

A Qualitative Exploration of Parental Interventions in E-Cigarette Cessation among Adolescents

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Abstract:

Objective: The rising prevalence of e-cigarette use among Malaysian adolescents could expose them to long-term health risks. In addressing the rising issues of adolescent e-cigarette consumption, it is crucial to explore the current parental interventions for smoking cessation. This qualitative study examines parental interventions for adolescents using e-cigarettes and identifies the challenges in implementing these interventions.

Material and Methods: The study employed semi-structured interviews to gather data from a sample of 14 parents residing in Kuala Selangor, Malaysia. The individual interviews were conducted through online meetings on the *Google Meet* platform between April 2023 and June 2023. All data were subjected to thematic analysis using NVivo, whereby emerging themes were identified.

Results: The findings revealed 3 primary themes concerning parental approaches: verbal counseling, direct interventions, and the adoption of a third-person approach. Furthermore, it underlined the challenges that impede parental prevention efforts, such as the child's individuality and sense of self, the ease of accessing e-cigarettes, and the impact of the surrounding environment.

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Conclusion: The study emphasizes the importance of parental involvement in preventing adolescent e-cigarette use and highlights the need for effective prevention initiatives through education, policy interventions, and community participation. By addressing the barriers, stakeholders, including policymakers, public health practitioners, and parents, can create targeted interventions to protect future generations' health and well-being. This research emphasizes the need for parental education and a support framework that serves as guidance for effective parental interventions in adolescent e-cigarette smoking cessation efforts.

Keywords: adolescent health, e-cigarette, parental interventions, smoking cessation

Introduction

In 2023, two shocking cases were recorded about the safety hazards of e-cigarettes among children, one involved the death of a 16-year-old teen due to acute heart failure and pulmonary embolism associated with E-cigarette or Vaping Use-Associated Lung Injury (EVALI), after a history of 3 years of vaping, and a 2-year-old who survived but is living with neurological problems after accidentally ingesting a nicotine pod. The practice of using e-cigarettes or any other electronic delivery system that contains nicotine is known as "vaping"¹. The Malaysian National Health Morbidity Survey (NHMS) on Adolescent Health Survey Report 2022 indicated that e-cigarette use among Malaysians rose from 9.8% in 2017 to 14.9% in 2022, with a teen vaping prevalence of 23.3% (male), 6.2% (female)². Early initiation of e-cigarette use among adolescents is associated with an increased risk of developing nicotine dependence³ and continued use into adulthood⁴. Additionally, patterns of e-cigarette consumption have been linked to the use of other substances, such as cannabis and marijuana⁵. Adolescents are particularly susceptible to the behavioral and psychological effects of nicotine, which can affect emotional regulation, cognitive development, and academic performance⁶. These findings highlight the importance of implementing timely interventions to support smoking cessation efforts among adolescents, preventing long-term dependencies, and promoting healthier developmental outcomes.

On April 1, 2023, Malaysia took decisive action by removing any nicotine liquids and gels from the list of prohibited substances under the 1952 Poisons Act, thereby authorizing their legal sale and usage⁷. The lack of regulatory framework has resulted in an unregulated industry, with about 2000 vape shops in Malaysia, making it the second largest market worldwide, after the United States, and the largest in Asia⁸. Poor legislation and enforcement to manage e-cigarette consumption and distribution have resulted in many nicotine poisoning cases among teenagers. University Sains Malaysia National Poisons Centre (NPC) indicated an increase of 30.6 percent in nicotine poisoning cases from 2023 and a five-fold increment from 2019. These cases involved adolescents who presented with symptoms such as severe vomiting, abdominal pain, loss of consciousness, seizures or worse, psychosis, and hallucinations⁹. Many opposing efforts from healthcare professionals, enforcement authorities, and public advocates are pressuring the government to review the enlistment of nicotine and to devise quick action plans and regulatory actions regarding products containing nicotine consumption and distribution. Till then, the e-cigarette smoking cessation efforts among adolescents need to be supported by many sectors, including familial institutions¹⁰.

Due to the limited number of studies on vaping cessation among adolescents, it is reasonable to adopt similar approaches for tobacco smoking cessation¹¹. In the clinical management guidelines for smoking cessation,

pharmacological approaches are only indicated to adolescents who are ready to quit smoking, meanwhile, due to the complexities in adolescents' psychosocial and behavioral minds, effective interventions should be guided by parental involvement and support¹². The Theory of Planned Behavior (TPB) is a known theory in smoking prevention¹³, stating that an individual's behavior is influenced by their intention, attitude, subjective norms, and perceived control. Parents play a crucial role in shaping these factors by fostering positive attitudes, reinforcing social norms, and enhancing adolescents' sense of control over quitting, making them essential contributors to successful cessation efforts¹⁴. Vaping smoking cessation programs that involve the assistance of parents have been widely adopted in many developed countries¹⁵; however, this approach has never been investigated in the Malaysian context. Therefore, this study aimed to investigate the non-pharmacological interventions employed by parents of adolescents who use e-cigarettes and to explore the challenges they face. The research is expected to further insight into parents' current involvement in an effort for e-cigarette smoking cessation and address the barriers to successful implementation.

Material and Methods

Research methodology

This study is a qualitative study conducted through semi-structured interviews with 14 parents of adolescents who vape, including 5 males and 9 females, through online platforms. The research aimed to understand the strategies and challenges parents face in adopting non-pharmacological approaches for e-cigarette cessation among adolescents. The study used purposive sampling and snowball sampling techniques to encourage participation. Data collection and analysis were conducted over 4 months from April to July 2023, using a semi-structured interview guide. The interviews focused on understanding parental interventions including strategies to discourage

e-cigarette consumption and the challenges parents face in deterring their adolescents from using e-cigarettes. The parents' characteristics (i.e. names, age, occupation, parental role, and parent's smoking status) were collected during the interview session. Pseudonyms were used to ensure confidentiality and anonymity. The interviews were transcribed word for word and then given unique identifications using Nvivo technology. The transcripts were encoded and subsequently organized into clusters, allowing for themes to be discerned. The data were then subjected to thematic analysis for analytical purposes. Concurrent data analysis and the constant comparison method were employed to scrutinize the data. To ensure the reliability of the data, the triangulation method was employed by counterchecking the emerging themes with the existing literature; meanwhile, inter-coder reliability was established by calculating the agreement of key themes and subthemes between all the researchers. Discrepancies were resolved through a consensual meeting. The primary researcher ensured all preliminary findings were shared and checked by the participants to confirm the accuracy of the interview's interpretation and context, further strengthening the reliability of the results.

Results

The study successfully collected the opinions of 14 parents whereby saturation of themes was achieved. The parents' characteristics are presented in Table 1. The analysis identified 3 primary themes with a variety of strategies being implemented. The key themes revolve around verbal counseling, direct disciplinary action, and a third-person approach. Meanwhile, barriers to successful interventions include the child's individuality and sense of self, the ease of accessing e-cigarettes, and the impact of the surrounding environment. Subthemes for both strategies and barriers were further explored below:

Table 1 Characteristics of participants

Mrs. ME, 47 years old	
Occupation	Lecturer
Parental role	Mother
Parents' smoking status	Husband smokes e-cigarettes
Mr. ES, 53 years old	
Occupation	Teacher
Parental role	Father
Parents' smoking status	None are smoking
Mrs. SO, 49 years old	
Occupation	Accountant
Parental role	Mother
Parents' smoking status	Husband smokes e-cigarettes
Mr. HA, 66 years old	
Occupation	Electrician
Parental role	Father
Parents' smoking status	He smokes tobacco cigarettes
Mrs. SR, 57 years old	
Occupation	Housewife
Parental role	Mother
Parents' smoking status	Husband smokes both e-cigarettes and tobacco cigarettes
Mrs. AI, 48 years old	
Occupation	Housewife
Parental role	Mother
Parents' smoking status	None are smoking
Mr. ZA, 68 years old	
Occupation	Retired
Parental role	Father
Parents' smoking status	None are smoking
Mrs. SU, 47 years old	
Occupation	Housewife
Parental role	Mother
Parents' smoking status	None are smoking
Mr. HA, 44 years old	
Occupation	Lecturer
Parental role	Father
Parents' smoking status	He smokes tobacco cigarettes
Mrs. AM, 43 years old	
Occupation	Lecturer
Parental role	Mother
Parents' smoking status	None are smoking
Mrs. NI, 46 years old	
Occupation	Accountant
Parental role	Mother
Parents' smoking status	Husband smokes e-cigarettes
Mrs. NU, 52 years old	
Occupation	Lecturer
Parental role	Mother
Parents' smoking status	None are smoking
Mrs. HZ, 47 years old	
Occupation	Lecturer
Parental role	Mother
Parents' smoking status	None are smoking
Mr. HL, 50 years old	
Occupation	Teacher
Parental role	Father
Parents' smoking status	He smokes tobacco cigarettes

Strategies for parental interventions

Theme 1: verbal counselling

Subtheme 1: guided reduction and values-based advice

Parents often participated in counseling sessions, where they emphasized the negative consequences of using e-cigarettes in order to discourage their adolescents. Guidance was customized to suit specific situations, considering religious doctrines, financial consequences, and consistent reinforcement. Aside from that, some participants have advised their adolescents to talk with friends who can influence their choice of actions.

"I previously suggested to gradually decrease the frequency of using e-cigarettes to him, considering that it is highly addictive. Therefore, I proposed reducing the frequency based on the amount he currently vapes." (Mrs. ME)

"Our advice includes providing examples from religious teachings, e-cigarette laws, and the broader context of smoking. By incorporating examples from these areas, we aim to address both health concerns and religious perspectives." (Mrs. SA)

"Subsequently, I will advise him to discontinue e-cigarette usage, highlighting the financial implications it carries. I will emphasize that continuing to engage in e-cigarettes is an unnecessary expenditure and a misuse of money." (Mr. HA)

"One aspect we discussed is the importance of selecting the right friends for your child. It is crucial to be cautious if those friends engage in harmful habits like smoking. It is essential to convey to your child that it's all right to be friends with such individuals, but they must ensure not to emulate their negative behaviors." (Mrs. NI)

Subtheme 2: personalized counselling

Some parents believe that these adolescents are still searching for their identity and require justifications

for every action that their parents forbid, including smoking e-cigarettes. According to them, adolescents require more parent-child "heart-to-heart talks", which are believed to be key in individual counseling. The conversations are also adjusted for convenience of time and place so that the children feel comfortable when speaking with their parents.

"I adopt an approach where I provide advice to him during moments of privacy, such as when we are alone together for a heart-to-heart conversation. Alternatively, I may choose a relaxed atmosphere, such as during meals, to engage in calm discussions. This allows for open and meaningful communication without distractions or interruptions." (Mrs. SA)

"Slow talk involves two-way communication, considering their perspectives and way of thinking. Rather than by just giving advice, it helps the child to compare what is good and bad for their health." (Mrs. AM)

Subtheme 3: proposing alternative products

A few parents proposed transitioning to conventional tobacco products as a substitute for e-cigarettes.

"I recommended that my child smokes tobacco rather than e-cigarettes." (Mr. HA)

"I think he would be better off using the tobacco cigarette rather than this one." (Mr. ZA)

Theme 2: direct disciplinary action

Subtheme 1: displacement strategy

Parents swiftly handled the issue of e-cigarette consumption by gently reprimanding their adolescents when they were observed using them, to discourage future use.

"If I observe him holding the e-cigarette, I promptly reprimand him. However, if he does not have it, I do not bring up the topic." (Mrs. NU)

"If you want to scold your children, you must have valid reasons. Due to the tendency of adolescents to

rebel, it is important for me as a mother to adopt a friendly approach and gently express my concerns instead of harshly scolding them.” (Mrs. NI)

Subtheme 2: decrease financial allocation

To discourage e-cigarette usage, some parents impose restrictions on their adolescents’ allowances and pocket money, by reducing the amount provided to them.

“I will punish him by not giving him money. We limit his spending. I will control his spending by carefully monitoring his daily allowance, typically ranging from MYR5 to MYR10.” (Mr. HI)

Subtheme 3: curfew imposition

A participant implemented a curfew to deter her child from remaining outside late with friends. The purpose of this approach was to safeguard her son against detrimental influences, particularly those associated with e-cigarette consumption.

“He was not allowed to go out at night with his friends.” (Mrs. NU)

Subtheme 4: diversion

This strategy was employed to divert their adolescents’ attention toward more advantageous activities, such as sports or other extracurricular pursuits. One participant mentioned that house rules regarding e-cigarette usage were established to create clear boundaries and discourage vaping within the household.

“I actively encourage my son to engage in sports in order to divert his focus away from e-cigarettes. Presently, he has joined a martial arts club that meets on weekends during the evening. Additionally, I motivate him to spend time outdoors playing football with his friends in the evenings. If I have any available time, I also take the initiative to go jogging with him.” (Mrs. ME)

“House rules dictate that using e-cigarettes is strictly prohibited inside the house. Instead, he is allowed to

use e-cigarettes outside. I don’t want his brother or sister to get the effects from his smoking.” (Mrs. AI)

Theme 3: third person role

Subtheme 1: relative perspectives and behaviors

Other elder relatives played a crucial role in providing advice and guidance to adolescents, steering them away from using e-cigarettes, although they mostly could only offer guidance or advice.

“His grandmother consistently expresses her concerns by repeatedly advising her grandchildren to abstain from using e-cigarettes entirely. She diligently reminds him about the potential health risks associated with e-cigarettes and may even scold him. The presence and behavior of his cousins or uncles have a significant influence on him.” (Mr. HA)

Subtheme 2: peer influence

According to the participants, adolescents primarily allocate most of their time to socializing with their friends. Consequently, they are more inclined to follow the actions of their friends rather than their parents. Some parents have sought advice from their children’s close friends.

“I sought assistance from his non-vaping and non-smoking friends to convey the message that vaping is inappropriate and unsuitable for teenagers.” (Mrs. SU)
“Adolescents often feel understood by their friends and value their advice, which can greatly influence their decisions. Recognizing this, I have devised a strategy to involve his friends in offering guidance.” (Mrs. SO)

Barriers to parental interventions

Theme 1: child’s perspective and identity

Subtheme 1: positive perception and adolescent vulnerability

Parents’ feedback indicated that their adolescents maintain a belief that e-cigarettes are a safer and

preferable choice compared to smoking or using traditional tobacco products. This signals a favorable opinion towards e-cigarettes, perceiving it as a safer alternative to smoking. Several parents reported children's poor sense of identity makes them vulnerable to negative influences. They claimed that strong self-assurance and a distinct sense of self are fundamental to building one's character.

"He likely holds the perception that using e-cigarettes is a superior option to tobacco cigarettes, believing that it does not have adverse effects on the individuals who vape." (Mrs. HA)

"If his faith is strong, he will not be influenced by those external factors." (Mrs. AM)

"Self-strength is crucial to me. Ultimately, the outcome depends on us, regardless of whether our friends use e-cigarettes or not." (Mrs. NU)

Subtheme 2: rebellious attitude

Parents also believe that throughout their teenage years, their children would rebel easily and exhibit fluctuations of emotion, thus making all interventions challenging and complex. A participant expressed concern that stringent measures to prevent them from using e-cigarettes could potentially prompt acts of violence, potentially leading to the adolescent fleeing from home or withdrawing into seclusion within their room.

"I'm worried about the potential for rebellious behavior or even running away from home if he is confronted with strict measures. There is a risk that he may choose not to return home or isolate himself within his room without engaging in open communication." (Mr. HI)

Theme 2: regulation dilemma

Subtheme 1: lack of regulatory enforcement and appeal of flavored e-cigarettes

The parents identified the insufficient implementation of regulations limiting the sale of e-cigarette goods to underage individuals as a major obstacle in discouraging

adolescent vaping. They stressed that when restrictions regarding the purchase or use of e-cigarettes are not strictly enforced, it becomes more challenging for their children to quit using these devices, despite the various interventions used by the parents. Accessibility and the low cost of the devices serve as one of the obstacles in parents' attempts to discourage their adolescents from using e-cigarettes. Some parents believe that the diverse and captivating flavors of e-cigarettes contribute to their teens' reluctance to quit using them, as they are curious to experience new flavors.

"The government needs to ban vaping among the younger generation by making it illegal for people under 18 to buy it. They have taken no firm action to stop the sale of vape among adolescents. There is no enforcement." (Mrs. HA)

"For now, there are many shops that sell this e-cigarette, so this thing is very easy to find." (Mrs. SU)

"The e-cigarettes may be welcome because of their cheap price." (Mrs. SU)

"More new types and flavors are coming out now." (Mr. HA)

Theme 3: external influence

Subtheme 1: peer and family influences

Parents' responses indicate that they perceive the presence of other family members who smoke cigarettes and use e-cigarettes sets a precedent within their own homes. Consequently, parents find it more challenging to persuade their children to discontinue vaping when they are already exposed to smoking behavior among their peers and within their immediate family environment.

"He is friends with people who use e-cigarettes too. That is the challenge." (Mr. ES)

"My husband also uses an e-cigarette." (Mrs. ME)

"Because I also smoke. But I smoke tobacco cigarettes." (Mr. HA)

Subtheme 2: impact of social media

When parents learned about e-cigarettes, they also identified that social media influence was one of their largest challenges since e-cigarette use is promoted as advertisements on many social media platforms, by famous local celebrities and influencers.

“If you look at YouTube, sometimes there are influencers or artists who even promoted their e-cigarette brands.” (Mrs. SO)

“For me, e-cigarettes have become a fashion or trendy culture, in which this trend is also supported by the celebrities who the kids follow.” (Mrs. AM)

“When the government allows these commercials to appear in mainstream media and exposes them to the general population, children unavoidably will somehow be affected. Furthermore, with e-cigarette companies heavily advertised on social media platforms, adolescents are likely to feel pressured to try them.” (Mrs. NI)

Subtheme 3: insufficient exposure and awareness

Participants emphasized the absence of awareness programs and inadequate familiarity with the dangers linked to vaping and other detrimental behaviors. As a result, adolescents may have a harder time stopping the practice.

“If we look at the awareness campaign about the dangers of e-cigarettes, there isn’t much.” (Mrs. HA)

Discussion

This study’s findings highlight the diverse approaches employed by parents to deter their adolescents from smoking e-cigarettes, as well as the barriers they face in the successful implementation of their efforts. Enforcing behavioral boundaries and parents’ active participation is essential for guiding adolescents toward healthier choices¹⁶. The study’s findings demonstrate that verbal counseling, a common parental approach, plays a crucial role in

advising adolescents to cease using e-cigarettes early on. Garcia et al. highlight that an effective verbal strategy involves communicating openly regarding the dangers of tobacco use while providing the practical means of quitting¹⁷. Demonstrating respectful communication not only promotes positive behaviors but also fosters a supportive family environment conducive to helping adolescents quit e-cigarette use effectively^{18,19}. However, our findings indicate that while verbal therapy and direct techniques, such as reprimanding, financial restrictions, and diversionary tactics are practiced by parents, there are concerns over how adolescents perceive these interventions. Issues such as approachability, and external pressures complicate successful interventions, particularly considering adolescents’ rebellious personality traits and challenges in forming a stable identity²⁰. Effective parental strategies should cater to adolescents’ psychosocial behaviors, by incorporating reasoning, open communication, and cooperative power management in order to help adolescents internalize the risks and make informed choices. This is particularly effective when information is shared genuinely out of concern while tailoring the conversation to be age-appropriate and engaging. A personalized approach can be an effective strategy by addressing the adolescent’s lifestyle risk and behaviors while respecting their need for autonomy, which helps mitigate defiant behavior²¹. Encouraging adolescents to reflect on their reasons for vaping and the potential benefits of quitting can be part of the motivational interviewing technique²². This approach could be enhanced by following more structured methods such as the 5A’s strategies in the management of smoking cessation or the “Ask-Counsel-Treat” method²³. Integrating structured personalized therapy more effectively can address the complex needs of adolescents and support their journey toward cessation and overall healthier choices.

The study’s analysis of the “third-person role” as a parental intervention technique sheds light on the

impact of peers, family members, and social media on adolescent vaping behaviors. This study discovered that other elder relatives, such as grandparents, played an important role in providing counsel and assistance to adolescents, discouraging them from smoking e-cigarettes. This is consistent with earlier studies highlighting the impact of family members' behavioral support in increasing individuals' motivation to stop smoking and preventing relapse²⁴. The findings of this study also show that peer and family influence has a substantial impact on adolescent e-cigarette use. Parents claimed that adolescents are more likely to follow the actions of their friends than their parents because they feel understood and value their peers' counsel. This is consistent with other study's findings, which have shown that peer influence has a major impact on teenage substance use decision-making²⁴⁻²⁶. In terms of barriers to parental intervention, parents saw the presence of other family members who smoke cigarettes and use e-cigarettes as a significant impediment to their efforts to encourage their children to quit vaping. This is consistent with the existing literature that emphasizes the influence of family smoking behaviors on adolescent smoking and vaping initiation²⁵. Additionally, social media has a major impact on adolescent e-cigarette use. Parents regarded the promotion of e-cigarettes by influencers and celebrities on social media platforms as a significant barrier in their efforts to discourage vaping in their children. This is especially concerning in Malaysia, where social media platforms have grown in influence regarding the behaviors and attitudes of the young²⁷. Previous studies have demonstrated that exposure to e-cigarette marketing on social media might normalize and glamorize the use of these products, resulting in increased adoption among adolescents^{28,29}. This is compounded by the increasing use of social media among Malaysian youth, with a recent study reporting that over 90% of adolescents in the country are active on social media platforms²⁷. To address this issue,

a comprehensive approach involving collaboration among parents, educators, and legislators is required in order to control e-cigarette marketing and promotion on social media platforms and minimize their attraction to young people^{27,29}. The broad availability of e-cigarette marketing and endorsements on social media platforms can lead to the perception of e-cigarette usage as a «fashionable» or «trendy» behavior, further normalizing and encouraging its use among teens. This is consistent with a previous study that showed the impact of social media in normalizing and promoting e-cigarette usage, particularly among young people³⁰.

Parents also perceive weak enforcement of e-cigarette regulations as a significant challenge in curbing adolescent vaping. Despite the existing Control of Tobacco Product Regulations 2004 (CTPR) laws that prohibit the sale of e-cigarettes to minors³¹, parents reported that easy access and lax enforcement undermine their efforts to discourage their children from vaping. These concerns resonate with the provisions of the recently enacted Malaysian Control of Smoking Products for Public Health Act 2024 (Act 852)³², which seeks to address regulatory gaps by introducing stricter controls on the sale, promotion, and accessibility of smoking products. The Act bans the sale of smoking products, including e-cigarettes, at educational institutions, vending machines, and online platforms. Immediate measures, including the prohibition of sales targeted at adolescents and the sale of products at restricted locations, align with the parents' call for stronger action to control access. However, as full enforcement will only take effect over time, the interim grace period could still present opportunities for adolescents to continue vaping. While Act 852 focuses on limiting the availability of products to minors, it does not yet impose specific restrictions on flavored e-cigarettes, an area that warrants further regulatory consideration, while responding to parents' concerns over affordability and diverse e-cigarette flavor appeal. Given

the rising prevalence of e-cigarette use among Malaysian children and adolescents, we recommend future regulatory efforts that include a ban on flavors known to attract children and adolescents, regular inspections and penalties for retail and online vendors, and price control measures by increasing taxes. These strengthened regulations, combined with educational initiatives, will be essential in reducing adolescent vaping and supporting parents in managing their children's behavior.

Our study has also revealed a participant who advised his child to transition from using e-cigarettes to conventional tobacco products. The proposal made by the participant underscores the perceived hazards associated with e-cigarettes. The notion that e-cigarettes might be more detrimental than conventional cigarettes is consistent with the conclusions found by Balfour et al., in which more than 50% of participants perceived vaping to be as risky or even more hazardous than smoking tobacco³³. Simultaneously in the Malaysian context, youths can easily access more advanced e-cigarettes (third generation and beyond), which are more effective and produce higher levels of addictive nicotine. This access leads to continued e-cigarette use after experimentation, even though they believe e-cigarettes are more harmful than tobacco cigarettes³⁴. Despite this, many previous studies highlight the potential benefits of e-cigarettes as an alternative to smoking cessation, due to its directed small amount of nicotine delivery into the lung, with a considerable safety profile³⁵⁻³⁷. However, Polosa et al. indicated that e-cigarettes are less detrimental even for persons with preexisting respiratory diseases, such as asthma and COPD³⁸. Despite many debates regarding e-cigarette safety, especially regarding adolescents, the Malaysian clinical guidelines do not recommend e-cigarettes as the primary alternative for smoking cessation among adolescents³⁹. The perceptual paradox highlights a significant deficiency in parental comprehension and consciousness regarding the comparative hazards of e-cigarettes and

conventional tobacco products, emphasizing product switching is an unsuitable approach. This highlights the need for clear, evidence-based guidelines to help parents manage adolescent vaping behaviors more effectively. To address this, the Malaysian Education Ministry introduced the "Five Minute Anti-Smoking/Vape" program in 2023 that focuses on preventing teenagers from starting to smoke, rather than quitting vaping. It encompasses talks during school assemblies, support group counseling sessions for adolescents, anti-smoking/vape campaigns, speeches, exhibitions, and school co-curricular activities⁴⁰. Despite many efforts for e-cigarette smoking cessation prevention strategies targeting youth and children, parents play a significant role in influencing adolescent behavior. Therefore, they could be a key group for targeted smoking cessation efforts. Education and training for parents, including appropriate guidance on tools and strategies for effective interventions should be provided through a well-defined clinical framework. As this framework is currently lacking, future studies could work on developing such an intervention strategy. The integration of perspectives from adolescents and key stakeholders such as healthcare providers, educators, and policymakers can inform the development of comprehensive, culturally relevant interventions. Future research should focus on creating and evaluating these parent-led strategies in order to ensure sustainable outcomes.

Conclusion

This study has uncovered the various tactics parents utilize to dissuade adolescents from using e-cigarettes, which encompass vocal guidance and a combination of explicit and implicit methods. However, there are still considerable challenges that remain due to the distinct characteristics of teenagers, the easy availability of e-cigarettes, and the strong impact of peers and social media. Tackling these difficulties necessitates

a comprehensive and diverse strategy. It is imperative to take crucial measures, such as enhancing education on the hazards of e-cigarettes, implementing stricter legislation to limit access, encouraging good peer impacts, and creating personalized intervention tactics. The study's results offer valuable perspectives for designing future treatments targeted at diminishing e-cigarette usage among adolescents. Policymakers, healthcare experts, and educators need to acquire a thorough comprehension of the intricate variables involved in parental efforts to deter e-cigarette usage. This study enhances our comprehension of the complex correlation between parental influence and extrinsic influences in molding teenage behavior. As a result, it creates opportunities for focused interventions and preventive actions, ultimately leading to more efficient support programs for teenagers.

Data sharing statement

All data generated or analyzed during this study are included in this published article. Other data may be requested through the corresponding author.

Conflict of interest

The authors declare that there are no conflicts of interest.

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