

Научная статья | Original paper

Understanding the psychological pathway linking parental phubbing to academic burnout among Chinese high school students: the role of alienation

Q. Wang^{1,2} ✉, R.A.M. Jaladin¹ ✉, A.N.B. Yahya¹, Q. Zhang², R. Liu²

¹ Universiti Malaya, Kuala Lumpur, Malaysia

² Mudanjiang Normal University, Mudanjiang, China

✉ s2040518@siswa.um.edu.my, rafidah_aga@um.edu.my

Abstract

Context and relevance. Academic burnout has become a major concern among adolescents in exam-oriented educational systems. Parental phubbing, defined as parents' distraction by smartphones during interactions, is increasingly recognized as a potential risk factor for students' psychological and academic adjustment. **Objective.** This study examined the psychological pathway linking parental phubbing to academic burnout among Chinese high school students, with particular attention to the role of alienation within the framework of Self-Determination Theory. **Hypothesis.** It was hypothesized that parental phubbing would be positively associated with alienation and academic burnout, that alienation would be positively associated with academic burnout, and that alienation would mediate the association between parental phubbing and academic burnout. **Methods and materials.** A total of 511 students ($M = 17,0$; $SD = 0,88$; 54,4% female) from Shanxi and Heilongjiang provinces completed validated questionnaires assessing parental phubbing, alienation, and academic burnout. Structural equation modeling was performed using SmartPLS 4 with 5,000 bootstrap resamples. **Results.** Parental phubbing was positively associated with both alienation and academic burnout. Alienation significantly predicted academic burnout and partially mediated the association between parental phubbing and academic burnout. Gender differences were observed, with female students reporting higher levels of burnout. **Conclusions.** The findings suggest that alienation represents an important psychological pathway through which parental phubbing may be associated with academic burnout among Chinese high school students. The results highlight the relevance of adolescents' perceived relational disconnection in understanding the academic consequences of digitally distracted parenting.

Keywords: parental phubbing, academic burnout, alienation, high school students

Supplemental data. The datasets generated and/or analyzed during the current study are not publicly available due to the inclusion of sensitive information on students' academic performance and perceived parental behaviors, but are available from the corresponding authors upon reasonable request.

For citation: Wang, Q., Jaladin, R.A.M., Yahya, A.N.B., Zhang, Q., Liu, R. (2026). Understanding the psychological pathway linking parental phubbing to academic burnout among Chinese high school students: the role of alienation. *Psychological-Educational Studies*, 31(4), 280–292. (In Russ.). <https://doi.org/10.17759/psyedu.2026310420>

Психологический механизм взаимосвязи родительского фаббинга и академического выгорания у китайских старшеклассников: опосредующая роль отчуждения

Ц. Ван^{1,2} ✉, Р.А.М. Джаладин¹ ✉, А.Н.Б. Яхья¹, Ц. Чжан², Ж. Лю²

¹ Университет Малайя, Куала-Лумпур, Малайзия

² Муданьцзянский педагогический университет, Муданьцзян, Китай

✉ s2040518@siswa.um.edu.my, rafidah_aga@um.edu.my

Резюме

Контекст и актуальность. Академическое выгорание представляет собой значимую проблему среди подростков, обучающихся в системах образования, ориентированных на экзаменационные результаты. Родительский фаббинг, понимаемый как отвлечение родителей на мобильные устройства в процессе общения с детьми, в настоящее время рассматривается в качестве фактора риска нарушений психологической и академической адаптации учащихся. **Цель.** В данном исследовании проверялось, опосредует ли отчуждение связь между родительским фаббингом и академическим выгоранием у китайских старшеклассников, с опорой на теорию самодетерминации. **Гипотеза.** Предполагалось, что: родительский фаббинг будет положительно связан с отчуждением и академическим выгоранием; отчуждение будет положительно связано с академическим выгоранием; отчуждение будет опосредовать взаимосвязь между родительским фаббингом и академическим выгоранием. **Методы и материалы.** Выборку составили 511 учащихся ($M = 17,0$; $SD = 0,88$; 54,4% лиц женского пола) из провинций Шаньси и Хэйлунцзян, которые прошли валидизированные опросники, направленные на оценку родительского фаббинга, отчуждения и академического выгорания. Статистический анализ проводился с помощью моделирования структурными уравнениями в пакете SmartPLS 4 на основе 5000 бутстраповских ресемплов. **Результаты.** Родительский фаббинг положительно коррелировал как с отчуждением, так и с академическим выгоранием. Отчуждение было значимым предиктором академического выгорания и частично опосредовало взаимосвязь между родительским фаббингом и академическим выгоранием. Были выявлены гендерные различия: у девушек наблюдался более высокий уровень выгорания. **Выводы.** Полученные результаты позволяют предположить, что отчуждение представляет собой важный психологический механизм, посредством которого родительский фаббинг может быть связан с академическим выгоранием у китайских старшеклассников. Результаты подчеркивают значимость воспринимаемого подростками межличностного и реляционного отчуждения для понимания академических последствий цифровой отвлеченности родителей.

Ключевые слова: родительский фаббинг, академическое выгорание, отчуждение, старшеклассники

Дополнительные материалы. Наборы данных, полученные и/или проанализированные в ходе настоящего исследования, не являются общедоступными в связи с наличием в них конфиденциальной информации об академической успеваемости учащихся и их восприятии родительского поведения, однако могут быть предоставлены авторами для переписки по обоснованному запросу.

Для цитирования: Ван, Ц., Джаладин, Р.А.М., Яхья, А.Н.Б., Чжан, Ц., Лю, Ж. (2026). Психологический механизм взаимосвязи родительского фаббинга и академического выгорания у китайских старшеклассников: опосредующая роль отчуждения. *Психологическая наука и образование*, 31(4), 280–292. <https://doi.org/10.17759/psyedu.2026310420>

Introduction

With the rapid penetration of mobile internet technologies, smartphones have become indispensable in daily interactions. While they provide instant communication and convenience, concerns have grown about their unintended social and psychological consequences. One such phenomenon is “phubbing”, a term combining “phone” and “snubbing”, which refers to situations in which individuals prioritize mobile devices over face-to-face interactions (Pera, 2020).

In contemporary digital parenting research, phubbing is increasingly viewed as a specific behavioral manifestation of smartphone-based neglect during dyadic interaction, whereas the broader construct of parental technofence refers to a wider range of technology-driven interruptions in family life, including disruptions caused by various digital devices and media use (Dixon et al., 2023; Nie et al., 2024). Compared with parental technofence, parental phubbing highlights the interpersonal and relational nature of moment-to-moment disengagement during parent-child interactions. In family contexts, parental phubbing, which refers to parents diverting their attention from children to mobile devices, has received increasing scholarly attention because it undermines the quality of parent-child relationships (Selak et al., 2025; Shen, Xie, 2024; Zhang, Wang, 2025).

Adolescents are particularly sensitive to parental behaviors, and prior studies suggest that parental phubbing may impair their psychological well-being and academic adjustment (Wang et

al., 2023; Zhang et al., 2023). Academic burnout has emerged as a critical concern among students in upper secondary education (senior high school), particularly within exam-oriented educational systems (Liu et al., 2023; Vazsonyi et al., 2024). Although some studies have documented the negative effects of parental phubbing on academic outcomes among younger students (He et al., 2022), less is known about its role in academic burnout during the high school years.

A growing body of literature suggests that alienation may serve as a key explanatory mechanism. Alienation reflects a psychological state of disconnection from meaningful social relationships, accompanied by feelings of powerlessness, meaninglessness, and loneliness (Mann, 2001). Evidence shows that parental phubbing is associated with disrupted parent-child interactions and heightened adolescents' sense of alienation (Frackowiak et al., 2024; Liu et al., 2024; Mi et al., 2023). In turn, alienation has been identified as a risk factor for academic maladjustment, including burnout (Atik, Özer, 2020). These findings point to alienation as a potential psychological pathway linking parental phubbing and academic burnout. However, this potential pathway has not been systematically examined among high school students.

The present study is theoretically informed by Self-Determination Theory (SDT), which identifies autonomy, competence, and relatedness as fundamental psychological needs that support motivation and psychological functioning (Deci, Ryan, 1985, 2008). Within the con-

text of parent-child relationships, parental attentiveness and emotional availability are especially relevant for satisfying adolescents' need for relatedness. When parents are frequently distracted by smartphones, adolescents' relatedness needs may remain unmet, thereby increasing feelings of alienation. Higher levels of alienation may be associated with poorer academic and emotional functioning, including greater vulnerability to academic burnout (Guo et al., 2024; Shim, Go, 2025). Although the present study primarily focuses on relatedness as the most proximal pathway linking parental phubbing to academic burnout, autonomy and competence may also be indirectly affected by digitally distracted parenting and merit further examination in future research. In this way, SDT serves as an integrative theoretical framework for understanding how digital parenting behaviors may shape adolescents' academic and emotional functioning.

The present study therefore examines alienation as a potential psychological pathway linking parental phubbing with academic burnout among Chinese high school students. By addressing this question, the study seeks to extend the literature on the psychological effects of parental phubbing and to clarify the potential psychological mechanisms underlying its academic consequences. Theoretically, this work aims to refine the application of SDT to family-school contexts by elucidating how parental interaction patterns are associated with adolescents' learning-related outcomes. From a practical perspective, the findings may inform future discussions on how parental

smartphone use can be guided to promote adolescents' emotional well-being and academic adjustment.

Materials and methods

Participants

A total of 600 high school students (corresponding to the senior high school level in the Chinese education system) were recruited using a multistage cluster sampling strategy from schools in Shanxi and Heilongjiang provinces, China. These provinces were selected to ensure regional diversity and to capture potential variations in educational environments between central and north-eastern regions. Within each province, schools were randomly selected, and classes within these schools were then randomly chosen.

Of the 600 distributed questionnaires, 511 valid responses were obtained, yielding a response rate of 85,2%. The final sample comprised 54,4% female students, with a mean age of 17,01 years (*SD* = 0,88). In the Chinese education system, high school (senior high school) typically includes Grades 10–12, corresponding approximately to ages 15–18 years. In the present sample, Grade 10 students were mainly aged 15–16 years, Grade 11 students were aged 16–17 years, and Grade 12 students were aged 17–18 years. This age-grade correspondence is provided to facilitate interpretation across different educational systems.

Questionnaires exhibiting patterned responses, extreme outliers, or excessive missing data were excluded (Kang, 2013). Table 1 presents the descriptive statistics of participants' demographic characteristics.

Table 1

Participant characteristics (N = 511)

Variable	Type	Frequency	Percentage
Gender	Female	278	54,40
	Male	233	45,60
Grade	10	191	37,38
	11	163	31,90
	12	157	30,72
Area	Rural	209	40,90

Variable	Type	Frequency	Percentage
	Urban	302	59,10
Only-child status	Yes	199	38,94
	No	312	61,06

Measures

Parental phubbing

Parental phubbing was measured using the Parent Phubbing Scale, adapted from the Partner Phubbing Scale developed by Roberts and David (2016) and revised for parent-child contexts by Ding et al. (2020). The instrument includes nine items (e.g., “My parent checks their phone during conversations with me”) rated on a five-point Likert scale (1 = never, 5 = always). Higher scores indicate more frequent parental phubbing. The scale demonstrated satisfactory internal consistency in the present study (Cronbach’s $\alpha = 0,839$).

Academic burnout

Academic burnout was assessed using the Secondary School Students’ Academic Burnout Scale developed by Hu and Dai (2007). The original scale comprises 21 items across four dimensions: emotional exhaustion, teacher-student relationship disengagement, low learning efficacy, and physical exhaustion. In the present study, one item referring to textbook reviewing behavior was excluded because it was considered less relevant to the learning behaviors of students in senior high school, resulting in a 20-item version. Items were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), with higher scores reflecting greater academic burnout. The scale demonstrated good internal consistency in the present study (Cronbach’s $\alpha = 0,887$).

Alienation

Alienation was evaluated using the Interpersonal Alienation Subscale developed by Yang et al. (2002), which was constructed within the Chinese cultural context. The subscale contains 16 items across three dimensions: interpersonal alienation (items 1–7), family alienation

(items 8–11), and social isolation (items 12–16). Items were scored on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). Higher scores indicate a stronger sense of alienation. The scale demonstrated acceptable internal consistency in the present study (Cronbach’s $\alpha = 0,847$).

Demographic variables

Demographic information, including gender, grade level, single-child status, and place of residence, was collected. Gender, single-child status, and place of residence were statistically controlled in the structural model to minimize potential confounding effects, whereas grade level was excluded as preliminary analyses revealed no significant association with the primary study variables.

Proposed research model

The hypothesized model is depicted in Fig. 1. The model illustrates the hypothesized relationships among parental phubbing behavior (PPB), alienation (AL), and academic burnout (AB). Specifically, PPB is expected to be positively associated with AL, which in turn is positively associated with AB, thereby examining the potential psychological pathway through alienation. Gender, only-child status, and place of residence were included as control variables in the structural model.

Procedure

The study protocol was reviewed and approved by the Research Ethics Committee of the authors’ affiliated university. Informed consent was obtained from school administrators, teachers, parents, and students before participation. Data collection was carried out in classroom settings using a paper-and-pencil survey format. Trained research assistants ad-

ministered the questionnaires according to a standardized protocol. Students were informed of the anonymity and confidentiality of their responses. Completed questionnaires were collected immediately after administration and securely stored for data analysis.

Statistical analysis

Data analysis was performed using SmartPLS 4, which applies the partial least squares structural equation modeling (PLS-SEM) approach. This method was chosen because it is well-suited for testing complex mediation models and makes fewer assumptions about data distribution. The analysis proceeded in two stages.

First, the measurement model was evaluated by examining indicator reliability, composite reliability (CR), average variance extracted (AVE), and discriminant validity based on the Fornell-Larcker criterion and the heterotrait-monotrait ratio (HTMT). Second, the structural model was assessed to test the hypothesized relationships. Path coefficients were estimated, and their significance was determined using a bootstrapping procedure with 5000 resamples. The mediating effect of alienation was examined by testing the indirect path from parental phubbing to academic burnout through alienation. Mediation was considered significant if the 95% confidence

intervals (CIs) of the bootstrapped estimates did not include zero.

Results

Common method bias

To evaluate the potential influence of common method bias (CMB), Harman's single-factor test was first conducted (Harman, 1976; Podsakoff et al., 2003). The unrotated factor analysis extracted 11 factors with eigenvalues greater than 1, and the first factor accounted for 23,58% of the total variance, which is well below the commonly accepted threshold of 40%. This suggests that common method bias was not a major threat in the present study.

To further assess the potential influence of common method bias, full collinearity variance inflation factors (VIFs) were assessed using SmartPLS 4 (Kock, 2017; Singh et al., 2024). The VIF values ranged from 1,000 to 1,115, all below the recommended cutoff value of 3,3, thereby providing additional evidence that common method variance was unlikely to confound the study's results.

Measurement model assessment

The reliability and validity of the measurement model were first evaluated. The results are presented in Table 2. Indicator reliability was acceptable, with factor loadings ranging

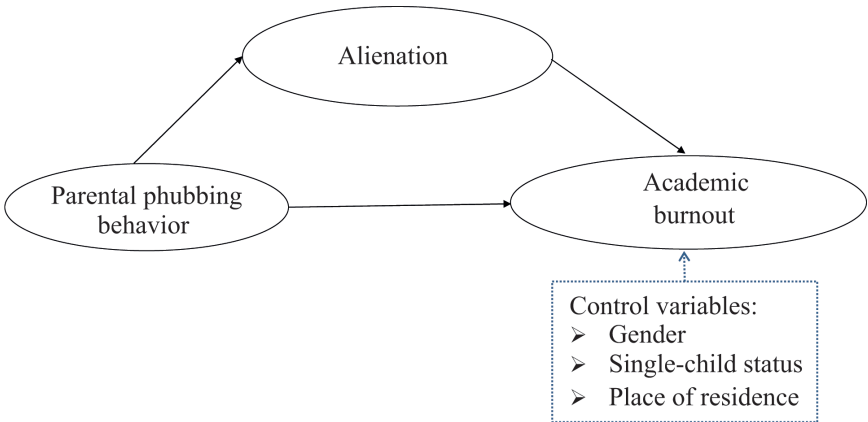


Fig. 1. Proposed research model

from 0,60 to 0,83. Internal consistency was satisfactory, with composite reliability (CR) values ranging from 0,82 to 0,90, all above the 0,70 cutoff. Convergent validity was supported, as the average variance extracted (AVE) values for each construct exceeded the minimum acceptable value of 0,40. Discriminant validity was confirmed: the Fornell-Larcker criterion was met, with the square root of each construct's AVE greater than its correlations with other constructs, and the HTMT values were below 0,85. Together, these results demonstrate that the measurement model exhibited satisfactory psychometric properties.

**Descriptive statistics
and correlation analysis**

Table 3 presents the descriptive statistics and correlation coefficients of all study variables. Parental phubbing was positively correlated with both alienation and academic burnout, and alienation was positively correlated with academic burnout. These findings provide preliminary support for Hypothesis 1.

Structural model assessment

Figure 2 presents the hypothesized structural model. Parental phubbing behavior (PPB) was modeled as the independent variable, alienation (AL) as the proposed psychological pathway, and academic burnout (AB) as the dependent variable. Gender, only-child status, and place of residence were included as control variables.

The structural model was evaluated in SmartPLS 4 using a bootstrapping procedure with 5000 resamples. Standardized path coefficients (β), standard errors, and significance levels were obtained. Table 4 summarizes the structural model results.

PPB significantly predicted AL ($\beta = 0,321$, $p < 0,001$), and AL significantly predicted AB ($\beta = 0,524$, $p < 0,001$). The direct effect of PPB on AB remained significant ($\beta = 0,106$, $p = 0,006$), indicating that alienation partially mediated the association between parental phubbing and academic burnout, thereby supporting Hypothesis 2. Regarding the control variables, gender was significantly associated

Table 2

Reliability and validity of the measurement model

Construct (Variable)	Indicator reliability (factor loadings)	Composite reliability (CR)	Average variance extracted (AVE)	Fornell-Larcker criterion ($\sqrt{\text{AVE}} > \text{correlations}$)	HTMT ($< 0,85$)
Parental phubbing behavior (PPB, IV)	0,72–0,77	0,88	0,55	Satisfied	Satisfied
Alienation (AL, Mediator)	0,70–0,83	0,82	0,60	Satisfied	Satisfied
Academic burnout (AB, DV)	0,60–0,72	0,90	0,53	Satisfied	Satisfied

Table 3

Descriptive statistics and correlation coefficients for variables

Variable	M	SD	PPB	AB	AL	IA	FA	SI
PPB	2,55	0,68	1					
AB	2,60	0,58	0,23**	1				
AL	3,68	0,96	0,30**	0,52**	1			
IA	3,78	1,03	0,20**	0,34**	0,83**	1		
FA	3,24	1,15	0,29**	0,28**	0,67**	0,45**	1	
SI	3,89	1,56	0,23**	0,54**	0,81**	0,44**	0,32**	1

Note: «**» — correlation is significant at the 0,01 level (two-sided). PPB = parental phubbing behavior; AB = academic burnout; AL = alienation; IA = interpersonal alienation; FA = family alienation; SI = social isolation.

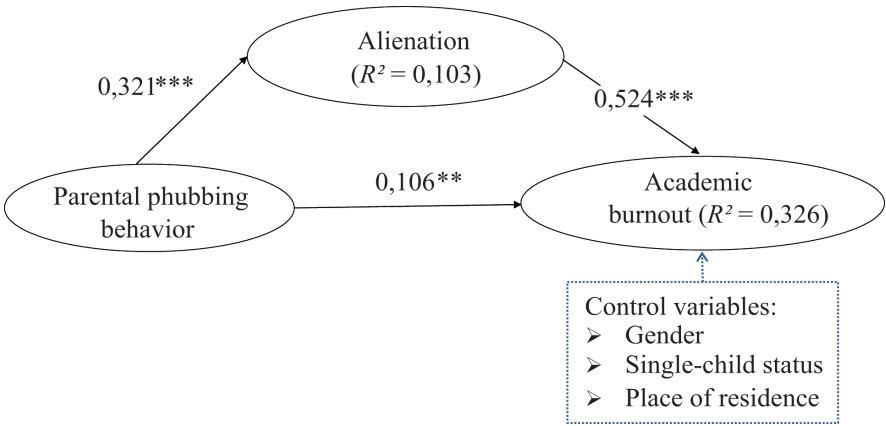


Fig. 2. The structural model with standardized path coefficients (β) and explained variance (R^2):
«*» — $p < 0,05$; «**» — $p < 0,01$; «***» — $p < 0,001$

Table 4

Structural model results

Path	β	SE	t	p	Result
PPB → AL	0,321	0,043	7,509	< 0,001	Supported
AL → AB	0,524	0,034	15,31	< 0,001	Supported
PPB → AB	0,106	0,039	2,725	0,006	Supported
Gender → AB	−0,249	0,076	3,253	0,001	Supported
Only-child status → AB	0,020	0,079	0,248	0,804	Not Supported
Place of residence → AB	0,045	0,163	0,277	0,782	Not Supported

Note. AB = academic burnout; PPB = parental phubbing behavior; AL = alienation. Gender was coded as 1 = female and 2 = male.

with AB ($\beta = -0,249$, $p = 0,001$), indicating that female students reported higher levels of academic burnout than male students. In contrast, only-child status and place of residence were not significant predictors.

predictive relevance, as Q^2 values were positive ($Q^2 = 0,095$ for alienation; $Q^2 = 0,049$ for academic burnout). The global model fit was satisfactory (SRMR = 0,072).

Discussion

The present study examined the relationships among parental phubbing, alienation, and academic burnout in Chinese high school students. The findings supported both primary hypotheses. Specifically, consistent with Hypothesis 1, parental phubbing was positively associated with alienation and academic burnout. Moreover, in line with Hypothesis 2, alienation emerged as an important psychological pathway linking parental phubbing and academic burnout.

Structural model results

Endogenous variable	R^2	Q^2
Alienation (AL)	0,103	0,095
Academic burnout (AB)	0,326	0,049

The structural model demonstrated acceptable explanatory power (see Table 5), with $R^2 = 0,103$ for alienation and $R^2 = 0,326$ for academic burnout. The model also demonstrated

The results further indicated that students who frequently experienced parental smartphone distraction during face-to-face interactions reported stronger feelings of detachment and higher levels of academic burnout. These findings are consistent with previous studies indicating that parental distraction during face-to-face communication undermines adolescents' psychological well-being and academic functioning (He et al., 2022; Marsh et al., 2024). However, most existing studies have focused on primary and middle school students. By contrast, the present study extends this evidence by focusing on Chinese high school students, who face particularly intense academic pressures within an exam-oriented educational context and may therefore be especially vulnerable to the effects of parental phubbing.

Whereas earlier research has primarily emphasized the emotional consequences of parental phubbing, the present findings further highlight its academic implications, suggesting that digitally mediated parental inattention not only disrupts interpersonal dynamics but also undermines students' engagement and persistence in learning.

The findings further suggest that alienation may represent an important psychological pathway linking parental phubbing behavior with academic burnout. Specifically, when parents prioritize mobile phone use over face-to-face interactions with their children, adolescents are more likely to perceive parental neglect and relational disconnection, which may undermine their sense of relatedness, weaken intrinsic motivation, and increase emotional exhaustion. These findings align with Self-Determination Theory (Deci, Ryan, 1985, 2008), which posits that the satisfaction of relatedness needs is essential for sustaining motivation and psychological resilience.

Although similar mechanisms have been documented among college students (Liu et al., 2023), the present study extends this evidence to high school students who are at a critical developmental stage and exposed to heightened academic demands. Within China's highly competitive examination system, weakened parent-child bonds may therefore amplify adolescents' vulnerability to academic burnout and disengagement.

In addition to the hypothesized pathways, the results revealed a noteworthy gender difference: female students reported higher levels of academic burnout compared to their male peers, even after controlling for parental phubbing and alienation. One possible explanation is that adolescent girls tend to be more sensitive to interpersonal dynamics and relational cues, which may heighten their emotional responsiveness to familial interactions. Prior research suggests that girls are more likely to register negative social experiences and exhibit heightened interpersonal sensitivity (Mella-Defranchi, Araya, 2025; Trentini et al., 2022), and that such sensitivity contributes to increased emotional distress during early adolescence (Rudolph, 2002).

This heightened relational sensitivity may make girls particularly vulnerable to the emotional consequences of parental inattention (such as phubbing), thereby increasing their susceptibility to alienation and subsequent academic burnout. The observed gender difference may thus reflect the combined effects of strong academic pressure and elevated emotional sensitivity.

Taken together, beyond demonstrating the detrimental effects of parental phubbing, these findings underscore the importance of fostering healthy family interaction patterns in the digital age. Effective intervention should focus not only on reducing parents' smartphone distraction but also on actively cultivating emotionally responsive and supportive parent-child communication. Establishing family media-use norms, engaging in shared activities, and promoting attentive communication may strengthen adolescents' sense of relatedness and help mitigate academic burnout.

At the broader level, schools and policymakers may contribute by implementing parent-oriented digital literacy programs that raise awareness of how everyday smartphone practices influence adolescents' academic and psychological well-being. In cultural contexts where academic achievement is closely intertwined with family expectations, addressing parental digital behaviors represents an important avenue for supporting adolescents' healthy adjustment.

Conclusions and limitations

The present study examined the relationships among parental phubbing, alienation, and academic burnout among Chinese high school students. The findings supported both primary hypotheses: parental phubbing behavior was positively associated with alienation and academic burnout, and alienation accounted for part of the association between parental phubbing and academic burnout, highlighting its role as an important psychological pathway. In addition, a significant gender difference emerged, with female students reporting higher levels of academic burnout, which may reflect greater sensitivity to parental inattention during everyday interactions. Together, these findings underscore the importance of family digital behaviors, particularly parents' moment-to-moment attentiveness, in shaping adolescents' psychological well-being and academic adjustment. This study further extends prior evidence from younger populations to high school students within an exam-oriented educational context.

At the same time, several limitations should be acknowledged. First, the sample was drawn from only two provinces in China, which may limit the generalizability of the findings to other cultural, regional, and educational contexts. Second, the reliance on self-report measures may have introduced common method bias and social desirability effects. Third, the cross-sectional design precludes strong causal inferences regarding the directionality of the observed relationships. Future research should employ longitudinal, multi-informant, or experimental designs to clarify temporal dynamics and causal mechanisms. In addition, expanding the investigation to more diverse samples, including cross-cultural comparisons, would further enhance the exter-

nal validity of the findings. Future studies may also examine additional moderators or mediators, such as parental stress, parenting styles, peer support, school climate, or broader forms of digital interference (e.g., technofence), to develop a more comprehensive explanatory model of academic burnout.

Taken together, this study contributes to the growing literature on the psychological and academic consequences of parental phubbing by identifying alienation as an important psychological pathway linking parental phubbing and academic burnout. The findings highlight that digitally distracted parenting not only disrupts immediate parent-child interactions but may also undermine adolescents' sense of relational connectedness, thereby increasing vulnerability to academic burnout. These findings further support the value of Self-Determination Theory in explaining how digital parenting behaviors influence adolescents' motivation and emotional functioning in contemporary family contexts.

From a policy and practice perspective, the findings suggest that parent education initiatives should explicitly address digital parenting behaviors, with an emphasis on mindful smartphone use and the cultivation of high-quality parent-child interactions. Schools and community agencies may consider integrating digital literacy, family communication training, and parent-child relationship enhancement programs into existing mental health and academic support services. At a broader level, policymakers may promote public awareness campaigns that encourage balanced technology use within families. Such multi-level interventions may help mitigate the risks associated with parental phubbing and foster healthier psychological and academic development among adolescents.

References

1. Atik, S., Özer, N. (2020). The Direct and Indirect Role of School Attitude alienation to school and school burnout in the relation between the trust in teacher and academic achievements of students. *Eğitim ve Bilim*, 45(202). <https://doi.org/10.15390/EB.2020.8500>
2. Deci, E.L., Ryan, R.M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109–134. [https://doi.org/10.1016/0092-6566\(85\)90023-6](https://doi.org/10.1016/0092-6566(85)90023-6)
3. Deci, E.L., Ryan, R.M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian psychology/ Psychologie canadienne*, 49(3), 182–185. <https://doi.org/10.1037/a0012801>

4. Ding, Q., Wang, Z., Zhang, Y. (2020). Revision of the Chinese version of parents phubbing scale in adolescents. *Chinese Journal of Clinical Psychology*, 28(05), 942–945. <https://doi.org/10.16128/j.cnki.1005-3611.2020.05.017>
5. Dixon, D., Sharp, C.A., Hughes, K., Hughes, J.C. (2023). Parental technoference and adolescents' mental health and violent behaviour: a scoping review. *BMC Public Health*, 23(1), 2053. <https://doi.org/10.1186/s12889-023-16850-x>
6. Frackowiak, M., Ochs, C., Wolfers, L., Vanden Abeele, M. (2024). Commentary: Technoference or parental phubbing? A call for greater conceptual and operational clarity of parental smartphone use around children. *Journal of Child Psychology and Psychiatry*, 65(8), 1108–1114. <https://doi.org/10.1111/jcpp.13917>
7. Guo, X., Hao, C., Wang, W., Li, Y. (2024). Parental burnout, negative parenting style, and adolescents' development. *Behavioral Sciences*, 14(3), 161. <https://doi.org/10.3390/bs14030161>
8. Harman, H.H. (1976). *Modern factor analysis*. University of Chicago Press.
9. He, Q., Zhao, B., Wei, H., Huang, F. (2022). The relationship between parental phubbing and learning burnout of elementary and secondary school students: The mediating roles of parent-child attachment and ego depletion. *Frontiers in Psychology*, 13, 963492. <https://doi.org/10.3389/fpsyg.2022.963492>
10. Hu, Q., Dai, C.L. (2007). 中学生学习倦怠结构研究 [A Research on Middle School Students' Learning Burnout Structure]. *心理科学 [Psychological Science]*, 30(1), 162–164. <https://doi.org/10.7666/d.y1023386>
11. Kang, H. (2013). The prevention and handling of the missing data. *Korean journal of anesthesiology*, 64(5), 402–406. <https://doi.org/10.4097/kjae.2013.64.5.402>
12. Kock, N. (2017). *WarpPLS user manual: Version 6.0. ScriptWarp Systems: Laredo, TX, USA*, 141, 47–60.
13. Liu, X., Geng, S., Lei, T., Cheng, Y., Yu, H. (2024). Connections between parental phubbing and electronic media use in young children: the mediating role of parent-child conflict and moderating effect of child emotion regulation. *Behavioral Sciences*, 14(2), 119. <https://doi.org/10.3390/bs14020119>
14. Liu, Z., Xie, Y., Sun, Z., Liu, D., Yin, H., Shi, L. (2023). Factors associated with academic burnout and its prevalence among university students: a cross-sectional study. *BMC Medical Education*, 23(1), 317. <https://doi.org/10.1186/s12909-023-04316-y>
15. Mann, S.J. (2001). Alternative perspectives on the student experience: Alienation and engagement. *Studies in higher education*, 26(1), 7–19. <https://doi.org/10.1080/03075070020030689>
16. Marsh, S., Chu, J.T.W., Calder, A.J. (2024). 'I tried to take my phone off my daughter, and I got hit in the face': a qualitative study of parents' challenges with adolescents' screen use and a toolbox of their tips. *BMC Public Health*, 24(1), 217. <https://doi.org/10.1186/s12889-024-17690-z>
17. Mella-Defranchi, E., Araya, R. (2025). Gender Differences in Classroom Sympathy and Antipathy: A Digital Sociometric Study. *Education Sciences*, 15(7), 830. <https://doi.org/10.3390/educsci15070830>
18. Mi, Z., Cao, W., Diao, W., Wu, M., Fang, X. (2023). The relationship between parental phubbing and mobile phone addiction in junior high school students: A moderated mediation model. *Frontiers in Psychology*, 14, 1117221. <https://doi.org/10.3389/fpsyg.2023.1117221>
19. Nie, J., Ni, X., Lei, L. (2024). Effects of general, socially-intended, and shared parental phone use: exploring the sequential mediation by distraction and relationship quality on adolescent loneliness. *Current Psychology*, 43(42), 32849–32861. <https://doi.org/10.1007/s12144-024-06817-5>
20. Pera, A. (2020). The Psychology of Addictive Smartphone Behavior in Young Adults: Problematic Use, Social Anxiety, and Depressive Stress [Review]. *Frontiers in Psychiatry*, 11, Article 573473. <https://doi.org/10.3389/fpsyg.2020.573473>
21. Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y., Podsakoff, N.P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879. <https://doi.org/10.1037/0021-9010.88.5.879>
22. Roberts, J.A., David, M.E. (2016). My life has become a major distraction from my cell phone: Partner phubbing and relationship satisfaction among romantic partners. *Computers in Human Behavior*, 54, 134–141. <https://doi.org/10.1016/j.chb.2015.07.058>
23. Rudolph, K.D. (2002). Gender differences in emotional responses to interpersonal stress during adolescence. *Journal of Adolescent Health*, 30(4), 3–13. [https://doi.org/10.1016/S1054-139X\(01\)00383-4](https://doi.org/10.1016/S1054-139X(01)00383-4)
24. Selak, M.B., Merkaš, M., Žulec Ivanković, A. (2025). Effects of parents' smartphone use on children's emotions, behavior, and subjective well-being. *European Journal of Investigation in Health, Psychology and Education*, 15(1), 8. <https://doi.org/10.3390/ejihpe15010008>

25. Shen, X., Xie, X. (2024). How parental phubbing decreases adolescent core self-evaluation through basic psychological need satisfaction: Evidence from longitudinal mediation analysis and longitudinal network analysis. *Journal of Social and Personal Relationships*, 41(10), 3031–3060. <https://doi.org/10.1177/02654075241262536>
26. Shim, T., Go, E. (2025). The Impact of School Burnout on Life Satisfaction Among University Students: The Mediating Effects of Loneliness and Fear of Alienation. *Behavioral Sciences*, 15(8), 1083. <https://doi.org/10.3390/bs15081083>
27. Singh, R., Singh, C.D., Singh, T. (2024). Structural equation modelling of core functional competencies based on partial least square method using WarpPLS 7.0. *International Journal of Process Management and Benchmarking*, 16(2), 215–230. <https://doi.org/10.1504/IJPM.2024.135759>
28. Trentini, C., Tambelli, R., Maiorani, S., Lauriola, M. (2022). Gender differences in empathy during adolescence: does emotional self-awareness matter? *Psychological Reports*, 125(2), 913–936. <https://doi.org/10.1177/0033294120976631>
29. Vazsonyi, A.T., Javakhishvili, M., Lobo-Dos-Santos, T.A., Özdemir, Y., Sağkal, A.S. (2024). Developmental changes in school burnout: The importance of sleep and problematic Internet use. *Journal of Adolescence*, 96(5), 1091–1101. <https://doi.org/10.1002/jad.12319>
30. Wang, X., Qiao, Y., Wang, S. (2023). Parental phubbing, problematic smartphone use, and adolescents' learning burnout: A cross-lagged panel analysis. *Journal of Affective Disorders*, 320, 442–449. <https://doi.org/10.1016/j.jad.2022.09.163>
31. Yang, D., Zhang, J.F., Huang, X.T. (2002). 青少年学生疏离感的理论构建及量表编制 [Adolescent students' sense of alienation: theoretical construct and scale development]. *Acta Psychologica Sinica*, 34(4), 407–413.
32. Zhang, J., Dong, C., Jiang, Y., Zhang, Q., Li, H., Li, Y. (2023). Parental phubbing and child social-emotional adjustment: A meta-analysis of studies conducted in China. *Psychology Research and Behavior Management*, 4267–4285. <https://doi.org/10.2147/PRBM.S417718>
33. Zhang, P., Wang, X. (2025). The impact of parental phubbing on social withdrawal in preschool children: the serial mediating roles of parent-child conflict and negative emotions. *BMC Psychology*, 13(1), 36. <https://doi.org/10.1186/s40359-025-02363-2>

Information about the authors

Qian Wang, PhD Candidate in Psychology, Department of Educational Psychology & Counselling, Faculty of Education, Universiti Malaya, Malaysia; Lecturer, School of Educational Science, Mudanjiang Normal University, China, ORCID: <https://orcid.org/0009-0008-4773-6804>, e-mail: s2040518@siswa.um.edu.my

Rafidah Aga Mohd Jaladin, PhD in Psychology, Associate Professor, Chair of Psychology, Department of Educational Psychology & Counselling, Faculty of Education, Universiti Malaya, Malaysia, ORCID: <https://orcid.org/0000-0002-3124-9736>, e-mail: rafidah_aga@um.edu.my

Amira Najihah Binti Yahya, PhD in Psychology, Lecturer, Department of Educational Psychology & Counselling, Faculty of Education, Universiti Malaya, Malaysia, ORCID: <https://orcid.org/0000-0001-6115-0086>, e-mail: amirayahya@um.edu.my

Qiushi Zhang, Lecturer, School of Educational Science, Mudanjiang Normal University, China, ORCID: <https://orcid.org/0009-0009-4294-8442>, e-mail: zhangqiushi8388@163.com

Ruijie Liu, Master's Student, School of Educational Science, Mudanjiang Normal University, China, ORCID: <https://orcid.org/0009-0003-7510-252X>, e-mail: 916336971@qq.com

Информация об авторах

Цянь Ван, аспирант по психологии, кафедра психологии образования и консультирования, факультет образования, Университет Малайя, Куала-Лумпур, Малайзия; преподаватель, факультет педагогических наук, Муданьцзянский педагогический университет, Муданьцзян, Китай, ORCID: <https://orcid.org/0009-0008-4773-6804>, e-mail: s2040518@siswa.um.edu.my

Рафида Ага Мохд Джаладин, кандидат психологических наук, доцент, заведующая кафедрой психологии, кафедра психологии образования и консультирования, факультет образования, Университет Малайя, Куала-Лумпур, Малайзия, ORCID: <https://orcid.org/0000-0002-3124-9736>, e-mail: rafidah_aga@um.edu.my

Амира Наджиха Бинти Яхья, кандидат психологических наук, преподаватель, кафедра психологии образования и консультирования, факультет образования, Университет Малайя, Куала-Лумпур, Малайзия, ORCID: <https://orcid.org/0000-0001-6115-0086>, e-mail: amirayahya@um.edu.my

Цюши Чжан, преподаватель, факультет педагогических наук, Муданьцзянский педагогический университет, Китай, ORCID: <https://orcid.org/0009-0009-4294-8442>, e-mail: zhangqiushi8388@163.com

Жуцзе Лю, студент-магистр, факультет педагогических наук, Муданьцзянский педагогический университет, Муданьцзян, Китай, ORCID: <https://orcid.org/0009-0003-7510-252X>, e-mail: 916336971@qq.com

Contribution of the authors

Qian Wang — study design; initial drafting of the manuscript.

Rafidah Aga Mohd Jaladin — project supervision; critical manuscript revisions; final approval of the manuscript.

Amira Najiha Binti Yahya — data analysis; interpretation of findings; manuscript revision.

Qiushi Zhang — data collection; data analysis.

Rujie Liu — data collection; data analysis.

All authors participated in the discussion of the results and approved the final text of the manuscript.

Вклад авторов

Цянь Ван — разработка дизайна исследования; подготовка первоначального варианта рукописи.

Рафида Ага Мохд Джаладин — общее руководство проектом; критический пересмотр рукописи; окончательное утверждение рукописи.

Амира Наджиха Бинти Яхья — анализ данных; интерпретация результатов; редактирование рукописи.

Цюши Чжан — сбор данных; анализ данных.

Жуцзе Лю — сбор данных; анализ данных.

Все авторы приняли участие в обсуждении результатов и одобрили окончательный текст рукописи.

Conflict of interest

The authors declare no conflict of interest.

Конфликт интересов

Авторы заявляют об отсутствии конфликта интересов.

Ethics statement

The study was reviewed and approved by the Academic Ethics Committee of the School of Educational Science, Mudanjiang Normal University (Approval ID: 2023-0103).

Декларация об этике

Исследование было рассмотрено и одобрено Комитетом по академической этике Факультета педагогических наук Муданьцзянского педагогического университета (№ одобрения: 2023-0103).

Поступила в редакцию 19.09.2025

Received 2025.09.19

Поступила после рецензирования 25.11.2025

Revised 2025.11.25

Принята к публикации 11.08.2026

Accepted 2026.08.11

Опубликована 30.08.2026

Published 2026.08.30