would show significant correlations reflecting readiness and exposure patterns (1,2,5).

MATERIALS AND METHODS

This cross-sectional observational study was conducted in a secondary healthcare setting in South Punjab, Pakistan, involving adult participants attending the facility during the study period. The study assessed smoking-related characteristics, cessation intentions, quit attempts, and cessation strategies using a structured questionnaire administered through a standardized approach. Participants were recruited through a registry-based sampling frame, and individuals who met eligibility criteria were approached using a probability-based selection procedure designed to reduce selection bias. Participation was voluntary, and informed consent was obtained prior to questionnaire administration.

Adults aged 30 years and above with a history of tobacco smoking, including current or former smokers, were eligible for inclusion. Participants were required to demonstrate adequate cognitive ability to provide consent and respond reliably to questionnaire items based on clinical assessment and/or medical documentation available at the facility. Individuals were excluded if they were non-smokers, were younger than 30 years, were unable to provide informed consent due to severe cognitive impairment, or could not communicate in the language used for questionnaire administration. The sampling frame consisted of all eligible individuals recorded within the facility's patient registry during the recruitment period, and participants were randomly selected from this list to reduce systematic enrollment bias.

Data were collected using a structured questionnaire containing 17 indicators designed to capture demographic characteristics, smoking initiation, smoking context (home, workplace, school, or other), smoking companionship patterns, daily cigarette consumption, household exposure through partners who smoke, perceived ethnic and community influences on smoking norms, exposure to anti-smoking messages, cessation intentions, estimated cessation timelines, number of quit attempts, duration of previous abstinence, perceived cessation success level, motivation for quitting (health, financial, social, or family), and cessation method used (cold turkey, NRT, or medication/pharmacotherapy). Questionnaire administration was performed by trained data collectors to ensure consistency in delivery and minimize interviewer bias. Completed questionnaires were reviewed for completeness at the point of collection to reduce missing responses, and data were entered into the statistical software using predefined coding to preserve data integrity. Variables were operationalized as categorical indicators unless otherwise stated. Age was categorized into four groups (30–40, 41–50, 51–60, and ≥60 years). Gender was recorded as male or female. Smoking intensity was categorized based on daily cigarette count (1/day, 2–8/day, 9–15/day, 15–20/day, >20/day). Quit intention was assessed through planned timeline categories (day, week, month, quarter, year), and quit attempt intensity was assessed using reported number of attempts (4, 10, 100, 150). Quit duration was recorded as (1 week, 1 month, 3 months, 6 months). Motivation for cessation was classified as health, financial, social, or family. Cessation method was categorized as cold turkey, NRT, or medication/pharmacotherapy.

Statistical analysis was performed using SPSS. Descriptive statistics were reported as frequencies and percentages for categorical variables. Normality assessment for relevant continuous indicators was evaluated using probability plots where applicable. Associations and differences across demographic categories were examined using inferential statistics aligned to variable type; p-values were interpreted using a two-sided significance threshold of <0.05. Correlation analysis using Pearson correlation was conducted among selected questionnaire indicators (Q12–Q17) to explore relationships between cessation-related behavioral patterns. Correlation coefficients (r) and corresponding p-values were reported, and significance was interpreted at both 0.01 and 0.05 levels. To ensure reproducibility, all statistical tests were performed using pre-coded variable definitions, and the analysis outputs were cross-checked against entered frequency totals. Ethical principles were followed in accordance with standard research conduct, including voluntary participation, confidentiality, and anonymization of responses prior to analysis. All participants provided informed consent, and no identifying information was included in the analytical dataset.

RESULTS

A total of 60 participants (N=60) were included in the analysis with no missing data for the reported variables. The sample was predominantly male (58/60, 96.7%) and largely comprised participants aged ≥60 years (35/60, 58.3%), followed by those aged 51–60 years (18/60, 30.0%) (Table 1). Most respondents reported initiating smoking at the age of 20 years (32/60, 53.3%), and workplace or other non-home settings were the most frequently reported initiation contexts (21/60, 35.0% on job; 22/60, 36.7% other) (Table 2). Daily cigarette consumption was highest in the 15–20 cigarettes/day category (24/60, 40.0%), and nearly half reported living with a partner/spouse who smoked (28/60, 46.7%) (Table 2).

Cessation readiness indicators showed that 21/60 (35.0%) planned to quit within one week and 19/60 (31.7%) within one month, while anti-smoking message exposure was limited, with 25/60 (41.7%) reporting never encountering such messaging (Table 3). Quit attempts were frequent and repeated, with 25/60 (41.7%) reporting 10 quit attempts and 15/60 (25.0%) reporting 100 attempts; the longest abstinence duration was most commonly one month (29/60, 48.3%) or one week (26/60, 43.3%) (Table 3). Social motivation was the most commonly reported reason for quitting (22/60, 36.7%), and the most frequently used cessation method was quitting without aids ("cold turkey," 31/60, 51.7%) (Table 3).

Table 1. Participant Demographic Characteristics (N=60; missing=0)

Variable	Category	n	%
Age group (years)	30–40	1	1.7
	41–50	6	10.0
	51–60	18	30.0
	≥60	35	58.3
Gender	Male	58	96.7
	Female	2	3.3

Table 2. Smoking History, Initiation Context, and Household Exposure (N=60; missing=0)

Domain	Variable	Category	n	%
Smoking initiation	Age at initiation (years)	20	32	53.3
		30	13	21.7
		40	12	20.0
		50	3	5.0
Initiation context	Place of initiation	Home	4	6.7
		School	1	1.7
		On job	21	35.0
		Don't remember	12	20.0
		Other	22	36.7
Social context	Smoking companionship	Friend	2	3.3
		Family	6	10.0
		Alone	18	30.0
		Don't remember	17	28.3
		Others	17	28.3
Smoking intensity	Cigarettes/day	1	1	1.7
		2–8	11	18.3
		9–15	12	20.0
		15–20	24	40.0
		>20	12	20.0
Household exposure	Partner/spouse smokes	Yes	28	46.7
		No	32	53.3

Table 3. Cessation Readiness, Quit Attempts, Motivations, and Methods (N=60; missing=0)

Domain	Variable	Category	n	%
Quit intention	Planned quit timeline	Day	8	13.3
		Week	21	35.0
		Month	19	31.7
		Quarter	6	10.0
		Year	6	10.0
Messaging exposure	Anti-smoking messages	Never	25	41.7
		Sometimes	21	35.0
		A lot	14	23.3
Quit attempts	Number of attempts	4	17	28.3
		10	25	41.7
		100	15	25.0
		150	3	5.0
Longest abstinence	Abstinence duration	1 week	26	43.3
		1 month	29	48.3
		3 months	4	6.7
		6 months	1	1.7
Motivation	Motivation for quitting	Health	16	26.7
		Financial	18	30.0
		Social	22	36.7
		Family	4	6.7
Cessation method	Method used	Cold turkey	31	51.7
		NRT	15	25.0
		Medication/ pharmacotherapy	14	23.3

Table 4. Inferential Analyses: ANOVA and Correlation Outputs (N=60) A) ANOVA: Age and Gender Association With Smoking Cessation Outcome

Predictor	SS_between	SS_total	df_between	df_within	F	p-value	η^2 (Effect size)
Age	9.182	32.850	19	40	0.817	0.676	0.280
Gender	1.076	1.933	19	40	2.643	<0.001	0.557

Inferential analysis demonstrated no statistically significant association between age categories and the analyzed cessation outcome ($F=0.817$, $p=0.676$; $\eta^2=0.280$), while a statistically significant association was observed for gender ($F=2.643$, $p<0.001$; $\eta^2=0.557$) (Table 4). Pearson correlation analysis among Q12–Q17 revealed strong positive associations between Q12 and Q14 ($r=0.757$, $p<0.001$) and between Q12 and Q17 ($r=0.628$, $p<0.001$), while Q13 correlated negatively with Q15 ($r=-0.418$, $p=0.001$) and positively with Q16 ($r=0.660$, $p<0.001$) (Table 4).

Table 4 B) Pearson Correlations Among Q12–Q17 (selected significant results shown)

Variable Pair	r	p-value
Q12 – Q14	0.757	<0.001
Q12 – Q17	0.628	<0.001
Q13 – Q15	−0.418	0.001
Q13 – Q16	0.660	<0.001
Q13 – Q17	−0.283	0.028
Q14 – Q17	0.342	0.007
Q15 – Q16	−0.310	0.016
Q15 – Q17	0.262	0.043

ANOVA = analysis of variance as reported in SPSS outputs. η^2 = SS_between/SS_total. Pearson correlations reported for Q12–Q17 based on SPSS output; r = Pearson correlation coefficient; p-values two-tailed.

DISCUSSION

The present cross-sectional analysis provides facility-based evidence on smoking behavior, cessation intentions, quit attempts, and cessation practices among adult smokers attending a healthcare setting in South Punjab. The sample was predominantly male and largely represented older age categories, with more than half aged ≥60 years. Early initiation of smoking was common, with most participants reporting onset around 20 years, and the workplace emerged as a frequent initiation context. These patterns align with broader evidence indicating that smoking uptake is often shaped by social and occupational exposure, and may persist due to nicotine dependence and social acceptability within peer environments (7,8). The high proportion of participants reporting smoking "alone" also suggests that smoking in this group may not be exclusively socially driven at the point of use, which is consistent with the progression of tobacco dependence from social experimentation to habitual consumption (8).

The distribution of daily cigarette use suggests moderate-to-high nicotine exposure, with 60% of participants reporting smoking ≥15 cigarettes per day, a profile that is typically associated with increased dependence severity and relapse risk. Nearly half of respondents reported living with a partner/spouse who smoked, indicating meaningful household-level exposure and a potential barrier to sustained abstinence. Household smoking environments have been recognized as important determinants of smoking persistence and cessation outcomes, particularly when cessation attempts occur without structured support and when exposure triggers are sustained (7). The relatively limited exposure to anti-smoking messaging reported in this sample, with 41.7% never encountering such messages, further underscores gaps in tobacco control outreach and risk communication, especially in settings where routine cessation counseling may not be institutionalized (9).

Quit intention was frequently reported, with two-thirds planning cessation within one month, indicating high readiness in a substantial proportion of respondents. However, repeated quit attempts were common and sustained abstinence beyond one month was rare, reflecting an intention–behavior gap and suggesting that motivation alone may not translate into durable cessation without evidence-based behavioral and pharmacological supports. This finding is consistent with established literature showing that relapse is common when quit attempts rely solely on unassisted methods, particularly among individuals with higher cigarette consumption and prolonged smoking histories (7,10). In this study, the most commonly reported cessation method was quitting "cold turkey," while NRT and pharmacotherapy were used less frequently, which may reflect limited access, affordability concerns, low awareness of evidence-based interventions, or variable counseling practices in clinical settings. International guidelines consistently support counseling and pharmacotherapy, including NRT, as effective cessation approaches, and combined modalities are frequently associated with higher abstinence rates than single interventions (7,10).

Inferential analysis demonstrated no statistically significant association between age groups and the analyzed cessation outcome, suggesting that cessation-related responses in this facility-based sample were not substantially differentiated by age category. This aligns with evidence that the benefits and feasibility of cessation persist across adulthood, and that cessation readiness may be driven more by dependence level, comorbidity, health perception, and psychosocial triggers than by age alone (7). In contrast, the ANOVA output identified a statistically significant association with gender; however, the extreme gender imbalance in this dataset (96.7% male) indicates that this result should be interpreted cautiously due to unstable estimates and limited representativeness of female smoking behavior. Correlation analysis among cessation-related questionnaire indicators showed clustering of behavioral and exposure constructs, with strong associations observed between Q12 and Q14 and between Q12 and Q17, while Q13 demonstrated both positive and negative relationships with other indicators. Although these findings suggest internal coherence among selected behavioral domains, interpretation remains constrained unless the questionnaire items are explicitly labeled and validated, consistent with reporting standards for cross-sectional behavioral research (11).

This study contributes locally relevant evidence that can support service planning for cessation counseling within healthcare settings in South Punjab, but its interpretation must consider methodological constraints including the single-setting design, reliance on self-reported indicators, and limited female representation. Future work should incorporate standardized dependence measures, explicit cessation endpoints (e.g., 7-day point prevalence abstinence), multivariable regression models accounting for household exposure and smoking intensity, and inclusion of both rural and urban samples to strengthen generalizability and policy relevance (7,9,11).

CONCLUSION

In this facility-based cross-sectional study of 60 adult smokers in South Punjab, smoking initiation frequently occurred early in adulthood and was commonly linked to occupational and social contexts, while daily cigarette consumption was high and household exposure through partner smoking was substantial. Quit intention was common, with most participants planning cessation within one month, yet repeated quit attempts and short abstinence durations suggested difficulties sustaining cessation. Quitting without assistance ("cold turkey") was the most commonly reported method, and exposure to anti-smoking messaging was limited, indicating a need for strengthened cessation counseling, improved access to evidence-based cessation aids, and structured tobacco dependence services integrated into routine healthcare delivery.

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REFERENCES

1. Onwuzo CN, Olukorode J, Sange W, Orimoloye DA. A review of smoking cessation interventions. Prim Health Care. 2024;16(1).
2. Mona H, Hers M, et al. Effectiveness of smoking cessation intervention among adults. Prim Health Care. 2024;13:179.
3. Sweileh WM. Technology-based interventions for tobacco smoking prevention and treatment. Prim Health Care. 2024;19(13).
4. Robertson L, McGee R, Marsh L. Nicotine dependence and habitual tobacco use: mechanisms and public health relevance. 2015.
5. Rajani NB, Weth D, Mastellos N, Filippidis FT. Use of gamification strategies and tactics in mobile application for smoking cessation. 2019;10.
6. Ahmad Khan J, Malik Amir Abdul, Arif Muhammad Arslan. Tobacco control laws in Pakistan and their implementation. 2016;66(7).
7. Pahwa V, Pimple SA, Bhattacharjee A, Kuberkar D. Behavioural interventions for tobacco cessation in India. J Family Med Prim Care. 2023;12(11).
8. Waleed SM. Technology-based interventions for tobacco. Prim Health Care. 2024;19(13).
9. World Health Organization. WHO Framework Convention on Tobacco Control (WHO FCTC). 2003.
10. Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-informed Tobacco Treatment (CAN-ADAPTT). Smoking cessation guideline (ADAPTE process).
11. STROBE Initiative. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): guidelines for cross-sectional studies.