

Keeping Up or Burning Out? Peer Pressure and Academic Burnout among Third-Year University Students in Changchun, China

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ABSTRACT

Academic burnout is increasingly recognised as a challenge in higher education, yet the contribution of peer-related pressures remains less clearly understood in Chinese university contexts. This study examined the association between peer pressure and academic burnout among third-year undergraduates in Changchun, China. A quantitative cross-sectional correlational design was employed, and data were obtained from 310 students recruited from two universities using adapted self-report measures of peer pressure and academic burnout. Analyses were conducted in IBM SPSS Statistics 32 and included data screening, Harman's single-factor test, reliability analysis, exploratory factor analysis, descriptive statistics, Pearson correlation, and simple linear regression. Both measures showed strong internal consistency (Cronbach's $\alpha = .941$ for peer pressure and $.901$ for academic burnout). Participants reported moderate levels of peer pressure and academic burnout. Peer pressure was positively correlated with academic burnout ($r = .369$, $p < .001$). The regression model was significant, $F(1, 308) = 48.530$, $p < .001$, with peer pressure accounting for 13.6% of the variance in academic burnout ($R^2 = .136$). Peer pressure also emerged as a significant positive statistical predictor of academic burnout ($B = .275$, $SE = .039$, $\beta = .369$, $p < .001$). These findings indicate that peer pressure constitutes a meaningful social-academic factor associated with burnout during a stage of university study characterised by increasingly visible academic and career comparisons. The results extend understanding of academic burnout by drawing attention to interpersonal pressures alongside formal academic demands. Universities may therefore benefit from fostering healthier peer climates and integrating academic, psychological, and career support for third-year students. Given the cross-sectional design and convenience sample, the findings should be interpreted as evidence of association rather than causation.

Keywords: peer pressure, academic burnout, third-year university students, higher education, China

INTRODUCTION

University students are exposed to increasing academic demands throughout their university education. Besides completing coursework and preparing for examinations, many students also face growing pressure related to postgraduate entrance examinations, employment preparation, and future career planning. Managing these overlapping responsibilities may place considerable psychological strain on students and increase their vulnerability to academic burnout. Academic burnout has therefore become an important concern in higher education because it is associated with lower learning motivation, poorer academic performance, and reduced psychological well-being (Schaufeli et al., 2002; Madigan & Curran, 2021). Recent evidence also shows that burnout is a common concern among university students across different academic and social contexts (Abraham et al., 2024; Olson et al., 2025).

Among the many factors influencing students' academic experiences, peer relationships deserve particular attention. University students spend a substantial amount of time interacting with classmates, making peer relationships an important part of both their academic and social lives. During these interactions, students frequently compare their academic performance, learning ability, and future plans with those of their peers. Such comparisons may encourage learning and personal improvement, but they may also create excessive pressure and psychological stress. Social Comparison Theory proposes that individuals naturally evaluate their abilities and achievements by comparing themselves with others, making classmates an important source of psychological influence in university settings (Festinger, 1954). Consistent with this perspective, peer pressure is associated with perceived peer expectations and conformity within groups (Santor et al., 2000). When these peer-related demands persist over time, they may gradually consume students' emotional and cognitive resources, thereby increasing the likelihood of academic burnout (Demerouti et al., 2001).

Existing research has shown that peer pressure is related to students' learning engagement, academic achievement, and mental health. Academic burnout has likewise been linked to a wide range of academic, social, and psychological factors. For example, perceived social support has been found to be negatively related to academic burnout among Chinese university students (Ye et al., 2021). Although these studies have contributed to understanding students' academic experiences, direct evidence regarding the relationship between peer pressure and academic burnout among Chinese university students remains limited. This gap is particularly evident among third-year university students in Northeast China, who often encounter increasing academic and career-related demands.

Against this background, the present study investigates the relationship between peer pressure and academic burnout among third-year university students in Changchun, China. By examining this relationship, the study seeks to provide empirical evidence for understanding the role of peer pressure in students' academic experiences and to offer practical implications for strengthening academic support and promoting psychological well-being in higher education.

LITERATURE REVIEW

Peer Pressure

Peer pressure refers to the influence of peers on an individual's attitudes, behaviours, and decisions. It often encourages individuals to follow group norms or meet peer expectations (Laursen & Faur, 2022). In the present study, peer pressure mainly refers to pressure arising from academic comparison, competition, and perceived peer expectations. University students spend much of their time with classmates and friends. This makes peer influence an important part of their academic and social lives (Laursen & Veenstra, 2021).

Early studies mainly viewed peer pressure as a negative influence. Researchers linked it to risky behaviours such as smoking, drinking, and delinquency. Experimental studies also showed that peer influence could increase risk-taking and risky decision-making, particularly among adolescents (Lorenz & Kray, 2022). More recent research suggests that peer influence is not always harmful. Positive peer relationships can encourage learning, healthy competition, and academic engagement. At the same time, excessive competition and repeated social comparison may increase stress and emotional strain.

Peer pressure has been measured using a variety of instruments. Santor et al. (2000) developed and validated a short measure of peer pressure. The measure distinguishes peer pressure from related concepts such as conformity and the desire for popularity. It may be adapted for different student populations because cultural and educational contexts vary.

Recent research has increasingly focused on educational outcomes rather than problem behaviours. Earlier studies demonstrated that peer groups play an important role in shaping students' learning motivation and academic achievement (Reindl, 2021). More recent research has shown that peer relationships are associated with learning motivation, engagement, adjustment, and academic achievement (Shao et al., 2024). These findings indicate that peer influence extends beyond behavioural outcomes and contributes to students'

academic development. Direct evidence on whether peer pressure contributes to academic burnout among university students, however, remains limited, particularly within the context of Chinese higher education.

Although the literature has expanded, several research gaps remain. Much of the existing research has focused on adolescents rather than university students (Laursen & Veenstra, 2021). Previous studies have mainly examined risky behaviours, academic achievement, or general mental health, whereas fewer have directly explored the relationship between peer pressure and academic burnout. This relationship remains underexplored among Chinese university students, particularly those in Northeast China. Further research is therefore needed to improve understanding of peer pressure and academic burnout in this population.

Academic Burnout

Academic burnout is a negative psychological response to prolonged academic demands. It occurs when students perceive that the effort required for their studies exceeds their available energy and personal resources. Common symptoms include fatigue, loss of interest in learning, and a reduced sense of academic competence (Schaufeli et al., 2002).

Schaufeli et al. (2002) extended the concept of burnout to the university context. They conceptualised academic burnout as consisting of three dimensions: emotional exhaustion, cynicism, and reduced academic efficacy. Emotional exhaustion refers to feeling emotionally drained by academic demands. Cynicism describes a detached or negative attitude towards learning. Reduced academic efficacy reflects students' doubts about their ability to accomplish academic tasks.

Academic burnout may result from both personal and environmental factors. Heavy academic workloads, repeated assessments, poor time management, and unclear academic goals may increase the risk of burnout. Stress, anxiety, limited social support, and low self-efficacy may also contribute to burnout. By contrast, supportive relationships and effective coping strategies can help students manage academic demands more effectively. Research has shown that perceived social support is negatively associated with academic burnout among university students (Ye et al., 2021).

Academic burnout has become a growing concern in Chinese higher education. University students often experience pressure from coursework, examinations, career planning, and social comparison. Studies of Chinese university students have linked academic burnout to stress, poor mental health, limited social support, smartphone addiction, and broader psychosocial pressures (Sun et al., 2024; Yang et al., 2022; Zhang et al., 2025). These findings suggest that academic burnout is influenced by multiple personal and environmental pressures rather than a single factor.

Several research gaps still remain. Many existing studies have focused on medical students or included broad samples from different academic years. Comparatively less attention has been given to third-year undergraduates, who experience increasing pressure related to internships, postgraduate entrance examinations, and future employment. Research involving university students in Northeast China is also limited. Further research is therefore needed to better understand the factors associated with academic burnout in this population.

Relationship between Peer Pressure and Academic Burnout

Previous studies have linked peer influence to students' academic experiences and psychological well-being. As peer relationships become increasingly important during university life, students may compare their academic performance, learning ability, and future plans with those of their classmates. These comparisons may influence both academic engagement and emotional adjustment (Laursen & Veenstra, 2021).

Excessive peer pressure may be linked to negative academic and psychological outcomes. Students who perceive strong peer expectations may experience higher levels of stress, anxiety, and emotional strain. Ongoing competition and concerns about falling behind may reduce learning satisfaction and increase the

likelihood of academic burnout. By contrast, supportive peer relationships can provide encouragement and help students cope with academic challenges.

Recent studies also suggest that peer relationships are linked to students' learning attitudes and academic adjustment. Positive peer interactions may strengthen learning motivation and academic engagement, whereas negative peer influence may reduce students' willingness to engage in learning activities (Shao et al., 2024). These findings suggest that peer experiences play an important role in students' academic adjustment.

Although previous research has examined peer influence and student well-being, direct evidence on the relationship between peer pressure and academic burnout remains limited. Most studies have focused on risky behaviours, academic achievement, mental health, or learning motivation rather than academic burnout. Academic burnout is characterised by emotional exhaustion, cynicism, and reduced academic efficacy. It may develop when continuing academic demands consume students' available resources (Schaufeli et al., 2002). Few studies have examined whether peer pressure represents one of these demands among Chinese university students, particularly those in Northeast China.

Based on the existing literature, peer pressure may be an important factor related to academic burnout. However, additional evidence is needed to better understand this relationship in the context of Chinese higher education. The present study therefore examines whether peer pressure is significantly associated with academic burnout among third-year university students in Changchun, China.

Theoretical Framework

The present study is grounded in the Job Demands–Resources (JD-R) Theory, which provides a useful perspective for understanding how students respond to academic demands. Originally proposed by Demerouti et al. (2001), the JD-R theory explains burnout as a consequence of prolonged demands that exceed an individual's available physical and psychological resources (Demerouti et al., 2001). Social Comparison Theory (Festinger, 1954) provides a complementary perspective by explaining how comparisons with peers may contribute to perceived peer pressure.

Within the university context, students are exposed to a variety of academic demands, including coursework, examinations, assignments, and interpersonal challenges. From the perspective of the JD-R theory, peer pressure can also be regarded as an academic demand because students may feel compelled to achieve high grades, compete with classmates, and keep pace with their peers. When these expectations become excessive or persistent, they may increase psychological strain and gradually deplete students' emotional resources.

The JD-R theory proposes that sustained exposure to high demands without sufficient personal or social resources increases the likelihood of burnout. Students experiencing high levels of peer pressure may invest additional time, effort, and emotional energy in attempting to meet academic expectations. As these demands continue, emotional resources may gradually become depleted, resulting in lower learning engagement and a greater likelihood of academic burnout. Evidence from educational settings similarly supports this theoretical perspective, showing that study demands are positively associated with burnout, whereas available resources promote engagement and academic adjustment (Salmela-Aro et al., 2022).

Subsequent developments of the JD-R theory further emphasise that academic demands primarily contribute to emotional exhaustion, whereas personal and environmental resources help sustain motivation and engagement (Bakker et al., 2023). Based on this theoretical perspective, peer pressure is expected to function as an academic demand that may increase students' risk of academic burnout. The JD-R theory therefore provides the theoretical foundation for examining the relationship between peer pressure and academic burnout in the present study.

Hypothesis Development

The existing literature and the Job Demands–Resources (JD-R) Theory together provide a basis for examining the relationship between peer pressure and academic burnout. Within the JD-R framework, excessive academic

demands may gradually consume students' emotional and psychological resources, increasing the likelihood of burnout (Demerouti et al., 2001). In the university context, peer pressure may function as one such demand because students often experience expectations related to academic performance, competition, and social comparison. As these pressures accumulate, they may place additional psychological demands on students and contribute to academic burnout.

Empirical evidence also supports this theoretical perspective. Previous studies have linked peer pressure to students' learning experiences and psychological adjustment, while peer relationships have been associated with learning motivation, engagement, and academic achievement (Shao et al., 2024). However, direct evidence regarding the relationship between peer pressure and academic burnout remains limited, particularly among Chinese university students. Taken together, the available theoretical and empirical evidence suggests that higher levels of peer pressure are likely to be associated with greater academic burnout. Accordingly, the following hypothesis is proposed:

H1: Peer pressure is positively associated with academic burnout among third-year university students in Changchun, China.

METHODOLOGY

Research Design

This study employed a quantitative cross-sectional correlational research design to examine the relationship between peer pressure and academic burnout among third-year university students in Changchun, China. A quantitative approach was considered appropriate because it enables psychological constructs to be measured using standardised instruments and allows relationships between variables to be examined statistically (Creswell & Creswell, 2023). Because the primary objective of the study was to examine whether peer pressure was associated with academic burnout, a correlational design was adopted to assess the direction and strength of the relationship between the two variables.

A cross-sectional survey design was employed, with data collected from participants at a single point in time. This design is commonly used to examine variables and their associations within a defined population, but it cannot establish temporal order or causal relationships (Setia, 2016). As the present study did not manipulate variables or evaluate an intervention, no experimental procedures were implemented. Instead, it focused on participants' self-reported perceptions of peer pressure and academic burnout in their current academic context.

Following the correlation analysis, simple linear regression was conducted to examine whether peer pressure statistically predicted academic burnout. This analysis assessed the predictive association between the two variables rather than a causal effect. All statistical analyses were conducted using IBM SPSS Statistics Version 32.

Participants and Procedure

The study employed convenience sampling to recruit participants from two universities in Changchun, Jilin Province, China. Students from different classes and academic disciplines were invited to participate to improve sample coverage. The target population consisted of third-year undergraduate students because this stage is characterised by increasing academic demands and important career-related transitions, including preparation for postgraduate entrance examinations, internships, and employment. For this reason, third-year students were considered an appropriate population for examining the relationship between peer pressure and academic burnout.

Data were collected during a regular academic semester using a structured questionnaire with the assistance of course instructors and student counsellors. Permission to conduct the study was obtained from the participating universities. Before completing the questionnaire, participants were informed of the study purpose.

Participation was voluntary, and written informed consent was obtained from all participants. Responses were anonymous and confidential and were used only for academic research.

After data collection, all returned questionnaires were screened for quality. Questionnaires containing substantial missing data, obvious repetitive response patterns, or clear logical inconsistencies were excluded from the analysis. Following data screening, 310 valid questionnaires were retained for the final statistical analyses. The demographic characteristics of the participants are presented in Table 1.

Measures

Two self-report instruments were used to assess peer pressure and academic burnout. Both instruments were adapted from established international scales for use with Chinese university students. Following cross-cultural adaptation guidelines, the original English versions were translated into Chinese and subsequently back-translated to ensure semantic and conceptual equivalence (Beaton et al., 2000). Two experts in educational psychology then reviewed the translated items to evaluate conceptual accuracy and cultural appropriateness.

A pilot study was conducted before the formal survey. Based on participants' feedback, minor revisions to item wording were made to improve clarity without altering the original meanings of the items. All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). After reverse coding where required, higher scores indicated higher levels of the corresponding construct. Cronbach's alpha was calculated to evaluate the internal consistency of both instruments.

Peer Pressure

Peer pressure was measured using an instrument adapted from the peer pressure measure developed and validated by Santor et al. (2000). The original English items were translated into Chinese and culturally adapted to reflect the academic experiences of Chinese university students while retaining the conceptual meaning of the original instrument.

The adapted scale consisted of 11 items assessing students' perceived peer pressure in academic settings. Each item was rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated greater perceived peer pressure.

The scale demonstrated excellent internal consistency in the present study, with a Cronbach's alpha coefficient of .941.

Academic Burnout

Academic burnout was measured using an instrument adapted from the Maslach Burnout Inventory–Student Survey developed by Schaufeli et al. (2002). The original instrument comprises three theoretical dimensions: emotional exhaustion, cynicism, and reduced academic efficacy. Following the translation, back-translation, and cultural adaptation procedures described above, the scale was adapted for use with Chinese university students while retaining the conceptual meaning of the original instrument.

The adapted scale consisted of 15 items. Each item was rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The academic efficacy items were reverse-coded before calculating the total score so that higher overall scores indicated higher levels of academic burnout.

The scale demonstrated excellent internal consistency in the present study, with a Cronbach's alpha coefficient of .901.

Data Analysis

Data were analysed using IBM SPSS Statistics Version 32. Before the formal analyses, the dataset was screened for missing values, response inconsistencies, and invalid questionnaires. The academic efficacy items were reverse-coded before calculating the total academic burnout score.

Harman's single-factor test was conducted as a preliminary assessment of common method bias (Podsakoff et al., 2003). The internal consistency of the instruments was evaluated using Cronbach's alpha. Exploratory factor analysis was performed to examine the factor structure of the adapted scales. The Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity were used to determine whether the data were suitable for factor analysis. Means and standard deviations were calculated to describe peer pressure and academic burnout. Pearson correlation analysis was conducted to examine the relationship between the two variables. Simple linear regression was then performed to determine whether peer pressure significantly predicted academic burnout. The regression analysis assessed predictive association rather than causality. All statistical tests were two-tailed, and $p < .05$ was considered statistically significant.

RESULTS

Sample Characteristics

A total of 310 valid questionnaires were included in the final analysis. As presented in Table 1, females accounted for 75.2% of the sample, while males accounted for 24.8%. Most participants were 21 years old (56.5%), followed by 22 years old (28.1%), 20 years or below (11.6%), and 23 years or above (3.9%). Regarding academic discipline, 47.4% of the participants majored in Economics and Management, 36.8% in Humanities, Education, and Arts, 14.5% in Science and Engineering, and 1.3% in other disciplines. Concerning primary graduation plans, the largest proportion of participants (35.8%) intended to prepare for civil service, public institution, or teacher recruitment examinations, followed by direct employment (26.5%), postgraduate study (25.5%), and other plans or remaining undecided (12.3%). In terms of academic performance, nearly half of the participants (47.1%) reported ranking within the 21%–50% range of their class or major, while 34.2% were in the top 20%, 15.8% were in the 51%–80% range, and 2.9% reported being in the bottom 20%. Furthermore, 58.1% of the participants reported serving as student cadres, whereas 41.9% did not hold student leadership positions. Finally, the sample showed a relatively balanced distribution between urban (51.9%) and rural (48.1%) places of origin.

Table 1: Participant Characteristics (N = 310)

Variable	Category	n	%
Gender	Male	77	24.8
	Female	233	75.2
Age	20 years or below	36	11.6
	21 years	175	56.5
	22 years	87	28.1
	23 years or above	12	3.9
Academic Discipline	Economics and Management	147	47.4
	Science and Engineering	45	14.5
	Humanities, Education, and Arts	114	36.8
	Other disciplines	4	1.3
Primary Graduation Plan	Postgraduate study	79	25.5
	Civil service / public institution / teacher recruitment	111	35.8
	Direct employment	82	26.5

	Other plans / Undecided	38	12.3
Academic Performance	Top 20% (Excellent)	106	34.2
	21%–50% (Upper-middle)	146	47.1
	51%–80% (Lower-middle)	49	15.8
	Bottom 20% (Academically at-risk)	9	2.9
Student Cadre Status	Yes	180	58.1
	No	130	41.9
Place of Origin	Urban	161	51.9
	Rural	149	48.1

Note. Percentages may not total exactly 100% because of rounding.

Preliminary Analyses

Prior to hypothesis testing, a series of preliminary analyses were conducted to assess the quality of the data and the psychometric properties of the measurement instruments. Common method bias was first examined using Harman's single-factor test. Subsequently, the reliability of the scales was evaluated using Cronbach's alpha coefficients, and exploratory factor analysis (EFA) was performed to assess construct validity. The results are presented in the following sections.

Common Method Bias Test

Because all study variables were collected from the same participants using self-report questionnaires, Harman's single-factor test was conducted as a preliminary assessment of common method bias (Podsakoff et al., 2003). All 26 items from the Peer Pressure Scale and the Academic Burnout Scale were entered into an unrotated principal component analysis. The results showed that three factors had eigenvalues greater than 1. The first unrotated factor accounted for 39.51% of the total variance. As this value was below 40%, no single factor explained most of the variance. The result therefore provided preliminary evidence that common method bias was unlikely to dominate the observed relationship. However, Harman's single-factor test cannot completely rule out common method bias.

Reliability Analysis

The internal consistency of the measurement instruments was evaluated using Cronbach's alpha coefficients. As shown in Table 2, the Peer Pressure Scale demonstrated excellent internal consistency (Cronbach's $\alpha = .941$), while the Academic Burnout Scale demonstrated excellent internal consistency (Cronbach's $\alpha = .901$). These results indicated that both scales had satisfactory overall reliability and were suitable for subsequent analyses.

Table 2: Reliability Analysis of the Study Variables

Scale	Number of Items	Cronbach's α	Interpretation
Peer Pressure	11	.941	Excellent
Academic Burnout	15	.901	Excellent

Note. Cronbach's α values above .70 indicate acceptable internal consistency.

Exploratory Factor Analysis

Exploratory factor analysis was conducted using principal component analysis with Varimax rotation to examine the factor structure of the measurement scales. The results are presented in Table 3.

For the Peer Pressure Scale, the Kaiser–Meyer–Olkin measure was .937, and Bartlett’s test of sphericity was significant, $\chi^2(55) = 2646.255$, $p < .001$. One factor with an eigenvalue greater than 1 was extracted, accounting for 63.55% of the total variance. Factor loadings ranged from .661 to .868, and all communalities exceeded .40.

For the Academic Burnout Scale, the KMO value was .919, and Bartlett’s test of sphericity was significant, $\chi^2(105) = 4954.255$, $p < .001$. Two factors with eigenvalues greater than 1 were extracted, accounting for 77.94% of the total variance. After rotation, factor loadings ranged from .753 to .913, and communalities ranged from .569 to .837, with no substantial cross-loadings. This pattern of strong loadings is broadly consistent with other recently developed self-report scales validated via exploratory factor analysis in comparable social science contexts, where similarly robust loadings and substantial explained variance have been reported, lending further support to the robustness of the factor structures obtained in the present study (Alias et al., 2025; Sakamoto & Nagamine, 2025; Silva et al., 2025).

The academic efficacy items were reverse-coded before the factor analysis. Nevertheless, the two-factor solution differed from the original three-dimensional structure of the Academic Burnout Scale. Therefore, the factor structure of the adapted scale should be interpreted cautiously. Because the present study focused on overall academic burnout rather than its separate dimensions, the total scale score was used in the subsequent correlation and regression analyses.

Table 3: Exploratory Factor Analysis Results of the Measurement Scales (N = 310)

Scale	Theoretical Dimensions	Extracted Factors	KMO	Bartlett's χ^2	df	p	Variance Explained (%)	Factor Loadings
Peer Pressure	1	1	.937	2646.255	55	< .001	63.55	.661–.868
Academic Burnout	3	2	.919	4954.255	105	< .001	77.94	.753–.913

Note. KMO = Kaiser–Meyer–Olkin measure of sampling adequacy. The academic efficacy items were reverse-coded before factor analysis. The two-factor solution for the Academic Burnout Scale differed from its original three-dimensional structure and should therefore be interpreted cautiously.

Descriptive Statistics and Correlation Analysis

To provide an overview of the study variables and examine the relationships between them, descriptive statistics and Pearson correlation analyses were conducted. Descriptive statistics were first calculated to summarize the central tendency and variability of each variable. Pearson correlation analysis was then performed to examine the bivariate association between peer pressure and academic burnout.

Descriptive Statistics

Descriptive statistics for the study variables are presented in Table 4.

The Peer Pressure scale had a mean item score of 2.92 (SD = 0.91), with observed scores ranging from 1.00 to 5.00. These results indicate that participants experienced a moderate level of peer pressure, with considerable variability across individuals.

The Academic Burnout scale had a mean item score of 2.63 (SD = 0.68), with observed scores ranging from 1.00 to 3.87. Overall, participants reported a moderate level of academic burnout.

Table 4: Descriptive Statistics and Pearson Correlations of the Study Variables (N = 310)

Variable	N	M	SD	Min	Max	1	2
1. Peer Pressure	310	2.92	0.91	1.00	5.00	—	.369***
2. Academic Burnout	310	2.63	0.68	1.00	3.87	.369** *	—

Note. M = mean; SD = standard deviation. *** $p < .001$ (two-tailed).

Pearson Correlation Analysis

Pearson correlation analysis was conducted to examine the relationship between peer pressure and academic burnout. As shown in Table 4, peer pressure was positively and significantly correlated with academic burnout ($r = .369$, $p < .001$). This finding indicates that higher levels of peer pressure were associated with higher levels of academic burnout among university students.

Simple Linear Regression Analysis

Assumption Testing

Prior to the regression analysis, the assumptions of simple linear regression were examined. The histogram and normal probability (P–P) plot of the standardised residuals indicated that the residuals were approximately normally distributed. The scatterplot of standardised residuals against standardised predicted values showed no clear systematic or funnel-shaped pattern, suggesting that the assumptions of linearity and homoscedasticity were reasonably satisfied.

The Durbin–Watson statistic was 2.014, indicating that the residuals were independent. Because the model included only one predictor, multicollinearity was not a concern. In addition, no standardised residual exceeded ± 3.0 , suggesting that no substantial residual outliers were identified. Overall, the assumptions of simple linear regression were adequately satisfied.

Regression Results

A simple linear regression analysis was conducted to examine whether peer pressure statistically predicted academic burnout among third-year university students. The regression model was statistically significant, $F(1, 308) = 48.530$, $p < .001$. As presented in Table 5, peer pressure explained 13.6% of the variance in academic burnout ($R = .369$, $R^2 = .136$, adjusted $R^2 = .133$), indicating modest explanatory power.

Peer pressure was a significant positive statistical predictor of academic burnout ($B = .275$, $SE = .039$, $\beta = .369$, $t = 6.966$, $p < .001$, 95% CI [.197, .353]). A one-unit increase in peer pressure was associated with an average increase of 0.275 units in academic burnout. Students reporting higher peer pressure therefore tended to report higher academic burnout. Hypothesis 1 was supported.

Table 5: Simple Linear Regression Predicting Academic Burnout (N = 310)

Predictor	B	SE	β	t	p
Peer Pressure	.275	.039	.369	6.966	< .001

Model Statistics				Value	
R ²				.136	
Adjusted R ²				.133	
F(1, 308)				48.530	
p				< .001	

Note. Dependent variable = academic burnout. B = unstandardized regression coefficient; SE = standard error; β = standardized regression coefficient.

DISCUSSION

Interpretation of the Descriptive Findings

The descriptive findings indicate that third-year university students in Changchun experienced moderate levels of both peer pressure and academic burnout. Rather than suggesting severe psychological difficulties across the sample, these results imply that both experiences were common features of students' academic lives during the period of investigation.

One possible explanation for the moderate level of peer pressure is the academic and career-related demands typically faced by third-year university students. At this stage, many students begin preparing for postgraduate entrance examinations, internships, professional qualifications, and future employment. At the same time, differences in academic achievement and career planning become increasingly visible. Under these circumstances, classmates naturally become important reference points for evaluating academic progress and future development. Although such comparisons may motivate students to improve their performance, they may also generate pressure when students perceive themselves as falling behind their peers.

This pattern is consistent with previous research suggesting that peer relationships can have both supportive and demanding characteristics. Classmates may provide encouragement, academic assistance, and access to useful information, while ongoing competition and repeated social comparison may simultaneously increase psychological strain. The moderate level of peer pressure observed in this study therefore suggests that peer influence formed a meaningful part of students' academic experiences without becoming overwhelmingly stressful for the majority of participants.

A similar pattern was observed for academic burnout. Participants reported a moderate level of burnout, indicating that emotional exhaustion and reduced academic engagement were present but not severe across the overall sample. One plausible explanation is that third-year students are required to balance multiple academic and career-related responsibilities within a relatively short period. Besides completing regular coursework, many students must prepare for postgraduate entrance examinations, internships, and employment, all of which increase the demands placed on their time and psychological resources. From the perspective of the Job Demands–Resources theory, burnout is more likely to occur when continuing demands exceed the personal resources available to cope with them (Demerouti et al., 2001).

The present findings are broadly consistent with earlier studies reporting that academic burnout is relatively common among university students and is associated with sustained academic demands and psychological stress (Schaufeli et al., 2002; Zhang et al., 2025). At the same time, the moderate mean scores should be interpreted cautiously because they represent overall group averages. Individual students may have experienced considerably higher levels of peer pressure or academic burnout than those reflected by the average values.

Taken together, the descriptive findings suggest that peer pressure and academic burnout were common academic experiences among third-year university students in Changchun. These findings provide an

appropriate foundation for examining whether higher levels of peer pressure were associated with higher levels of academic burnout in the subsequent analyses.

Interpretation of the Relationship Between Peer Pressure and Academic Burnout

The present study found that peer pressure was positively associated with academic burnout among third-year university students in Changchun. Students who perceived greater peer pressure were also more likely to report higher levels of academic burnout. In addition, peer pressure significantly predicted academic burnout, providing empirical support for Hypothesis 1.

One interpretation of this finding is that peer pressure functions as an additional psychological demand within the university learning environment. Unlike formal academic requirements such as coursework or examinations, peer pressure often develops through continuous comparison with classmates regarding academic performance, learning progress, internships, postgraduate entrance examinations, and future career preparation. When students perceive themselves as falling behind their peers, these comparisons may gradually increase psychological tension, reduce enthusiasm for learning, and contribute to emotional exhaustion.

This interpretation is consistent with previous theoretical and empirical research. Recent evidence indicates that social comparison is positively associated with academic burnout among university students (Lee, 2024). Social Comparison Theory also suggests that individuals naturally evaluate their abilities and achievements by comparing themselves with others, particularly when objective standards are unclear (Festinger, 1954). Within the university context, classmates become particularly meaningful comparison targets because they share similar academic tasks and career goals. Although upward comparison may encourage self-improvement, repeated perceptions of lagging behind peers may gradually undermine students' confidence and increase psychological strain.

The findings can also be understood from the perspective of the Job Demands–Resources (JD-R) theory. According to this framework, burnout becomes more likely when continuing demands consume more emotional and psychological resources than individuals are able to replenish (Demerouti et al., 2001; Bakker et al., 2023). In the present study, peer pressure appears to represent a contextual academic demand that requires additional emotional and cognitive investment. When combined with coursework, examinations, internships, and career planning, these accumulated demands may increase students' vulnerability to academic burnout.

However, peer pressure explained only 13.6% of the variance in academic burnout, indicating modest explanatory power. Although the effect size was relatively modest, this finding remains theoretically meaningful because academic burnout is widely recognised as a multidimensional construct influenced by the combined effects of psychological, academic, interpersonal, and contextual factors. It is therefore unlikely that any single variable can account for a substantial proportion of the variance in academic burnout. Within this broader context, peer pressure should be regarded as one important contextual factor associated with students' academic burnout rather than its sole determinant. Accordingly, the present findings should be interpreted as highlighting one meaningful contextual factor rather than providing a comprehensive explanation of academic burnout. Other variables, including academic workload, learning motivation, self-efficacy, perceived social support, and institutional support, are also likely to contribute to students' burnout experiences and warrant further investigation.

The exploratory factor analysis of the adapted Academic Burnout Scale yielded a two-factor solution rather than the original three-dimensional structure. Nevertheless, the overall internal consistency of the scale remained satisfactory. Because the present study examined overall academic burnout rather than individual burnout dimensions, the total scale score was considered appropriate for the correlation and regression analyses.

Overall, the present findings indicate that peer pressure represents an important aspect of students' academic experiences and is positively associated with academic burnout among third-year university students in Changchun. The results further suggest that interpersonal experiences within the university environment

should be considered alongside formal academic demands when examining students' academic adjustment and psychological well-being.

Theoretical Implications

The present study contributes to the theoretical understanding of how peer pressure is associated with academic burnout among university students. By examining this relationship in the context of Chinese higher education, the findings extend existing theoretical perspectives on students' academic adjustment and psychological well-being.

From the perspective of Social Comparison Theory (Festinger, 1954), the results suggest that peer comparison represents an important psychological process through which students evaluate their academic progress and future development. Although social comparison may motivate academic improvement, repeated perceptions of lagging behind classmates may also increase psychological strain. The positive association observed in this study therefore supports the view that peer-related comparisons constitute an important interpersonal mechanism associated with students' emotional well-being.

The findings also enrich the application of the Job Demands–Resources (JD-R) theory (Demerouti et al., 2001; Bakker et al., 2023) within higher education. While the JD-R model has traditionally emphasised formal academic demands, the present results suggest that peer pressure may also function as a contextual academic demand arising from competition, comparison, and perceived peer expectations. This broadens the understanding of academic demands by highlighting the importance of students' interpersonal learning environments alongside formal educational requirements.

Another theoretical contribution of this study lies in its focus on Chinese higher education. Academic competition, postgraduate admission, internships, and employment preparation are highly visible within this context, making peer comparison particularly salient. Although the present findings should not be interpreted as direct evidence of the cross-cultural generalisability of existing theories, they provide additional empirical support for applying these theoretical perspectives within Chinese university settings.

In addition, the study contributes stage-specific evidence by focusing on third-year university students, a group experiencing increasing academic and career-related demands. Rather than treating university students as a homogeneous population, the findings highlight the importance of considering students' developmental stage when examining peer pressure and academic burnout.

Collectively, the present findings suggest that peer pressure should be understood not only as a social experience but also as an academic demand embedded within students' interpersonal environments. These findings provide additional theoretical support for integrating interpersonal factors into research on academic burnout among university students.

Practical Implications

The present findings have several practical implications for universities seeking to promote students' academic adjustment and psychological well-being. Because peer pressure was positively associated with academic burnout, attention should be directed not only to students' academic workload but also to the interpersonal environments in which learning takes place.

At the institutional level, universities may benefit from creating learning environments that encourage healthy competition while reducing excessive social comparison. Academic policies and classroom practices that emphasise individual progress, cooperation, and realistic goal setting may help students view classmates as learning partners rather than continual competitors. Learning communities, peer mentoring programmes, and collaborative projects may further strengthen supportive peer relationships and reduce unnecessary competitive pressure.

The findings also highlight the important role of educators. Teachers are often well positioned to recognise early signs of peer-related stress through changes in classroom participation, learning engagement, or academic confidence. Providing timely feedback, constructive academic guidance, and realistic encouragement may help students develop healthier expectations regarding their own academic progress while reducing the negative effects of excessive peer comparison.

Student counselling and support services may also play an important preventive role. Workshops focusing on stress management, healthy social comparison, and effective coping strategies may assist students in responding more positively to academic competition. Such support may be particularly valuable for third-year university students, who frequently encounter increasing pressure related to postgraduate entrance examinations, internships, and future employment.

Finally, the findings suggest that academic advising, career guidance, and psychological support should not operate independently. Greater collaboration among teachers, counsellors, and student affairs staff may facilitate the early identification of students experiencing elevated peer pressure or academic burnout and provide more coordinated forms of support.

Overall, the practical implications of the present study indicate that reducing academic burnout requires attention to both academic demands and students' interpersonal learning environments. Strengthening supportive peer relationships while providing timely academic, psychological, and career-related support may contribute to healthier academic adjustment and improved psychological well-being among university students.

Limitations and Future Research

Although the present study provides useful evidence regarding the relationship between peer pressure and academic burnout, several limitations should be acknowledged when interpreting the findings.

One limitation concerns the research design. Because the study adopted a cross-sectional approach, the temporal ordering of the two variables cannot be established, and causal inferences cannot be drawn. Although a significant association was observed between peer pressure and academic burnout, the direction of this relationship cannot be determined from the present data. Students experiencing higher levels of academic burnout may also be more sensitive to peer comparison and therefore perceive greater peer pressure. Longitudinal research would provide a clearer understanding of how these variables influence one another over time.

A second limitation relates to the study sample. Participants were third-year undergraduate students recruited from two universities in Changchun through convenience sampling. As a result, the findings may not be fully representative of university students from other academic years, institutions, or geographical regions. Future studies could improve the generalisability of the findings by including more diverse samples across different educational settings.

Another limitation is the reliance on self-report questionnaires. Although self-report measures are appropriate for assessing perceived peer pressure and academic burnout, participants' responses may have been influenced by recall bias, social desirability, or other response tendencies. Harman's single-factor test provided only preliminary evidence that common method bias did not substantially affect the results. Future research may benefit from combining questionnaire data with interviews, peer evaluations, or behavioural indicators to obtain a more comprehensive assessment.

The measurement of academic burnout also warrants further attention. Although the adapted Academic Burnout Scale demonstrated satisfactory internal consistency, the exploratory factor analysis produced a two-factor solution rather than the original three-dimensional structure. Additional studies using confirmatory factor analysis are needed to determine whether the original theoretical model or the observed factor structure provides a better representation of academic burnout among Chinese university students.

Finally, the present study focused exclusively on the direct relationship between peer pressure and academic burnout. Academic burnout is influenced by multiple psychological, academic, and contextual factors, and the relatively modest explanatory power of the regression model suggests that other variables are also involved. Future research could examine learning motivation, perceived social support, academic self-efficacy, psychological resilience, or other relevant variables as potential mediators or moderators within more comprehensive theoretical models.

Taken together, these limitations do not diminish the contribution of the present study but instead indicate several directions for future research. Broader samples, longitudinal designs, and more comprehensive measurement and analytical approaches may further strengthen understanding of how peer pressure influences academic burnout among university students.

CONCLUSION

The present study examined the relationship between peer pressure and academic burnout among third-year university students in Changchun, China. Using a quantitative cross-sectional correlational design, questionnaire data were analysed through descriptive statistics, Pearson correlation analysis, and simple linear regression to examine the association between the two variables.

The findings showed that peer pressure was positively associated with academic burnout. Students who perceived higher levels of peer pressure were more likely to report higher levels of academic burnout. Although peer pressure explained a modest proportion of the variance in academic burnout, the results indicate that it represents one meaningful contextual factor associated with students' burnout experiences.

The study also provides additional evidence supporting the application of Social Comparison Theory and the Job Demands–Resources (JD-R) theory in understanding university students' academic experiences. The findings suggest that peer pressure should be considered not only as an interpersonal experience but also as an academic demand that may influence students' psychological well-being.

From a practical perspective, the findings highlight the importance of creating supportive learning environments that reduce excessive peer comparison while promoting healthy academic competition. Universities may benefit from integrating academic guidance, career support, and psychological services to help students manage peer-related pressure more effectively.

Despite the limitations associated with the cross-sectional design and convenience sampling, the present study contributes empirical evidence regarding the relationship between peer pressure and academic burnout among third-year university students in Changchun. Future research should include broader and more diverse samples, adopt longitudinal research designs, and examine additional psychological and contextual variables to develop a more comprehensive understanding of academic burnout among university students.

Conflict Of Interest

The authors declare no conflict of interest.

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