

Beyond Nicotine: Understanding the Binary Why Smokers Cope or Crave

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ABSTRACT

Despite the call through advertising and health promulgation on the dangers of cigarettes to human health, it has not eradicated smoking, nor has it abated dependence. People have indulged in a smoking habit, motivated by the addictive content of cigarettes, which is nicotine. This article examines how smoking for pleasure or as a coping mechanism is addressed in a systematic review of five foundational studies on smoking. This paper critically evaluates and addresses gaps in understanding, highlighting the need for a comprehensive synthesis of qualitative experiences regarding pleasure and coping to inform cessation strategies. The results of the findings included the pleasurable effects of nicotine. Again, psychological dependence is accrued from adverse childhood experiences (ACEs) and other psychological factors [24]. A limitation of the work is that the demographic sampling was limited to young people and adolescents, excluding adults who smoke. The conclusion is that smokers, both as a pleasure response and a coping mechanism, are compelled by the S-R mechanism [7].

Keywords: Smoking, nicotine, coping, pleasure

1 INTRODUCTION

Anti-smoking campaigns frequently use advertising to warn the public about the dangers of smoking, emphasizing its negative impact on health and encouraging people to quit or avoid starting. Cigarette smoking among U.S. adults has declined from 42.4% in 1965 to 11.6% in 2022 [22]; however, tobacco use remains the leading cause of preventable death [37]. Cigarettes and alcohol can have combined pharmacological effects that can result in a heightened reward [27, 10, 30] and may contribute to their co-use; for Halvaiepoura & Nosratabad (2022), tobacco use is the second leading cause of death and disability-adjusted life years (DALYs) in India. In order to understand the addictive circumstances of

tobacco-smoking, this paper aims to review previous works to understand the underlying pull towards smoking, whether people smoke for pleasure or as a coping mechanism.

A 2022 study by [24] explored the connection between negative childhood experiences and subjective socioeconomic status and cigarette smoking cravings among University Students in Isfahan, Iran," with a cross-sectional survey plan, comprising 450 university students in Isfahan, Iran, who were randomly selected; showed in its findings, 46.5 percent of all university students had at least one Adverse Childhood Experience (ACE), and 68.8 percent of all university students had some level of smoking craving. The study also concluded that university students who have had adversity in their childhood are more likely to engage in high-risk behaviors like smoking. Because smoking was recognized as a coping mechanism for stressful events, it was suggested that personal, local, and national strategies aimed at young adults in Iran be developed.

A study by [32] found that young adults experience greater enjoyment from using e-cigarettes and smoking conventional tobacco cigarettes when they are also consuming alcohol. The study utilized data from a larger tobacco use study conducted in 2015 and 2016, along with time-location sampling, to generate a sample of young adult bar and club patrons in Los Angeles, San Diego, and San Francisco. Comparing the extent of use and perceived pleasure from cigarettes and e-cigs when drinking alcohol, with 269 participants, 40.1% male and 36.1% female, showed participants reported an average of 63.6% (SD = 24.8) of cigarette smoking episodes and 46.7% (SD = 27.8) of e-cig use episodes under the influence of alcohol. The study concluded that drinking alcohol is associated with an increase in perceived rewarding effects of both cigarettes and e-cigs and thus may increase their abuse liability. This effect may be stronger for

cigarettes, which could be an important barrier to switching completely from smoking cigarettes to using e-cigs or quitting both entirely.

Furthermore, a study by [13] indicated that young adults report increased pleasure from smoking cigarettes when drinking alcohol concurrently, but not when using marijuana in conjunction with smoking. The study utilized baseline survey data from a randomized controlled trial of English-literate young adults aged 18-25 in the United States, who reported smoking at least 100 cigarettes in their lifetime and currently smoked on at least 3 days per week. Using a large sample of 7,540 respondents who passed the online eligibility screening, 1,039 signed online consent forms, of whom 739 (71.3%) provided online verification of identity, and 500 (48.3%) completed a baseline assessment. The result showed there were no other differences for tobacco use or alcohol use characteristics between groups. The study concluded there were no differences between smokers who used alcohol and marijuana, compared to smokers who used only marijuana or only alcohol, on these measures, increasing the generalization of the findings.

More so, a 2013 study by [33] found that pregnant smokers experience more psychological distress and use more emotion-focused coping styles compared to non-smokers, who have higher self-esteem and use more active coping strategies. The study employed a socio-demographic and pregnancy data collection method, involving 80 participants. The results showed that the group of pregnant women who smoked had significantly lower mean self-esteem, elevated psychological distress and anxiety scores, and reported using more emotion-focused coping than the group of pregnant non-smokers. The study concluded these women were not physiologically addicted to nicotine but were habitual smokers who had a psychological dependence.

Finally, [3] investigated the link between an earlier age of smoking initiation, the experience of initial pleasurable sensations, and subsequent development of addiction. A prospective longitudinal study method was employed to track the outcomes of early risk factors from birth to adulthood, involving a population of 384 children, predominantly (>99.0%) of European descent, born between 1986 and 1988. The study's results highlighted that the age at which the first cigarette was consumed varied between 8 and 21.5 years. The prevalence of current smoking

was 62.9%, with a mean number of cigarettes consumed per month ranging from 1 to 1,500. The study concluded that the adolescents who smoked their first cigarette at an earlier age report sensations that are more pleasurable from cigarettes. Hence, a higher proportion of adolescents who try cigarettes at an early age go on to smoke regularly and become dependent.

2 DISCUSSION

This article review examined the reasons behind smoking behaviour, whether people smoke for pleasure or as a coping mechanism. Hence, to aid us for clarity, Coping was defined as “cognitive and behavioral efforts to master, reduce or tolerate the internal and/or external demands, which are created by the stressful transaction” [16]. Pleasure was also defined as the subjective hedonic quality linked to stimuli or objects, which is defined in behavioral terms as incentivizing or rewarding [15]. The article deepens our understanding of smoking behaviour. In the study by [24], the findings show that children with adversity are more likely to engage in high-risk behavior like smoking. Although the study has its limitations, including a small sample size that restricts its generalizability to other populations and its reliance on self-reported subjective socioeconomic status (SES) rather than objective criteria, which may have influenced the findings, the work has increased our understanding of why smoking serves as a coping mechanism. It explains the craving for Cigarette Smoking Based on Adverse Childhood Experiences and Subjective socioeconomic Status among University Students. This is also corroborated by the study by [33] on coping style in pregnant smokers, which found that pregnant women who have low self-esteem are more likely to smoke than those with high self-esteem. Although the demographic was pregnant women, the study revealed that low self-esteem was a significant factor in this population. These two studies focus on smoking as a coping mechanism. Both ACE and low self-esteem are among the psychological factors that create dependence on smoking.

Previous studies have highlighted how smoking operates as a coping mechanism, and many smokers believe that cigarettes help them cope with negative emotions [5, 29, 18]. As early as 1985, [36] proposed that smoking should be conceptualized as a maladaptive coping response to stress and negative

mood. Stress, which is a psychological factor, is another common trigger for smoking has been identified as a barrier to quitting [20]. According to studies, smoking is a well-known stress-reduction strategy [12]. Adverse childhood experiences (ACEs), or stressful life events in the past, have been linked to the initiation and dependence on smoking and drug use [9]. An adverse childhood experience is a specific negative or traumatic event that occurs in the life of a child under the age of 18 [11]. Individuals with ACE may be predisposed to the disease due to differences in psycho-physiological development as well as the adoption of maladaptive behaviors such as smoking [14, 35]. The influence of ACEs on mental, physical, and social health varies greatly depending on age, gender, and other demographic factors [34]. This disparity can be attributed to differences in resilience, stress-coping capacity, and social support [17]. However, because young people, particularly students, are subjected to various academic stressors, worries about the future, and other social insecurities, these situations may exacerbate their inclination to smoke [26]. Hence, psychological factors, including depression, anxiety, and low self-esteem, play critical roles in smoking behavior [21].

Again, the study by [32] showed that the young adults report increased pleasure from using tobacco cigarettes when drinking alcohol, but not with e-cigarettes. This corroborates the study by [13], which reported that young adults report increased pleasure from smoking cigarettes when drinking alcohol but not when using marijuana. Here we see that cigarettes and alcohol are both addictive substances. Their commonalities include their effects on the brain's reward system, their associated social behaviors, and the heightened health risks that occur when they are used concurrently [23]. Finally, the longitudinal study by [3] reports sensational pleasure by adolescents who smoked their first cigarette at an earlier age. Buchmann's longitudinal study showed a clear pattern where a younger age of initiation was associated with increased addiction, smoking intensity, and reduced likelihood of cessation. It emphasizes the role of initial positive reinforcement (pleasurable sensations) in the progression from experimentation to regular use and addiction. This gave us a wider picture of smoking as pleasure, as he concluded that "Early smoking onset may promise initial pleasurable sensations and later addiction". However, when compared with [24], ACE, we noticed that smoking as

a pleasure and a coping mechanism are both motivated by the reward effects of the S-R mechanism.

Motivation is one of the alluring factors in smoking behaviour because of the characteristic content of cigarettes, which is nicotine. Nicotine dependence is a fundamental reason why individuals persist in using tobacco. This dependence is characterized by both tolerance and withdrawal symptoms in relation to nicotine use (Fagerström, 1978). This view was supported as one hypothesized reason for elevated smoking prevalence among adults with serious mental illness (SMI), believing that nicotine temporarily improves cognition (e.g., working memory, attention, and visual learning) [1]. In the editorial on addiction [4], a prevailing narrative explaining tobacco addiction is that uptake of nicotine in the brain causes dopamine release in the nucleus accumbens, which rewards the behavior that led to it. Cigarettes and alcohol can have combined pharmacological effects that can result in a heightened reward [27, 10, 30]. This reward serves as an operant for smoking behaviour.

[7] explained it as behaviour that occurs because it was previously effective in producing inevitable consequences. This sense of pleasure enhances the operant procedure in smoking behaviour to the point of becoming an addiction. With Skinner as the proponent of instrumental conditioning, Thorndike projected the Law of Effect, which states, "If a satisfying event follows a response R in the presence of a stimulus S, the association between the stimulus S and the response R becomes strengthened. The S-R association is weakened if an annoying event follows the response" [7]. This law of effect is what heightened the perceived tie to smoking as pleasurable. Dopamine reinforces the smoking behaviour positively, seeing the cigarette as an appetitive stimulus.

It is important to note that the notion of smoking for pleasure due to dopamine has been severely criticized. Many consider tobacco addiction to be a dopaminergic accumbal self-administration disorder, with nicotine as the primary pharmacological agent. Critiques of the dopaminergic narrative in nicotine dependence are not new. [6] described 'wrinkles' in the dopamine hypothesis. He pointed out that dopamine release is associated with nicotine self-administration but is not necessary for the behavioural demonstration of nicotine reward. Part

of the problem appears to stem from the misconception of a one-to-one correspondence between dopamine transmission in the nucleus accumbens and behavioral reward. More probably, dopamine transmission signals unpredictable and novel information from the environment. It participates in updating environmental saliency for both rewarding and aversive stimuli, as well as in its integration into adaptive, motivated behavior. This makes us reconsider whether there are other factors outside the dopamine factor that constitute smoking behaviour. Part of the argument involves reference to other neuropharmacological mechanisms found to be important that appear to have little or no connection to dopamine. Another part is the recognition that social and psychological factors have a huge role to play in the uptake, development, and maintenance of addictive behaviours [2].

Because adverse childhood experiences (ACEs) are commonly linked to family dysfunction, a lack of social support, and a low socio-economic status, it is hypothesized that these experiences increase the likelihood of increased smoking desires [31]. As a result, studies cited above have convincingly supported the hypothesis that smoking cravings in Iranian university students were related to adverse childhood experiences and subjective socio-economic position. Adverse Childhood Experience provided us with a factor in the early impoverished life of teens, which lures them into using smoking as a coping mechanism. This counteracts the notion that early initiation of children to smoking, instead of increasing the pleasure due to dependence on dopamine interplay, makes it minimal or secondary.

This does not mean we underrate the dopamine effect because accommodating all the available evidence in a single systems model will be challenging. However, it should be a key objective in the field [19]. Such a model will need to recognize the role of dopamine in tobacco addiction under a broader and more evolutionary conceptualization; the dopamine signal is the mediator not only of pleasure and reward, but also of aversion, novelty, expectation, prediction errors, decision-making, and, in general, of the information processing from/to the tobacco user's environment.

3 LIMITATION AND CONCLUSION

In the current article, one of the limitations, *inter alia*,

is that the demographic sample mainly consisted of young people and adolescents. There were not many references to adults who smoke for various reasons, which can include regrets in life; if we consider "integrity vs despair in Erikson's eight stages of psychological development, at least to test if our variables for smoking for pleasure and coping mechanisms are consistent across ages. Hence, further research and study are recommended to test a correlation between adult usage and adolescent usage of smoking as a coping mechanism. The goals of this study included investigating addiction to smoking behaviour, whether people smoke for pleasure or as a coping mechanism. The results include that uptake of nicotine in the brain causes dopamine release in the nucleus accumbens, which enhances the operant procedure in smoking behaviour. Critiques of the simple version of the dopamine hypothesis as a cornerstone of addiction theory apply to other addictions as well as tobacco [25].

Part of the argument references other important neuropharmacological mechanisms that appear to have little or no relationship to dopamine [2]. Another part is the recognition that social and psychological factors have a huge role to play in the uptake, development, and maintenance of addictive behaviours [28]. This behaviour increases due to repetition. This was what [7] referred to as a stereotype when he made the statement. This emphasis encouraged the belief that instrumental conditioning produces repetition of the same response -that it produces uniformity or stereotypy in behaviour; continuing further, he said that a habitual smoker who knows that smoking is harmful will continue to smoke because the S-R mechanism compels lighting a cigarette independent of the consequences of the response [7]. We can conclude that smokers, as a pleasure response and coping mechanism, are compelled by the S-R mechanism. The current article provides support for understanding the power of addiction to smoking. Interventions and future research should take into consideration these findings during treatment planning and investigating differences across demographically diverse samples of people with smoking behaviour.

4 References

- [1] Aubin, J., Farley, A., Lycett, D., Lahmek, P., & Aveyard, P. (2012). Weight gain in smokers after quitting cigarettes: meta-analysis. *British*

- Medical Journal*. 10(345): 4439. doi: 10.1136/bmj.e4439. PMID: 22782848; PMCID: PMC3393785.
- [2] Badiani, A., Berridge, K. C., Heilig, M., Nutt, D. J., & Robinson, T. E. (2018). Addiction research and theory: a commentary on the Surgeon General's report on alcohol, drugs, and health. *Addiction Biology*. 23: 3–5.
- [3] Buchmann, J., McKeganey, N., & Dickson, T. (2011). Early smoking onset may promise initial pleasurable sensations and later addiction. *Human Study bs banner Addiction Biology* doi:10.1111/j.1369-1600.2011.00377x.
- [4] Chiamulera, C., & West, R. J. (2018). What role does dopamine play in tobacco addiction? *Addiction*. 113(8): 1379–1380. doi: 10.1111/add.14235. Epub 2018 May 15. PMID: 29766605.
- [5] Cohen S, Lichtenstein E. (1990). Perceived stress, quitting smoking, and smoking relapse. *Health Psychol* 9: 466–478. DOI10.1037/0278-6133.9.4.466.
- [6] Dani, J. (2003). Roles of dopamine signaling in nicotine addiction. *Molecular Psychiatry* 8: 255–256. DOI - 10.1038/sj.mp.4001284.
- [7] Domjan, M. P. (2015). *The Principles of Learning and Behavior*. *Cengage Learning*. <https://books.google.com/books?id=vkLAAgAAQBAJ>. 9781305142671.
- [8] Fagerström, K. O. (1978). Measuring degree of physical dependence to tobacco smoking with reference to individualization of treatment, *Addictive Behaviors*. 3 (3–4): 235-241. ISSN 0306-4603, [https://doi.org/10.1016/0306-4603\(78\)90024-2](https://doi.org/10.1016/0306-4603(78)90024-2).
- [9] Garland, E. L., Hanley, A. W., Kline, A., & Cooperman, N. A. Mindfulness-Oriented Recovery Enhancement reduces opioid craving among individuals with opioid use disorder and chronic pain in medication-assisted treatment: Ecological momentary assessments from a stage 1 randomized controlled trial. *Drug Alcohol Depend*. 2019Oct1;203:61-65.doi: 10.1016/j.drugalcdep.2019.07.007. Epub 2019 Aug 5. PMID: 31404850; PMCID: PMC6939880.
- [10] Glautier, S.; Clements, K.1; White, J. A.W.2; Taylor, C.; Stolerman, I. P.2. Alcohol and the reward value of cigarette smoking. *Behavioural Pharmacology* 7(2): p. 144–154, March 1996.
- [11] Goddard, A., Janicek, E., & Etucher, L. (2021). Trauma-informed care for the pediatric nurse: *Journal of Pediatric Nursing*. (62)1-9 DOI: 10.1016/j.pedn.2021.11.003.
- [12] Golbidi, S. Edvinsson, L. Laher, Ismail. (2018). Smoking and Endothelial Dysfunction, 16(1). *Current Vascular Pharmacology*. DOI10.2174/1573403X14666180913120015.
- [13] Gubner, N. R., Thrul, J., Kelly, O. A., & Ramo, D. E. (2018). Young adults report increased pleasure from smoking cigarettes when drinking alcohol, but not when using marijuana. *Addiction Research & Theory*, 26(1), 71–76. <https://doi.org/10.1080/16066359.2017.1311877>.
- [14] Hughes K, Ford K, Bellis MA, Glendinning F, Harrison E, Passmore J. Health and financial costs of adverse childhood experiences in 28 European countries: a systematic review and meta-analysis. *Lancet Public Health*. 2021.Nov;6(11):e848e857. doi:10.1016/S2468-2667(21)00232-2.PMID:34756168; PMCID: PMC8573710.
- [15] Kringelbach, M. L., & Berridge, K. C. (2010). *Pleasures of the Brain*. New York: *Oxford University Press*.
- [16] Lazarus, S., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. *Springer Publishing*.
- [17] Logan-Greene P, Green S, Nurius PS, Longhi D. Distinct contributions of adverse childhood experiences and resilience resources: a cohort analysis of adult physical and mental health. *Soc Work Health Care*. 2014;53(8):776-97. doi: 10.1080/00981389.2014.944251. PMID: 25255340; PMCID: PMC4273909.
- [18] Manning, B.K., Catley, D., Harris, K.J., Mayo, M.S., & Ahluwalia, J.S. Stress and quitting

- among African American smokers. *J Behav Med.* 2005 Aug;28(4):325-33. Doi: 10.1007/s10865-005-9004-9. PMID: 16049631.
- [19] McKeganey, N., & Dickson, T. (2017). Why don't more smokers switch to using e-cigarettes? The views of confirmed smokers, *International Journal of Environmental Research and Public Health*14(6) DOI: 10.3390/ijerph14060647
- [20] Mansyur, M.D. (2013). Dolomitisation And Its Relation To Fracture Porosity Evolution; A Case Study In Permian Ratburi Carbonate Outcrop In The Sibumasu Domain, Krabi, Southern Peninsular Thailand. DO10.29118/IPA.0.13.G.016.
- [21] Maxson PM, Derby KM, Wroblewski DM, Foss DM. Bedside nurse-to-nurse handoff promotes patient safety. *Medsurg Nurs.* 2012 May- Jun;21(3):140-4; quiz 145. PMID: 22866433.
- [22] Meza R, Cao P, Jeon J, Warner KE, Levy DT. Trends in U.S. adult smoking prevalence, 2011-2022. *JAMA Health Forum* 2023;4:e234213.10.1001/jamahealthforum.2023.4213 [DOI] [PMC free article] [PubMed] [Google Scholar][Ref list]
- [23] Mokdad, H., Marks, S., Stroup, F., & Gerberding, L. (2000). Actual causes of death in the United States. *JAMA.* 2004;291(3):1238-1245. doi:10.1001/jama.291.10.1238.
- [24] Nosratabadi, M., & Halvaiepour, Z. (2022). The mediating role of emotion regulation in the relationship between criticism and cigarette smoking among male adolescents. *International Journal of High Risk Behaviors and Addiction*, 7(2), e55596. <https://doi.org/10.5812/ijhrba.55596>.
- [25] Nutt, D. J., Lingford-Hughes, A., Erritzoe, D., & Stokes, P. R. (2015). The dopamine theory of addiction: 40 years of highs and lows. *Nat Rev Neuroscience.* 16: 305–12.
- [26] Pashaeypoor S, Baumann SL, Sadat Ho-seini A, Cheraghi MA, Chenari HA. Identifying and Overcoming Barriers to Implementing Watson's Human Caring Science. *Nurs Sci Q.* 2019 Jul;32(3):239–244. doi: 10.1177/0894318419845396. PMID: 31203774.
- [27] Perkins, K. A. (1995). Individual variability in responses to nicotine. *Behavioral Genetics.* 25(2):119–32. doi: 10.1007/BF02196922. PMID: 7733854.
- [28] Piazza, J. Godwin G., & Rozin, P. (2013). Moral Character Predominates in Person Perception and Evaluation. *Journal of Personality and Social Psychology* (106) DO10.1037/a0034726.
- [29] Pomerleau, D. A. (1991). Efficient training of artificial neural networks for autonomous navigation. *Neural Computation*, 3(1), 88–97. <https://doi.org/10.1162/neco.1991.3.1.88>.
- [30] Rose, J. E., & Behm, F. M. (2004). Effects of low-nicotine content cigarettes on smoke intake. *Nicotine & Tobacco Research*, 6(2), 309–319. <https://doi.org/10.1080/14622200410001676378>.
- [31] Sheikh MA, Abelsen B, and Olsen JA (2016). Clarifying Associations between Childhood Adversity, Social Support, Behavioral Factors, and Mental Health, Health, and Well-Being in Adulthood: A Population-Based Study. *Front. Psy- chol.* 7:727. doi: 10.3389/fpsyg.2016.00727.
- [32] Thrul, J., Gubner, N. R., Kelly, O. A., & Ramo, D. E. (2019). Young adults report increased pleasure from using e-cigarettes and smoking tobacco cigarettes when drinking alcohol. *Addictive Behaviors Volume* 93, J 135-140.
- [33] Varescon, I. (2013). Psychological Reports: Mental & Physical Health SELF-ESTEEM, Psychological Distress and Coping Styles in Pregnant Smokers and Non-Smokers. Stop smoking (Haslam & Draper, 2001). Many women smokers con2013, 113, 3, 935-947.1, 2.
- [34] Verónica Pérez-Rosas, Rada Mihalcea, Kenneth Resnicow, Satinder Singh y Lawrence An. (2017). Understanding and Predicting Empathic Behavior in Counseling Therapy. In *Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, pages 1426–1435, Vancouver, Canada. Association for Computational Linguistics.
- [35] Vogel, E. A., Ramo, D. E., Rubinstein, M. L., Delucchi, K. L., Darrow, S. M., Costello, C., Prochaska, J. J. Effects of Social Media on Adolescents' Willingness and Intention to

Use E-Cigarettes: An Experimental Investigation. *Nicotine Tob Res.* 2021 Mar19;23(4):694701.doi:10.1093/ntr/ntaa003. PMID: 31912147; PM-CID: PMC7976937.

- [36] Wills, T. A., & Shiffman, S. (1985). Coping and substance use: A conceptual framework. In S. Shiffman & T. A. Wills (Eds.), *Coping and substance use*. San Diego: Academic Press.
- [37] US Department of Health and Human Services. Smoking cessation: a report of the Surgeon General. Rockville, MD: US Department of Health and Human Services; 2020.<https://www.hhs.gov/sites/default/files/2020-cessation-sgr-full-report.pdf> [PubMed].