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PEER PRESSURE INFLUENCED TOBACCO USE IN ADOLESCENTS: WEIGHING THE IMPACT OF PARENTING AND SOCIAL MEDIA

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ABSTRACT

This study investigates how parent-adolescent relationship factors, connectedness and hostility, and exposure to antisocial content on social media influence peer pressure among tobacco-using adolescents in Andhra Pradesh, India. A purposive sample of 760 adolescents aged 16–19 years (351 middle adolescents and 409 late adolescents) (561 males, 199 females) completed the Parent-Adolescent Relationship Scale, the Antisocial Content Exposure subscale of the C-ME2, and the Peer Pressure Scale. Independent samples t-tests revealed that late adolescents and females reported significantly higher connectedness, while males experienced greater hostility. Late adolescents also showed higher levels of antisocial content exposure and peer pressure. Correlation analysis indicated weak but significant associations between peer pressure and parenting dimensions, and a strong positive correlation between antisocial content exposure and peer pressure. Hierarchical regression analysis confirmed that antisocial content exposure was the sole significant predictor of peer pressure, while connectedness and hostility contributed no additional variance. These findings highlight the dominant role of digital and social media in shaping adolescent peer dynamics and underscore the need for interventions promoting media literacy, digital supervision, and family communication to reduce vulnerability to peer influence among tobacco-using adolescents.

KEYWORDS: Adolescents, Tobacco Use, Peer Pressure, Parenting, Social Media.

1. INTRODUCTION

Adolescence represents a critical period of growth characterized by swift changes in physical, emotional, and social domains. Globally, it is defined as the period from 10 to 19 years by the World Health Organization (WHO, 2022), while the American Academy of Pediatrics defines adolescence as spanning from 11 to 21 years, further dividing it into early (10–13 years), middle (14–17 years), and late (18–21 years) stages (AAP, n.d.). In India, adolescents comprise approximately 253 million people roughly 21% of the population positioning them as key drivers of the nation's future development (UNICEF, 2021). Adolescents form the backbone of a developing nation like India, as their growth and potential directly shape the country's future progress. However, widespread substance use including tobacco, alcohol, and marijuana is hindering their personal growth, which in turn hampers the nation's overall progress and development.

Amidst these formative years, adolescents are particularly susceptible to risk behaviors, including tobacco use. The Global Youth Tobacco Survey (GYTS-4, 2019) reported that 8.5% of Indian adolescents aged 13 to 15 use tobacco, with higher rates among boys (9.6%) than girls (7.4%) (MoHFW, 2019). Despite a reported decline in usage, exposure to secondhand smoke remains widespread, with nearly one-third of adolescents exposed in public settings. In response, the Ministry of Health and Family Welfare has implemented the National Tobacco Control Programme (NTCP), promoting public awareness and enforcement of tobacco legislation (MoHFW, 2021). Regional disparities further complicate this issue. In Andhra Pradesh, the adolescent smoking prevalence is relatively low at 2.6% (GYTS, 2019)

1.1. Parent-adolescent relationship

The parent-adolescent relationship significantly influences emotional, social, and behavioral development. Positive parenting marked by warmth, support, and open communication enhances adolescents' self-esteem, resilience, and independence, contributing to academic success and mental well-being. In contrast, hostile parenting involving harsh discipline and poor communication can lead to emotional distress, conflict, and behavioral problems like substance abuse (Sharma & Srivastav, 2023). Parental communication varies by age, education, and urban area, and school students show more openness, while older and rural adolescents face more conflict. Economic disadvantage further impedes parent-child communication (Singampalli et al., 2024a). Family history of smoking also plays a critical role in adolescent tobacco use. Parental smoking normalizes the behavior, increasing susceptibility to peer pressure and early tobacco initiation. In Andhra Pradesh, adolescents from joint families, low-income households, and smoking backgrounds exhibit higher nicotine dependence (Singampalli et al., 2024b).

1.2. Social media exposure

Adolescents today navigate an unfiltered digital environment. Social media platforms like Instagram, Facebook, TikTok, and Snapchat continuously expose adolescents to idealized lifestyles, peer expectations, and risky or harmful content. Without adequate parental supervision, this exposure can contribute to negative behaviors, including cyberbullying, social comparison, and early substance use (Dar & Nagarath, 2023). Bullo and Schulz (2021) found that antisocial media exposure heightened aggression, with peer norms outweighing parental influence. Late adolescents and undergraduate students show particularly high levels of smartphone and social media use, often linked to risks such as Internet Gaming Disorder and reduced academic engagement (Singampalli, 2024). Social media platforms also serve as a conduit for tobacco-related messaging. Both passive exposure to tobacco content and active engagement such as liking, sharing, or posting are linked to higher tobacco use among adolescents. Notably, adolescents who share tobacco-related content are more likely to escalate their own usage patterns (Cavazos-Rehg et al., 2021).

1.3. Peer Pressure

Peer pressure plays a central role in adolescence as young individuals seek acceptance and identity within their social circles. This influence arises not only from peers in school or friendships but increasingly through digital platforms. Social media apps amplify social comparison and promote idealized lifestyles, heightening adolescents' urge to conform to perceived norms related to behavior, appearance, and status both online and offline. Peer influence significantly shapes adolescent behavior, affecting academic motivation, social relationships, and risk engagement. Singh and Chandel (2022) emphasized the centrality of peer dynamics in adolescent development, particularly in relation to substance use and emotional regulation. Kumar et al. (2021) similarly reported that peer pressure among school-going adolescents in Southern India contributed to substance experimentation, though parental support helped buffer these effects.

1.4. Peer pressure and smoking

Peer pressure is one of the strongest predictors of tobacco use among adolescents of India. The need to fit in, gain approval, or appear mature often drives initial smoking behavior, particularly within school and college environments. Smoking is often viewed as a sign of autonomy or defiance, which can enhance its attractiveness to adolescents. Additional risk factors include easy accessibility of tobacco products, limited parental supervision, and modeling by older peers or siblings. A meta-analysis by Liu et al. (2017) concluded that peer smoking significantly increases the likelihood of adolescent smoking through direct behavioral modeling and internalized social norms. Similarly, Robalino and Macy (2018) and Rozi et al. (2016) found strong associations between peer influence and smoking initiation. Leshargie et al. (2019) confirmed that Peer influence has been consistently identified as a universal predictor of tobacco initiation. In the Indian context, studies done by Sharma et al. (2010) and Gupta et al. (2010) demonstrated that peer influence plays a major role in smoking initiation across rural, urban, and slum populations, underscoring the need for context-specific interventions.

1.5. Role of Parent-Adolescent Relationship and Social Media Exposure on Peer Pressure

Effective communication between parents and adolescents is linked to lower rates of smartphone dependency, while communication problems elevate risk (Singampalli et al., 2024c). Research supports these associations, Donaldson et al. (2022) found that exposure to tobacco-related content on social media has been shown to increase tobacco use among youth by normalizing and reinforcing such behavior and Bai et al. (2022) emphasized that adolescent substance use is jointly predicted by deviant peer affiliation and exposure to social media.

In India, the rise in smartphone addiction among adolescents has been linked to academic stress, urban living, and reduced parental supervision, leading to increased engagement with social media platforms (Yogesh et al., 2024). Urbanization and weakening community ties push youth toward digital interactions, where peer influence and Fear of Missing Out (FoMO) further drive online activity. Limited parental digital literacy allows exposure to unregulated content, with late adolescents showing higher engagement with antisocial material (Frey & Friemel, 2023). Seeking entertainment, validation, and escape, adolescents spend more time online, raising concerns about the impact of harmful content.

1.6. The Present Study

Parenting and social media exposure shape adolescents' vulnerability to peer pressure. Supportive parenting fosters confidence and resists negative influences, while neglectful or hostile parenting drives peer validation seeking. Poor monitoring of social media increases exposure to antisocial content, which glamorizes risky behaviors. Adolescents seeking identity and approval may internalize and imitate these digital norms.

This study addresses how parenting and social media exposure influence adolescent responses to peer pressure. Understanding the interplay between these factors is key to identifying effective interventions for healthier adolescent development.

1.7. Objectives

1. To examine differences in connectedness, hostility, anti-social content exposure and peer pressure based on age.
2. To examine differences in connectedness, hostility, anti-social content exposure and peer pressure based on gender.
3. To assess the relationship between parental connectedness and hostility, anti-social content exposure and peer pressure.
4. To determine the extent to which anti-social content exposure, connectedness, and hostility predict peer pressure.

1.8. Hypotheses

1. There are significant differences in connectedness, hostility, anti-social content exposure, and peer pressure based on age.
2. There are significant differences in connectedness, hostility, anti-social content exposure, and peer pressure based on gender
3. There is a significant relationship between parental connectedness, hostility, anti-social content exposure, and peer pressure.
4. Anti-social content exposure, connectedness, and hostility significantly predict peer pressure.

2. LITERATURE REVIEW

Adolescence is a developmental phase marked by heightened susceptibility to social, environmental, and behavioural influences, particularly those related to risk-taking behaviours such as tobacco use. The interplay between peer pressure, parental relationships, and media exposure has been extensively examined in the literature, highlighting their combined role in shaping adolescent behaviour.

Peer pressure has consistently been identified as one of the strongest determinants of adolescent smoking behaviour. Studies demonstrate that adolescents are more likely to initiate and maintain

tobacco use when influenced by peers who smoke, due to mechanisms such as social modeling and normative beliefs (Liu et al., 2017; Robalino & Macy, 2018). A meta-analysis by Liu et al. (2017) confirmed that peer behaviour significantly predicts smoking initiation across diverse cultural contexts. Similarly, Robalino and Macy (2018) found that adolescents are more likely to adopt smoking behaviours when exposed to socially influential peers. This influence is further reinforced in school environments where acceptance and identity formation are closely tied to group norms (Singh & Chandel, 2022).

The role of the parent-adolescent relationship in buffering or exacerbating peer influence has also been widely studied. Positive parenting characterized by warmth, communication, and monitoring is associated with lower levels of substance use and reduced susceptibility to peer pressure (De Goede et al., 2009; Keijsers & Poulin, 2013). De Goede et al. (2009) reported that strong parent-child relationships contribute to better emotional regulation and decision-making among adolescents. Conversely, hostile or conflictual parenting environments increase the likelihood of adolescents seeking validation from peers, thereby increasing vulnerability to risky behaviours (Shanahan et al., 2007). Keijsers and Poulin (2013) further highlighted that effective parental communication plays a protective role against peer-induced risk behaviours.

Family structure and parental behaviours also contribute significantly to adolescent smoking. Studies indicate that parental smoking and permissive attitudes toward tobacco normalize the behaviour, increasing the likelihood of adolescent initiation (Sharma et al., 2010; Gupta et al., 2010). Sharma et al. (2010) found that adolescents exposed to smoking role models within the family were significantly more likely to engage in tobacco use. Similarly, Gupta et al. (2010) demonstrated that socio-environmental factors, including family context, play a critical role in shaping tobacco use patterns among youth.

In recent years, social media has emerged as a powerful influence on adolescent behaviour, often amplifying peer pressure through digital interactions. Platforms such as Instagram, TikTok, and Facebook expose adolescents to curated lifestyles and risk-promoting content, which can normalize substance use behaviours (Nesi et al., 2018; Dar & Nagrath, 2023). Nesi et al. (2018) proposed that social media transforms peer influence processes by increasing visibility, immediacy, and reinforcement of peer behaviours. Exposure to tobacco-related content on social media has been strongly associated with increased likelihood of tobacco use among adolescents (Donaldson et al., 2022). A systematic review and meta-analysis by Donaldson et al. (2022) confirmed that digital exposure to tobacco content significantly increases usage among youth.

Antisocial content exposure, including portrayals of aggression, rebellion, and substance use, further contributes to adolescent risk behaviours. Den Hamer et al. (2017) developed the Content-Based Media Exposure Scale, demonstrating that frequent exposure to antisocial media content is associated with increased aggression and risky behaviours. Bullo and Schulz (2021) found that peer norms mediated the relationship between media exposure and aggressive behaviour, suggesting that social influence plays a central role in interpreting and adopting such behaviours.

The interaction between peer influence and media exposure is particularly significant. Adolescents who engage with or share substance-related content are more likely to internalize these behaviors as normative (Cavazos-Rehg et al., 2021). Cavazos-Rehg et al. (2021) found that both passive exposure and active engagement with tobacco-related content increase the likelihood of tobacco use. Furthermore, Bai et al. (2022) highlighted that deviant peer affiliation combined with social media exposure significantly predicts adolescent substance use.

Age and developmental stage also influence susceptibility to peer pressure and media effects. While some studies suggest that peer influence peaks in early adolescence and declines with age (Steinberg & Monahan, 2007), others indicate that late adolescents remain vulnerable, particularly in contexts involving substance use and identity exploration (Frey & Friemel, 2023). Steinberg and Monahan (2007) reported developmental differences in resistance to peer influence, with younger adolescents being more susceptible. However, contextual factors such as social media exposure may extend this vulnerability into later stages (Frey & Friemel, 2023).

Gender differences have also been observed in parent-adolescent relationships and behavioral outcomes. Research suggests that females often report higher levels of parental connectedness, while males experience greater conflict and hostility (Ashraf & Najam, 2011). Ashraf and Najam (2011) found significant gender differences in parent-adolescent conflict, with boys reporting higher levels of disagreement and autonomy struggles. These differences may influence how adolescents respond to peer pressure and engage in risk behaviors.

In the Indian context, cultural, social, and

economic factors further shape adolescent behavior. Studies conducted in India have consistently shown that peer pressure is a major determinant of tobacco use among adolescents (Kumar et al., 2021; Yogesh et al., 2024). Kumar et al. (2021) reported that peer influence significantly contributes to substance experimentation among school-going adolescents. Additionally, Yogesh et al. (2024) found that increased smartphone usage and reduced parental supervision are associated with higher engagement in risky online behaviors.

Overall, existing literature suggests that adolescent smoking behavior is influenced by a complex interplay of peer dynamics, parental relationships, and media exposure. While parental factors provide a foundational environment, peer and digital influences appear to exert a more immediate and powerful impact on adolescent decision-making. However, there remains a gap in understanding how these factors interact simultaneously, particularly among tobacco-using adolescents in specific regional contexts such as Andhra Pradesh. The present study aims to address this gap by examining the combined influence of parent-adolescent relationship dynamics and antisocial media exposure on peer pressure.

3. METHOD

3.1. Participants

A purposive sampling method was used to collect data from 760 adolescents from different schools (11th and 12th) and colleges (Inter and UG) in Andhra Pradesh. Only those who reported smoking or using tobacco products were included, ensuring the sample's relevance to the research. Among the participants, 351 (46.2%) were middle adolescents (MA) (aged 16–17 years), while 409 (53.8%) were late adolescents (LA) (aged 18–19 years). The sample included 561 (73.8%) males (M) and 199 (26.2%) females (F).

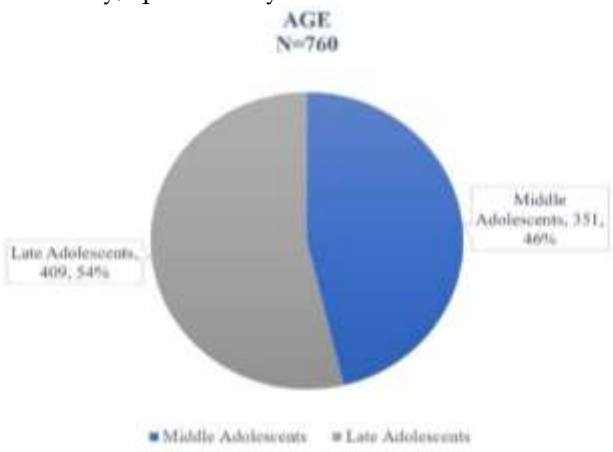

Figure 1: Distribution of Participants by Age Group (N=760)

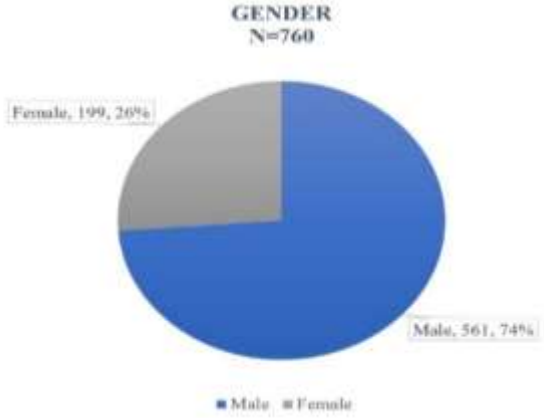

Figure 2: Distribution of Participants by gender (N=760)

3.2. Measures

- **Demographic Information Sheet:** A demographic sheet was used to collect information on participants' age and gender and a screening question about smoking or use of any nicotine product.
- **Parent-Adolescent Relationship Scale (PARS):** developed by Kylie Burke, Cassandra K. Dittman, Divna Haslam & Alan Ralph (2021), is a 15-item, 6-point Likert-type self-report measure designed to assess the quality of the parent-adolescent relationship across three dimensions:

Connectedness, Shared Activities, and Hostility. Suitable for ages 11–25, PARS is a reliable tool for assessing parent-adolescent relationships in research and clinical contexts.

- **Content-Based Media Exposure Scale (C-ME2):** developed by Den Hamer, Konijn, and Bushman (2017), is a self-report measure designed to assess individuals' exposure to antisocial and prosocial media content. The scale consists of 22 items, measured on a 5-point Likert scale (ranging from never (1) to very often (5)). It has two subscales, Antisocial Content Exposure and Prosocial Content Exposure. The scale has been validated for use with adolescents and young adults, making it suitable for research on media influence in these age groups.
- **Peer Pressure Scale (PPS):** developed by Sunil Saini and Sandeep Singh (2016), is a self-report, unidimensional measure designed to assess the extent of peer pressure in adolescents aged 16–19 years across both educated and uneducated strata. It is a 5-point Likert scale, with response options ranging from Strongly Disagree (5) to Strongly Agree (1), where higher scores indicate greater peer pressure. The scale consists of 25 items, with a score range of 25–125. Peer pressure, as measured by this scale, has been linked to behaviors such as smoking, drinking, gambling, violence, risky sexual activities, and gang involvement, making it a relevant tool for examining adolescent vulnerability to peer influence.

3.3. Data Analysis

The data were analyzed using IBM SPSS Statistics 27. Descriptive statistics, including means, standard deviations, and frequencies, were computed for key variables. Inferential analyses included independent samples t-tests to assess differences based on age and gender, Pearson's correlation was used to explore relationships among continuous variables, and hierarchical multiple regression analysis was conducted to determine the predictive effects of parental connectedness, hostility, and anti-social content exposure on peer pressure.

3.4. Procedure

This study followed a cross-sectional design, and data were collected through a pen-and-paper survey administered offline. Participants were first presented with a screening question to confirm their tobacco use status, ensuring that only adolescents who reported smoking or using tobacco products were included in the study. Necessary permissions were obtained from relevant authorities, and ethical guidelines were followed. Informed consent was obtained to ensure voluntary participation and confidentiality.

4. RESULTS

Table 1: Independent Samples t-Test for Age groups on Dependent Variables

DV	G	N	M	SD	t(df)	p	MD	95% CI	d
CO	MA	351	2.25	1.17	-10.37	***<.001	-.81	[-.96, -.66]	-.76
	LA	409	3.06	.95	(673.21)				
HO	MA	351	1.49	1.04	-15.81	***<.001	-1.24	[-1.39, -1.09]	-1.14
	LA	409	2.73	1.11	(752.79)				
ASCE	MA	351	50.37	11.61	-2.27	*.02	-1.95	[-3.63, -.26]	-.16
	LA	409	52.32	11.99	(758)				
PP	MA	351	100.62	19.20	-2.391	*.02	-3.42	[-6.23, -.61]	-.17
	LA	409	104.04	20.07	(758)				

Note. ***p<0.001, **p<0.01, *p<0.05

Independent samples t-tests were conducted to examine differences in connectedness (CO), hostility (HO), anti-social content exposure (ASCE), and peer pressure (PP) across age groups. Welch's t-tests were used for CO and HO due to significant Levene's test results indicating unequal variances.

For age, late adolescents (18–19 years) reported significantly higher levels of connectedness (M = 3.06, SD = 0.95) than middle adolescents (16–17 years) (M = 2.25, SD = 1.17), t(673.21) = -10.37, p < .001, d = -.76. They also reported higher hostility (M = 2.73, SD = 1.11) than middle adolescents (M = 1.49, SD = 1.04), t(752.79) = -15.81, p < .001, d = -1.14. Late adolescents reported significantly higher antisocial content exposure (ASCE) (M = 52.32, SD = 11.99) than middle adolescents (M = 50.37, SD = 11.61), t(758) = –2.27. Similarly, peer pressure (PP) was significantly higher in late adolescents (M = 104.04, SD = 20.07) compared to middle adolescents (M = 100.62, SD = 19.20), t(758) = –2.39. Differences in anti-social content exposure (p = .02, d = -0.16) and peer pressure (p = .02, d = -0.17) were statistically significant but had small effect sizes.

Table 2: Independent Samples t-Test for Gender Groups on Dependent Variables

DV	G	N	M	SD	t(df)	p	MD	95% CI	d
CO	M	561	2.39	1.04	-14.04	****<.001	-1.13	[-1.29, -.97]	-1.11
	F	199	3.52	.95	(377.40)				

HO	M	561	2.22	1.36	3.23	**.001	.26	[.10, .42]	.21
	F	199	1.96	.80	(593.01)				
ASCE	M	561	51.75	11.12	1.17	.24	1.26	[1.07, -.87]	.11
	F	199	50.49	13.66	(296.29)				
PP	M	561	103.12	18.70	1.43	.15	2.52	[1.77, -.96]	.13
	F	199	100.60	22.34	(302.15)				

Note. ***p<0.001, **p<0.01, *p<0.05

Independent samples t-tests were conducted to examine differences in connectedness (CO), hostility (HO), anti-social content exposure (ASCE), and peer pressure (PP) across genders. Welch's t-test used for all variables due to significant Levene's test results and unequal sample sizes

For gender, females reported significantly higher connectedness (M = 3.52, SD = 0.95) than males (M = 2.39, SD = 1.04), t(377.40) = -14.04, p < .001, d = -1.11. Males, however, reported higher hostility (M = 2.22, SD = 1.36) than females (M = 1.96, SD = .80), t(593.01) = 3.23, p = .001, d = .21. No significant gender differences were found for anti-social content exposure or peer pressure (p > .05).

Table 3: Pearson Correlation Matrix of Peer Pressure, Connectedness, Hostility, and Anti-Social Media Exposure

	CO	HO	ASCE	PP
CO	--			
HO	.36**	--		
ASCE	.12**	.08*	--	
PP	.10**	.08*	.91**	--

Note. ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Pearson correlation analysis was conducted to examine the relationships between Peer Pressure (PP), Connectedness (CO), Hostility (HO), and Anti-Social Content Exposure (ASCE).

Pearson correlation analysis revealed that PP was significantly correlated with ASCE (r = .91, p < .01), CO (r = .10, p < .01), and HO (r = .08, p < .05). ASCE was also significantly correlated with CO (r = .12, p < .01) and HO (r = .08, p < .05). A moderate positive correlation was found between CO and HO (r = .36, p < .01).

Table 4: Hierarchical Regression Predicting Peer Pressure from Anti-Social Content Exposure, Connectedness, and Hostility

Pred.	B	SE B	β	t	p	R^2	ΔR^2	F Change	p (F Change)
Step 1						**.822**	.822	3499.74	***<.001
(Const.)	24.78	1.35	—	18.39	***<.001				
ASCE	1.51	0.03	.91	59.16	***<.001				
Step 2						**.822**	.000	0.02	.87
(Const.)	24.87	1.47	—	16.99	***<.001				
ASCE	1.51	0.03	.91	58.73	***<.001				
CO	-0.04	0.27	-.002	-0.16	.87				
Step 3						**.822**	.000	0.73	.39
(Const.)	24.66	1.48	—	16.63	***<.001				
ASCE	1.51	0.03	.91	58.64	***<.001				
CO	-0.13	0.29	-.007	-0.45	.65				
HO	0.22	0.26	.014	0.85	.39				

Note. ***p<0.001, **p<0.01, *p<0.05; Dependent Variable= peer pressure.

Hierarchical regression analysis was conducted in three steps. In Step 1, ASCE significantly predicted peer pressure, β = .91, t = 59.16, p < .001, accounting for 82.2% of the variance (R^2 = .822, F(1, 758) = 3499.74, p < .001).

In Step 2, the addition of CO did not significantly improve the model, ΔR^2 = .000, F change = 0.02, p = .87. CO was not a significant predictor (β = –.002, p = .87).

In Step 3, adding HO also did not significantly enhance the model, ΔR^2 = .000, F change = 0.73, p = .39. HO was not a significant predictor (β = .014, p = .39), nor was CO (β = –.007, p = .65). ASCE remained a strong, consistent predictor throughout all steps.

5. DISCUSSION

Table 1 and 2, Late adolescents (18–19 years) reported significantly higher levels of both connectedness and hostility in the parent-adolescent relationship compared to middle adolescents (16–17 years). While differences in exposure to anti-social content and peer pressure were also significant, their effect sizes were small. Regarding gender, females exhibited greater connectedness with parents, whereas males reported higher levels of hostility. However, no significant gender differences were

observed in anti-social content exposure or peer pressure.

These findings indicate that both age and gender influence parent-adolescent relationships. Late adolescents and females report greater connectedness, likely due to increased parental support and autonomy as they transition into adulthood. Traditional gender norms also contribute, with girls receiving more emotional support and supervision, fostering stronger familial bonds (21,22). However, hostility remains prevalent, particularly among males and late adolescents. Stricter discipline and higher expectations for independence in boys often lead to greater conflicts with parents. As late adolescents assert autonomy in major life decisions, they may challenge parental authority, increasing tensions (Shanahan et al., 2007; Ashraf & Najam, 2011). These patterns suggest that while some adolescents experience growing closeness with parents, others continue to struggle with heightened familial conflicts.

Peer influence remains a significant factor in adolescent behavior, especially in school and college settings. While studies suggest peer pressure peaks in early adolescence and declines with age (Steinberg & Monahan, 2007), our findings indicate higher peer pressure among late adolescents, likely due to the inclusion of tobacco users in the sample. Leshargie et al. (2019) also highlight the role of peer pressure in smoking initiation and continuation, emphasizing its strong impact on adolescent and young adult tobacco use. However, structured family environments and societal norms may help buffer extreme peer pressure variations across different age groups.

Table 3, Correlation analysis revealed that both connectedness and hostility in parent-adolescent relationships had weak yet significant associations with peer pressure, suggesting that the quality of family interactions whether supportive or conflictual can influence adolescents' susceptibility to peer influence. However, exposure to antisocial content on social media demonstrated a strong positive correlation with peer pressure, indicating that digital environments play a more prominent role. Platforms that glamorize risk-taking, rebellion, or substance use can create perceived social norms that adolescents feel pressured to follow. Constant exposure to such content, combined with the desire for peer approval in online settings, heightens their vulnerability. For instance, Nesi et al. (2018) found that social media platforms can amplify peer influence processes, leading to increased engagement in risk behaviors. Additionally, a study by Xu et al. (2023) Peer pressure has been shown to significantly predict adolescent mobile social media addiction, indicating that exposure to specific online content can increase vulnerability to peer influence. These patterns highlight the growing influence of social media in shaping adolescent behavior, often surpassing traditional influences like family, and emphasize the importance of addressing digital exposure in peer pressure interventions.

Table 4, Hierarchical regression analysis revealed that antisocial content exposure was a strong predictor of peer pressure in smoking adolescents, explaining a significant portion of the variance. Supporting evidence from India further confirms this link, Sharma et al. (2021) reported that exposure to digital content, combined with peer influence, significantly impacts adolescents' behavioral patterns, particularly in the context of tobacco use. Antisocial media exposure and peer pressure were the strongest predictors of tobacco use severity, reinforcing their dominant influence over demographic factors (Singampalli et al., 2025).

This aligns with my findings, where antisocial content exposure emerged as the primary predictor of peer pressure, while parental connectedness and hostility had little to no impact. However, adding connectedness and hostility did not improve the model, indicating that these parental factors have little to no impact on peer pressure. These findings suggest that media exposure plays a dominant role in influencing adolescents' susceptibility to peer influence.

6. CONCLUSION

This study highlights the pivotal role of antisocial media content exposure in shaping peer pressure among tobacco-using adolescents. While both connectedness and hostility in the parent-adolescent relationship showed weak yet significant correlations with peer pressure, they did not significantly contribute to the regression model. In contrast, exposure to antisocial content emerged as a strong and consistent predictor, underscoring the dominant influence of digital environments over traditional familial dynamics. Age and gender differences were also evident, with late adolescents and females reporting higher connectedness, and males experiencing greater hostility. These findings suggest that interventions targeting adolescent tobacco use should prioritize media literacy, parental digital awareness, and regulation of harmful online content. As adolescents increasingly navigate identity and social validation through digital platforms, addressing the influence of online

peer norms becomes essential to reducing vulnerability to peer pressure and related risk behaviors.

7. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This study highlights the influence of peer pressure, parenting, and antisocial media exposure on adolescent tobacco use but is limited by its cross-sectional design and reliance on self-reports. It also overlooks factors like mental health and the residential environment. Future research should adopt longitudinal methods and explore broader influences and intervention strategies.

DECLARATIONS

DATA AVAILABILITY STATEMENT

Data files are available upon a reasonable request.

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CONFLICT OF INTEREST

We have no conflicts of interest to disclose.

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