

Academic Procrastination Through a Psychosocial Lens: A Systematic Literature Review of Academic Psychological Capital, Perceived Parenting Style and Learning Environment

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Abstract

Academic procrastination is common among young adults. Academic psychological capital - a resource comprising hope, self-efficacy, resilience, and optimism, in the context of academics, can buffer against procrastination. While personal, social, and environmental factors influence this relationship, contextual factors like perceived parenting style and learning environment remain underexplored.

This systematic review analyzes 17 peer-reviewed studies using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines, with further quality assessment using the Joanna Briggs Institute (JBI) Checklist for Analytical Cross-Sectional Studies.

Results show that permissive and positive parenting styles significantly impact academic procrastination. A favorable learning environment, including faculty support and academic discipline, also influences procrastination levels. Mediating factors include self-efficacy, self-esteem, personality, and perfectionism.

The review highlights theoretical and practical implications for educators, parents, and policymakers. Its novelty lies in integrating diverse psychological and contextual factors into a unified framework to better understand and address academic procrastination among young adults.

Keywords: *academic procrastination, academic psychological capital, learning environment, perceived parenting style, systematic review.*

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Introduction

Academic procrastination refers to the intentional delay of tasks in the academic domain, despite the individual's awareness of its negative consequences. It is a prevalent issue plaguing young adults today (Steel, 2007). Academic procrastination is linked to poor time management, reduced academic performance, heightened stress, and negative psychological outcomes (Klassen et al., 2008).

Research by Luthans et al. (2007) suggests that academic psychological capital (academic psycap), which refers to a positive psychological state comprising self-efficacy, hope, optimism, and resilience, plays a vital role in mitigating procrastination tendencies. Originally a concept taken from the domain of Positive Psychology, psychological capital is a resource that helps individuals navigate challenges, achieve goals, and enhance overall well-being. In academic settings,

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psychological capital refers to students' confidence, motivation, and perseverance in overcoming academic challenges. This, in turn, affects their academic performance, engagement, and procrastination. Higher levels of academic psychological capital are related to more academic achievement, lower stress levels, and enhanced well-being among learners (Li et al., 2023).

Despite the growing interest in the interplay between academic psychological capital and academic procrastination, till now, there is limited research on how contextual factors like perceived parenting style and learning environment influence this relationship. Past studies indicate that authoritative parenting, characterized by warmth and firm guidance, is linked to higher self-regulation and academic motivation (Pinquart, 2016), while authoritarian and neglectful parenting styles have been linked to maladaptive behaviors, including procrastination (Zakeri et al., 2013). The learning environment, which encompasses teacher support, peer interactions, and institutional climate, plays a crucial role in shaping students' academic engagement and psychological well-being (Wang & Holcombe, 2010). Other studies indicate that a supportive and resourceful academic setting can foster psychological capital by enhancing students' confidence, resilience, and motivation to complete tasks efficiently (Xanthopoulou et al., 2007). It may also be stated that the learning environment can play a dual role in enhancing academic psychological capital by fostering a sense of competence and resilience among young adults, or it can diminish psychological capital by creating stress and disengagement (Artino & Stephens, 2009). Understanding this dynamic is crucial for addressing academic procrastination.

Academic psychological capital helps to attain goals and reach desired academic

outcomes (Pradhan et al., 2016; Siu et al., 2013). A systematic review by Li et al. (2023) identified several personal and social factors that help develop academic psychological capital in young adults. The factors include self-esteem, motivation, gratitude, family support, and peer relationships. Self-regulated learning mediates the association between academic psychological capital and academic procrastination. It was also established that the method of learning helped differentiate between levels of academic procrastination in young adults (Rahmi & Safitri, 2023).

The present study

Previous studies have examined perceived parenting style and learning environment separately in relation to academic psychological capital and procrastination. However, their combined influence remains unexplored. Long term influence of parenting during childhood and the immediate study climate may trigger various kinds of behavioural patterns in young adults. This study addresses this gap by investigating how these external factors or psychosocial constructs jointly affect the relationship between academic psychological capital and academic procrastination among young adults.

Method

This systematic literature review was conducted using the framework of Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) 2020 Checklist. The quality assessment of each research paper considered for this review was done using the Joanna Briggs Institute (JBI) Checklist for analytical cross-sectional studies. The present systematic review has not been registered with the International Prospective Register of Systematic Reviews (PROSPERO) database.

Search Strategy

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A comprehensive literature search was carried out across several international electronic databases like SCOPUS, Social Sciences Citation Index (SSCI), and Google Scholar, considering all the research papers published from 2016 to 2025. The keywords used to extract the desired research papers were “perceived parenting style”, “learning environment”, “academic psychological capital”, “academic procrastination”, and “young adults”. The search strategy used the terms: “perceived parenting style” OR “parenting style”, “learning environment” OR “college environment”, “academic psychological capital” OR “psychological capital” AND “academic procrastination” AND “young adults”. The keywords were combined through the Boolean operators “AND” and “OR”. Moreover, gray literature articles such as conference proceedings, dissertations, theses, expert opinions, research reports, committee reports, magazine articles, and ongoing research work were not considered for review.

The papers reviewed were selected using the following inclusion and exclusion criteria - Inclusion Criteria: Only published research papers in the English language. Research papers published between 2016 and 2025. Papers which were based on the keywords – perceived parenting style, learning environment, academic psychological capital, academic procrastination, and young adults, only. Only cross-sectional, quantitative research was considered.

Exclusion Criteria: Research papers published in languages other than English were not considered. Research papers published before 2016 and after 2025 were not considered for the review. Papers not having any of the keywords mentioned above were not taken for this review.

Research done on any other population, apart from young adults, was not considered for the review. Longitudinal studies and

qualitative research done in the area mentioned were not considered.

Study selection

As of 07/05/2026, at the outset, there were a total of 528 research papers that addressed the topic under consideration, as accessed using three databases, namely, SCOPUS, Web of Science, and Google Scholar. After removing 113 duplicate records and a total of 56 papers that were not eligible by automation tools, 359 research papers were identified for further scrutiny. The screening procedure further removed 194 papers, leading to a total of 165 papers for consideration, following the analysis of the abstracts. 98 research papers could not be retrieved in full due to various subscription policies. Relevance was judged based on the keywords used. After excluding 50 studies based on the Inclusion and Exclusion Criteria mentioned, from a collection of 67 papers, a total of 17 papers were finally scrutinized. This set of 17 research papers was thoroughly analyzed, focusing on the research methodology used, sample characteristics, research design, and tools used for research. The research papers discarded included a total of 24 studies not published within the stipulated time frame, 5 research papers mentioned longitudinal research designs, 3 research papers were done qualitatively, 9 papers were not published in the English language, and 9 studies were not conducted on a sample of young adults. Hence, a total of seventeen papers were elaborately reviewed for this systematic literature review.

Methodological quality of the included studies

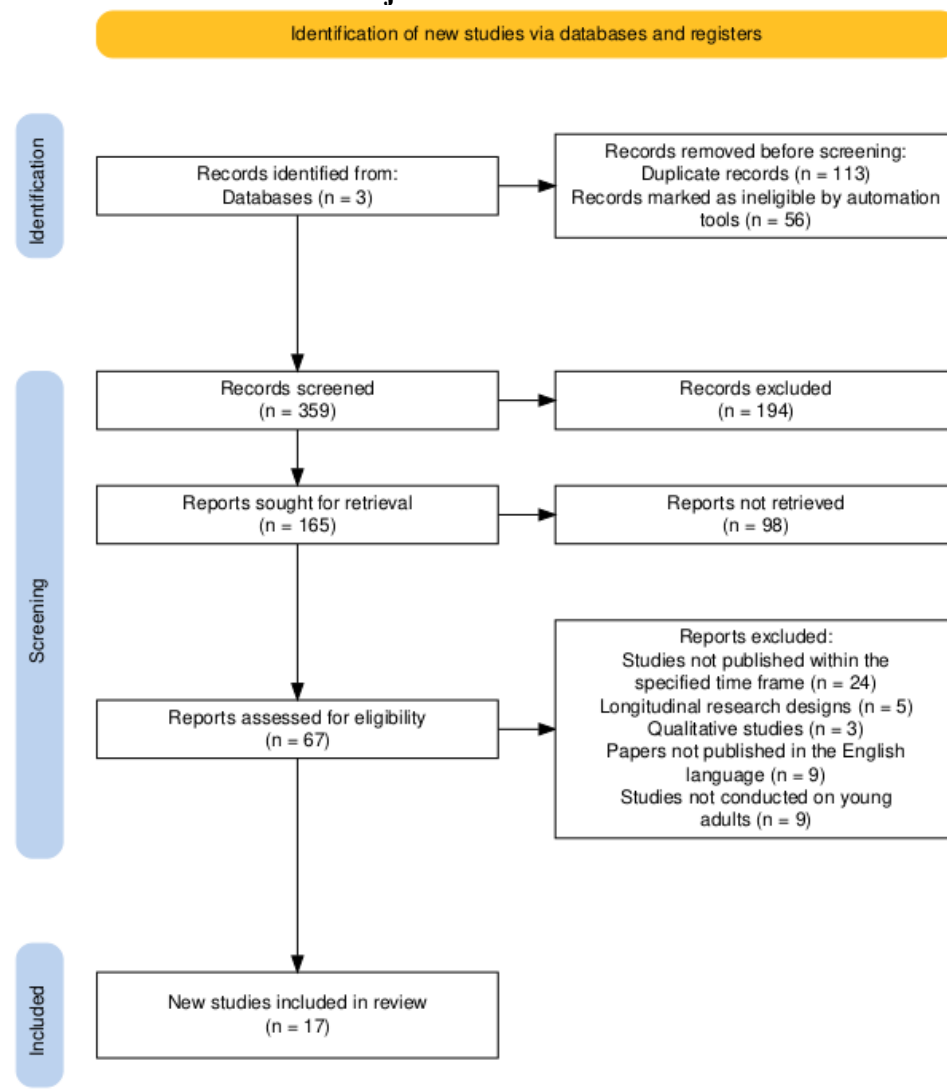
The Joanna Briggs Institute (JBI) Checklist was used to determine the methodological quality of the eighteen analytical cross-sectional studies. The checklist contains eight markers that assess the quality of the

research studies. All the research works included in the present systematic literature review met the standards of quality assessment (each of the research papers included showed a low to moderate risk of

bias). None of the research papers revealed a high risk of bias. Each of the seventeen research papers reviewed was further qualitatively rated by all four authors in an independent manner.

Figure I: PRISMA Flowchart-Flow diagram of the study selection process.

The studies reviewed addressed the objectives of this research.



Results

Study characteristics

This systematic review explores links between perceived parenting style, learning environment, academic psychological

capital, and academic procrastination among young adults. 17 research papers were analyzed in total. While 2 papers additionally focused on perceived stress in relation to academic procrastination, 3

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studies reported on personality and its characteristics. Academic emotions and academic burnout were also areas of focus, in addition to academic procrastination.

The studies selected for the systematic review were all quantitative. The majority of the research done followed a cross-sectional survey design (Teng et al., 2025; Chandhok et al., 2024; Li et al., 2023; Sultana & Wahid, 2023; Batool, 2019). The study by Bozgun and Baytemir (2022) used a correlational survey method. Wang et al. (2023) employed an anonymous cross-sectional survey in an online mode. Two of the studies reported data collection using both face-to-face interaction and online mode (Corkin et al., 2020; Saman & Wirawan, 2020). Two research papers (Saman & Wirawan, 2020, and Nordby et al., 2017) reported two separate studies working on similar research areas. The sampling techniques reported in the studies included cluster random sampling (Saman & Wirawan, 2020), purposive sampling (Sulaiman & Hassan, 2019), convenience sampling (Nordby et al., 2017; Yip & Leung, 2016), random sampling (Jafri, 2017), and multi-stage random cluster sampling (Mahasneh et al., 2016). A proportionate and stratified random sampling technique was used in one study (Guo et al., 2025). Another study used a stratified random sampling followed by a convenience sampling technique for data collection from participants (Teng et al., 2025). This review thus provides an insight into various young adults experiencing academic procrastination in relation to the other factors under consideration.

Sample characteristics

From the 17 research papers taken for the review, 6 were based on samples in China, 1 paper was based on young adults in the United States of America, 2 papers were

based in India, 1 from Indonesia, and 1 each from Turkey, Malaysia, Pakistan, Bangladesh, Jordan, Norway, Hong Kong, and Bhutan. All the research papers reviewed had a sample of young adults (18 to 25 years of age), including both males and females, across different disciplines.

All of the 17 studies reviewed were done on young adults, within the age group of 18 years (minimum) to 25 years (maximum), including both genders. 7 studies reportedly worked with a sample of college students with an equal number of males and females (Chandhok et al., 2024; Sharma & Palawat, 2017; Jafri, 2017; Nordby et al., 2017; Mahasneh et al., 2016; Yip & Leung, 2016). 3 papers worked on samples of college and university students of both genders (Sultana & Wahid, 2023; Bozgun & Baytemir, 2022; Saman & Wirawan, 2020; Batool, 2019). 2 papers reported studies on university students with a majority of females from ethnically diverse backgrounds, including Hispanics, Caucasians, Africans, Americans, Asians, African Americans, and Asian Americans, among others (Corkin et al., 2020). Research was done on young adult medical students, from both genders (Khalid et al., 2022; Khalid et al., 2019) and young adult nursing students, with a majority of females (Li et al., 2023).

Study measures

All the research papers reviewed assessed academic procrastination in young adults. Academic procrastination was measured using Lay's Procrastination Scale – Student Version (Lay, 1986) in two of the research works reviewed (Guo et al., 2025; Chandhok et al., 2024; Yip & Leung, 2016). It was measured using the Procrastination Assessment Scale for Students by Solomon and Rothblum (1984) in four studies (Khalid et al., 2022; Sulaiman & Hassan, 2019; Khalid et al., 2019; Batool, 2019). The

Aitken Procrastination Inventory (Aitken, 1982) was used in two studies (Li et al., 2023; Bozgun & Baytemir, 2022). The Tuckman Procrastination Scale (Tuckman, 1991) was employed in two studies (Saman & Wirawan, 2020). The adapted version of the Pure Procrastination Scale was used in the research by Corkin et al. (2020). The Academic Procrastination Questionnaire by Abu-Ghazal (2012) was used by Mahasneh et al. (2016). A self-designed scale to measure academic procrastination was used by Wang et al. (2023). Other measures of procrastination, including standardized scales on irrational procrastination, peer procrastination, and socially induced academic procrastination, were also used in one of the studies reviewed (Nordby et al., 2017). Some of the studies reviewed used standardized measures of academic psychological capital, like the Psychological Capital Questionnaire by Luthans et al. (2007) (Saman & Wirawan, 2020; Sharma & Palawat, 2017; Jafri, 2017), while Bozgun and Baytemir (2022) used standardized scales to measure individual sub-domains of academic psychological capital, including the Academic Self-Efficacy Scale by Kandemir (2010), the Academic Resilience Scale by Martin and Marsh (2016), Dispositional Hope Scale by Snyder et al. (1991). Perceived parenting style was measured in the studies by Sulaiman and Hassan (2019) using the Parental Authority Questionnaire by Buri (1991). The Perceived Dimensions of Parenting Scale (Batoool, 2016) was used by Batoool (2019). The Parenting Style Inventory – II (Darling

& Toyokawa, 1997) was used in two of the studies reviewed (Sharma & Palawat, 2017; Jafri, 2017). The Scale of Parenting Style (Gafor & Kurukkan, 2014) was employed by Chandhok et al. (2024). The Chinese versions of two scales, including the Parental Bonding Instrument and the Egna Minnen Beträffande Uppfostran (EMBU), were used in the research works by Teng et al. (2025), Li et al. (2023), Khalid et al. (2022; 2019). Learning environment as a variable was measured using standardized scales quantifying sub-domains like faculty support, patterns of adaptive learning, university engagement (Sultana & Wahid, 2023), and classroom social environment, course situational interest (Khalid et al., 2022).

A few other related factors, like perceived stress (Khalid et al., 2022), coping (Sharma & Palawat, 2017), academic intrinsic motivation (Bozgun & Baytemir, 2022), motivational strategies for learning and academic emotions (Yip & Leung, 2016), and personality characteristics (Chandhok et al., 2024; Corkin et al., 2020), self-esteem (Batoool, 2019), academic emotions, and academic burnout (Teng et al., 2025), emotional intelligence (Guo et al., 2025) were also studied in connection with the major variables under study.

One of the studies included the collection of saliva samples from the participants to measure levels of alpha-amylase in relation to procrastination, perceived stress, and parenting styles in medical students (Khalid et al., 2019).

Table I: Summary Table of the research articles reviewed (in reverse chronological order of publication).

Sr. No.	Author / Year	Aim of the study	Location	Sample size and characteristics	Study Design and Questionnaires Used	Key Results
1	Teng et al., 2025.	Parenting styles and academic burnout in medical students: a moderated mediation model of resilience and stress.	China	1403 undergraduate medical students from four colleges or universities.	Descriptive survey research, cross-sectional data collected through stratified random sampling. Chinese version of Simplified Parental Styles Questionnaire (s-EMBU) by Arrindell et al. (1999); College Student Academic Burnout Scale by Lian et al. (2005); Chinese version of Connor-Davidson Resilience Scale by Connor and Davidson (2003); Chinese version of Perceived Stress Scale by Yang and Huang (2003).	Higher academic burnout was mostly indicated in senior students, from rural areas, with a major in preventive medicine, with a sleep duration of less than 7 hours per day. Direct effects showed that academic burnout was higher in students having a rejecting and overprotective parenting style ($\beta = 6.331$, $p < 0.001$), while it was lower in students who had emotionally warm parents ($\beta = -5.706$, $p < 0.001$). Resilience had a mediating effect on parenting styles. Stress had a dynamic moderating effect in the above-mentioned relationship.
2	Guo et al., 2024.	Exploring the Interplay of Emotional Intelligence, Resilience, and Academic Procrastination Among Undergraduate Students	China	420 Undergraduate students (45.2% males and 54.8% females).	Descriptive research, a cross-sectional study done using an online survey method. Data collected using stratified and proportionate random sampling methods. Chinese version of The Self-Report Emotional Intelligence Test (Schutte et al., 1998); Connor-Davidson Resilience Scale by Connor and Davidson (2003); Procrastination Assessment Scale for Students by Solomon and Rothblum (1984).	Emotional intelligence, resilience and academic procrastination are significantly related to each other. Emotional intelligence significantly reduced academic procrastination ($\beta = -0.586$, $p < 0.01$). Emotional intelligence had a significant positive relationship with resilience ($\beta = 0.557$, $p < 0.01$). Resilience and academic procrastination have a significant negative relationship ($\beta = -0.563$,

		in Shaanxi Province, China				p<0.01). Resilience partially mediates the relationship between emotional intelligence and academic procrastination.
3	Chandhok et al., 2024.	Procrastination in college students: Relationship with personality traits and perceived parenting.	India.	120 college students were considered for the study. There were 60 males and 60 females aged between 18 to 22 years. All of them were enrolled in undergraduate courses in colleges in Delhi, India.	Quantitative data collected through survey research. Lay's Procrastination Scale – Student Version (Lay, 1986), NEO Five Factor Inventory (Form S – Adults) by Costa & McCrae, 1989, and Scale of Parenting Style by Gafoor and Kurukkan (2014).	Academic procrastination correlated negatively with conscientiousness ($r=-0.694$) and extraversion ($r=-0.433$), and positively with neuroticism ($r=0.401$). Parental responsiveness inversely predicted academic procrastination ($r=-0.242$, $p<0.01$); no gender difference.
4	Li et al., 2023.	The effect of parenting styles on Chinese undergraduate nursing students' academic procrastination: The mediating role of causal attribution and self-efficacy.	China.	A total of 683 nursing undergraduates were taken for the study. The participants were from the age group of 18 to 23 years. There was a majority of females (77.7%), and the remaining were males.	A cross-sectional survey was done to collect quantitative data. The scales used were the Parental Bonding Instrument (Chinese Version), revised by Hong-jun et al. (2009); the Multidimensional-Multiattributational Causality Scale by Lefcourt et al. (1979); the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995); and the Aitken Procrastination Inventory by Aitken (1982).	Positive parenting negatively predicted academic procrastination ($r=-0.350$). Attribution style ($\beta=-0.10$) and self-efficacy ($\beta=0.12$) mediated the relationship, acting as chain intermediaries.
5	Sultana &	Exploring the impact	Bangladesh	A total of 242 Undergraduate students	Quantitative data were obtained using a self-administered survey procedure.	Academic self-efficacy and resilience improved engagement;

	Wahid, 2023.	of academic psychological capital resources on student engagement at the Undergraduate level: The mediating role of faculty support.		were within the age range of 21 to 24 years. Both females and males were included.	The tools used for data collection included the modified student version of the 9 Scale Utrecht University Engagement Scale developed by Schaufeli & Bakker (2004), the Patterns for Adaptive Learning Scale by Ahmed et al. (2018), the Academic Resilience Scale by Martin & Marsh (2006), Faculty Support Scale by Wilson et al. (2020).	faculty support partially mediated this link ($\beta=0.233$, $p<0.05$).
6	Wang et al., 2023.	Moderating role of peer pressure and positive learning environment between career calling and academic procrastination in Chinese medical students during the controlled COVID-19	China.	A sample of 3614 participants was taken for the study. There was a majority of female participants (74.4%) as compared to male participants. Almost half (57.7%) of the participants were freshmen.	Data were collected from young adults studying in several Chinese medical universities through an anonymous, cross-sectional survey in an online mode. The tools used for the research were a self-designed scale to measure academic procrastination by the researchers, the Calling and Vocation Questionnaire by Dik (2012), and the adapted version of the Peer Pressure Scale by Wang (2012).	Career calling negatively related to academic procrastination ($r=-0.232$), positively to peer pressure ($r=0.390$) and learning environment ($r=0.637$). Both moderators reduced procrastination.

		Pandemic: A cross-sectional study.				
7	Bozgun & Baytemir, 2022.	Academic self-efficacy and dispositional hope as predictors of academic procrastination: The mediating effect of academic intrinsic motivation.	Turkey.	252 college students, aged between 18 and 23 years. Both males and females were included.	Quantitative data were collected using a correlational survey model. Structural Equation Modelling was done using LISREL statistical software. Questionnaires used included the Academic Self-Efficacy Scale by Kandemir (2010), Dispositional Hope Scale (Snyder et al., 1991), Academic Intrinsic Motivation Scale developed by Shia (1998), and Aitken Academic Procrastination Scale by Aitken (1982).	Intrinsic motivation mediated between self-efficacy (-0.10) and hope (-0.35) with academic procrastination (-0.41). Model fit indices supported the above-mentioned relationships.
8	Khalid et al., 2022.	The correlation between procrastination and perceived stress and parenting styles of Chinese medical students.	China.	A sample of 140 medical students was taken as participants. The age of the participants ranged between 18 to 22 years. Both males and females were considered.	Quantitative data were collected through the survey technique. The scales used were the Procrastination Assessment Scale for Students by Solomon and Rothblum (1984), the Chinese Version Perceived Stress Scale, and the Chinese Version of EMBU, revised by Dongmei (1993), measuring parenting styles.	Higher academic procrastination was linked to higher stress ($t = -9.237$, $p < 0.01$). Maternal warmth and over-intervention predicted stress; no parenting-style difference was reported between groups.
9	Corkin et al.,	Effects of positive	United States of	223 students enrolled in a university. 80.2% of	Data was collected through a survey via face-to-face interaction (for	Interesting courses and supportive instructors reduced academic

	2020.	college classroom motivational environments on procrastination and achievement.	America.	the sample comprised of females and the remaining were male students. The sample was ethnically diverse, including Hispanic, Caucasian, African American, Asian/Asian American, and others.	Education courses) or online mode (Psychology courses). Tools for data collection included the adaptation of the 12-item Pure Procrastination Scale (Steel, 2010), the Classroom Social Environment subscales were adapted from Patrick et al. (2011), Course Situational Interest was adapted from Linnenbrink-Garcia et al.'s (2010) measure of triggered situational interest. Conscientiousness was measured using the adapted version of Johnson's (2014) Five Factor Model.	procrastination. The effects on grades was mediated by academic procrastination ($F=9.11$, $p<0.001$).
10	Saman & Wirawan, 2020.	Examining the impact of psychological capital on academic achievement and work performance : The roles of procrastination and conscientiousness.	Indonesia	Two groups of participants were included. The first group consisted of 1670 university students with an age range of 17 to 24 years. Most of them were females (73.7%). The second group comprised 400 employees from both public and private sectors, with a majority of females (57.7%).	The first group of participants (students) were chosen using cluster random sampling. Data collection was done both in the online and offline modes using a survey method. The second group of participants was recruited using simple random sampling across five major organizations in Makassar, Indonesia. The scales used were the Psychological Capital Questionnaire (Luthans et al., 2007), Procrastination Scale (Students) by Tuckman (1991), Procrastination at the Workplace Scale by Metin et al. (2016), Individual Work Performance Scale by Koopmans et al. (2014), Big Five	Academic psychological capital negatively predicted academic procrastination ($r=-0.32$, $p<0.001$); interaction with conscientiousness significant. In employees, psychological capital improved performance.

					Inventory (conscientiousness Dimension) developed and modified by Rammstedt and John (2007).	
11	Khalid et al., 2019.	The relationship between procrastination, perceived stress, saliva alpha-amylase level and parenting styles in Chinese first year medical students.	China.	A total of 140 MBBS students were selected for the study, within the age range of 18 to 22 years. There were 62 males and 78 females.	Quantitative data were collected with the help of the following scales: Procrastination Assessment Scale – Students, by Solomon and Rothblum (1984), Chinese version of EMBU (a measure of parenting styles), and Chinese version of the Perceived Stress Scale. Also, salivary samples were collected using a saliva dental swab.	Males showed higher stress and academic procrastination. Positive parenting reduced stress and academic procrastination ($r=-0.600$, $p<0.01$). Negative parenting increased both.
12	Batool, 2019.	Academic achievement : Interplay of positive parenting, self-esteem, and academic procrastination.	Pakistan.	A total of 502 final year undergraduate students within the age range of 22 to 24 years were taken for the study. Both males and females were considered.	The study was based on a cross-sectional correlational design. The tools used for data collection were the Perceived Dimensions of Parenting Scale (Batool, 2016), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), Procrastination Assessment Scale for Students by Solomon & Rothblum (1984).	Positive parenting improved self-esteem ($r=0.49$, $p<0.01$) and reduced procrastination; self-esteem mediated academic achievement (19% variance).
13	Sharma & Palawat	Relationship between parenting	India.	A sample of 200 college students within the age range of 18 to	Quantitative data was collected using a convenience sampling technique. The tools used for data collection	Responsive parenting related to self-efficacy, hope, optimism ($r=0.229$, $p<0.01$). Positive coping linked with

	, 2017.	style, psychcap and coping among college students.		24 years was taken for this study. The participants came from different universities in Jaipur, India. There were 100 females and 100 males. There was an equal number of students pursuing Under Graduation and Post Graduation courses in the group of female and male participants.	were Parenting Style Inventory – II (Darling & Toyokawa, 1997), BRIEF Coping Scale (Carver, 1997), and PsyCap Questionnaire (Luthans et al., 2006).	higher psychological capital. Demandingness lowered optimism.
14	Jafri, 2017.	Understanding perceived parenting styles on student's psychological capital.	Bhutan.	210 participants, including both males and females, were considered for the study. The participants were aged between 17 to 23 years.	A cross-sectional, survey-based research was done. A random sampling technique was used. The tools used for research were the Psychological Capital Questionnaire by Luthans et al. (2007) and the Parental Style Inventory-II by Darling and Toyokawa (1997).	Responsive ($r=0.54$), autonomy-granting ($r=0.31$), and demanding ($r=0.25$) parenting styles positively related to academic psychological capital. Autonomy-granting and responsive parents had a significant influence on the development of psychological capital.
15	Nordby et al., 2017.	Do procrastination-friendly environments make students delay unnecessarily?	Norway.	Two studies were conducted to assess the role of environmental factors in academic procrastination. The cultural differences between different academic disciplines were also studied. In	The structural and cultural differences among three academic disciplines (ie., natural sciences, medicine, humanities) was observed based on six dimensions particularly relevant for academic procrastination, including rote learning and memorizing, tangible knowledge, reflection and afterthought, structured	Humanities students had highest procrastination; peer and dispositional procrastination correlated ($r=0.48$). Environment affected medium-level procrastinators most. The socially-induced academic procrastination and dispositional procrastination correlations varied according to

				the first study, 49 participants with a mean age of 24.3 years were included. The students were from the disciplines of natural sciences, medicine, and humanities. The second study was done on a sample of 215 students, with a majority (137) of females. They were also taken from different disciplines and their mean age was 22 years.	course progression, high demands and grade pressure, freedom in the study situation. Each of the dimensions were rated on a 5-point rating scale. For the second study, convenience sampling was used. Tools used were the Irrational Procrastination Scale (Steel, 2010), Socially-induced Academic Procrastination Scale by the authors, and measures of peer procrastination, peer influence, and exposure.	academic disciplines. ($r = 0.65$ for natural sciences; $r = 0.37$ for medicine and $r = 0.46$ for humanities).
16	Mahasneh et al., 2016.	The relationship between academic procrastination and parenting styles among Jordanian Undergraduate university students.	Jordan.	A total of 685 Undergraduate students were chosen for the study, including both males and females. There were 42% males and 48% females in the sample, with an age range of 18 to 22 years. The students came from different disciplines of Hashemite University.	To collect quantitative data from the chosen sample, a multi-stage random cluster sampling technique was used. The tools used included the Academic Procrastination Questionnaire (Abu-Ghazal, 2012) and the Parental Authority Questionnaire by Buri (1991).	67% showed moderate procrastination. Authoritative parenting predicted academic procrastination ($R^2 = 0.009$, $F = 75.269$, $p < 0.005$). No gender differences reported.
17	Yip & Leung,	The structural	Hong Kong.	A sample of 218 young adults was taken for the	The convenience sampling technique was used to select the participants. A	Authoritative parenting increased positive emotions ($\beta = 0.18$) and

2016.	model of perceived parenting style as antecedent on achievement motivation, self-regulated learning and academic procrastination of Undergraduates in Hong Kong.		research, including both males and females. The participants were from different universities in Hong Kong and within the age range of 17 to 24 years.	survey was conducted to collect quantitative data. The scales used were the Parental Authority Questionnaire (Buri, 1991), Motivated Strategies for Learning Questionnaire (Pintrich et al., 1991), Academic Emotions Scale (Huang, 2010), and Academic Procrastination Scale (Lay, 1986).	reduced academic procrastination ($\beta=-0.26$). Enhanced self-regulated learning mediated this link.
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Quality Appraisal

The Joanna Briggs Institute (JBI) Checklist Tool was used to assess the quality of the research papers reviewed. The quality of each research paper was individually evaluated by three of the authors. Disagreements were settled by consensus and discussed with the fourth author. The JBI Tool indicates that all studies are required to meet all the questions in the checklist. However, 16 research papers reviewed did not explicitly state the confounding factors in the study. The inclusion criteria of the sample were unclear in 4 out of 17 studies reviewed (Chandhok et al., 2024; Li et al., 2023; Wang et al., 2023; Corkin et al., 2020).

Table II: JBI Checklist for cross-sectional studies – For the research papers reviewed

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Were the criteria for inclusion in the sample clearly defined?	Yes	Yes	Un-clear	Un-clear	Yes	Un-clear	Yes	Yes	Un-clear	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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2. Were the study subjects and the setting described in detail?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Was the exposure measured in a valid and reliable way?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4. Were objective, standard criteria used for measurement of the condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5. Were confounding factors identified?	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No
6. Were strategies to deal with confounding factors stated?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
7. Were the outcomes measured in a valid and reliable way?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8. Was appropriate statistical analysis used?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Discussion

This systematic review explores links between perceived parenting style, learning environment, academic psychological capital, and academic procrastination among young adults. Out of the 17 research papers considered, 10 focused on perceived parenting style and academic procrastination, 4 on learning environment and academic procrastination, 4 on components of academic psychological capital and academic procrastination, 2 on academic psychological capital and learning environment, 4 on academic psychological capital and perceived parenting style, and 4 on academic psychological capital and academic procrastination in young adults.

Relationship between academic psychological capital and academic procrastination

Research by Saman and Wirawan (2020) found the effect of psychological capital on the academic achievement of students and the performance of employees. It was seen that psychological capital had a negative effect on students' academic procrastination. The effect was stronger when students reported low conscientiousness. Thus, conscientiousness had a positive relationship with both psychological capital and academic procrastination. The study found that psychological capital and conscientiousness predicted students' academic procrastination. Thus, students with lower levels of psychological capital are more prone to academic procrastination. This applies to those who have low conscientiousness. In gist, it can be said that psychological capital plays an important role in reducing levels of academic procrastination.

Factors associated with perceived parenting style and the relationship between academic psychological capital and academic procrastination

Teng et al. (2025) reported higher levels of academic burnout in students having overprotective and rejecting parents, while lower levels of academic burnout were observed in students having emotionally warm parents. Sharma and Palawat (2017) found that parenting style has a significant positive relationship with self-efficacy, hope, optimism, and overall psychological capital. Individuals brought up by demanding parents have low levels of optimism. Young adults who were brought up by responsive parents usually tend to have positive coping strategies. Moreover, it was seen that coping is significantly positively correlated with overall psychological capital. This can be because when an individual faces a problem, self-efficacy helps instigate a particular coping strategy. High self-efficacy is often found to be associated with active coping, including problem-solving and information seeking, whereas low self-efficacy is associated with passive coping, including avoidance and distraction. Thus, optimism and coping styles interact to influence the way an individual responds to a challenge. Jafri (2017) revealed that parenting styles significantly explained 34% variance in academic psychological capital. The paper highlighted how parental behaviour, communication, and interaction patterns have important underpinnings in the psychological growth of children while growing up. Demanding parenting style fails to facilitate the development of academic psychological capital due to the restrictions and control they have over their children. Most of the studies reviewed highlight the relationship between perceived parenting style and academic procrastination among young adults. According to Batool (2019), 19% of the variance in academic achievement was accounted for by the compassionate and supportive parenting

style. This particular style of parenting had a statistically significant positive and indirect impact on academic achievement via self-esteem and academic procrastination. The study validated the fact that a supportive parenting style or positive parenting enhances the self-esteem of children. Similarly, Chandhok et al. (2024) reported that individuals who experienced higher parental responsiveness, support, warmth, and acceptance had lower academic procrastination. Responsive parents tend to promote autonomy, self-regulation, and individuality in their offspring. This helps them build up their self-determination and intrinsic motivation, which further lowers their levels of procrastination. Parental control, however, did not have a role in academic procrastination. Khalid et al. (2019) found that male medical students had higher levels of procrastination and perceived stress scores as compared to female medical students. They also had higher ratings for their fathers and mothers in terms of punishing and severe, and rejecting parenting styles, as compared to their female counterparts. Moreover, it was seen that young adults who had low scores on warm and affectionate fathers (parenting style) reported having higher procrastination scores. The punishing and severe parenting style among fathers had a relationship with the tendency of academic procrastination among students. Similar results were applicable in the case of mothers. Thus, the study indicated that negative parenting styles directly influenced academic procrastination in young adults. Procrastination was found to induce perceived stress and higher levels of saliva alpha-amylase in students. In another research, it was shown that positive and negative parenting styles can negatively and positively predict academic procrastination in Nursing students (Li et al., 2023). The

mediator variable in this relationship is internal attribution (for positive parenting style) and external attribution (for negative parenting style). This attribution style, in turn, reflects the self-perception of the students. Further, it was reported that higher self-efficacy led to lower levels of academic procrastination. Mahasneh et al. (2016) found that there is a positive and statistically significant relationship between academic procrastination and parenting styles, including authoritative, authoritarian, and permissive. Research by Yip and Leung (2016) indicates that perceived paternal parenting style is an indirect positive predictor of self-regulated learning in young adults. The mediator variable in this relationship is positive achievement emotions. Perceived maternal parenting style was also found to be an indirect positive predictor of self-regulated learning. Additionally, the perceived paternal and maternal parenting style served as an indirect negative predictor of academic procrastination. Moreover, self-efficacy acted as a predictor of self-regulated learning and academic procrastination, with hope as the mediating factor.

However, a study done on Chinese medical students by Khalid et al. (2022) indicates that there is no significant relationship between parenting styles and academic procrastination, although academic procrastination was positively correlated with stress. In another research done on Malaysian students, it was found that there is no significant relationship between the kind of parenting style and academic procrastination (Sulaiman & Hassan, 2019).

Factors associated with a learning environment and the relationship between academic psychological capital and academic procrastination

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According to a study by Sultana and Wahid (2023), it was found that students' self-efficacy and their participation in the academic discipline were related. Managing stress effectively and remaining motivated in the face of adversity increases the levels of enthusiasm, attentiveness, and commitment among students. Faculty support (a latent variable in this study) was found to positively accelerate students' involvement in the process of learning. It was reported that students' academic self-efficacy exerts a positive impact on teachers' support. This study focused on how support from faculty can influence the relationship between components of academic psychological capital (self-efficacy and resilience) and academic involvement.

Understanding the influence of several factors within college learning environments on the academic procrastination of students is of utmost importance. In a study by Corkin et al. (2014), the classroom climate, including instructor support, instructor organization, situational interest, academic press, and its influence on academic procrastination, was defined. This was also the first study to identify the mediating role of motivational beliefs on the relationship between classroom climate and academic procrastination. It was reported that the instructor organization reduced academic procrastination scores. This may be because organized instructors tend to be rigid and set deadlines for students. This greatly reduces their tendency to procrastinate. Academic press and academic procrastination were found to be negatively correlated. Path analysis showed that task value served as the mediator between course situational interest and academic procrastination. According to Corkin et al. (2020), several facets of the classroom motivational environment, including instructor support, classroom mutual respect, and task-related interaction,

were found to have a statistically significant negative relationship with academic procrastination. Course situational interest was the strongest negative predictor of academic procrastination. Thus, academic procrastination can be reduced by creating a more positive learning environment. Research by Nordby et al. (2017) highlights how distinct differences in fields of study (Natural Sciences, Medicine, and Humanities) influence students to have different beliefs, expectations, and attitudes, which make them prone to academic procrastination. It was found that academic procrastination and peer procrastination were greater in students of the Humanities. Wang et al. (2023) found that peer pressure and a positive learning environment acted as separate moderating factors in the relationship between career calling and academic procrastination. The study found that medical undergraduates experienced lower levels of academic procrastination with higher levels of peer pressure. Moreover, it was found that a positive learning environment can be effective in moderating the degree of impact between career calling and academic procrastination. Sultana and Wahid (2023) found that academic psychological capital positively influences students' engagement, performance, and learning quality. Teacher support strengthens academic resilience, further enhancing students' participation and overall academic success. Interrelationship among perceived parenting style, learning environment, academic psychological capital, and academic procrastination among young adults

Parenting style and learning environment significantly influence academic psychological capital and procrastination. Supportive parenting and positive learning settings enhance resilience and motivation, helping young adults reduce procrastination

and improve academic success, alongside factors like self-regulation, stress, personality, and self-esteem.

Conclusion

From this systematic review of literature, it is evident that external factors like perceived parenting style and learning environment have a role to play in the relationship between academic psychological capital and academic procrastination among young adults. A positive parenting style leads to the enhancement of psychological capital in young adults, which further indicates their success in academics. Permissive parenting style led to academic procrastination, while the authoritative parenting style had an impact on academic achievement, which further affected self-regulated learning and academic procrastination. Other factors like social media use, environmental and cultural factors also influence the relationship between academic psychological capital and academic procrastination. Personality dimensions like Neuroticism, Extraversion, Conscientiousness, and perceived parental responsiveness were found to be inversely related to academic procrastination. Mediating factors like attribution style and self-efficacy were further found to mediate the relationship between parenting styles and academic procrastination. On the other hand, rejecting, punishing, severe parenting styles, and socially prescribed perfectionism had a significant relationship with academic procrastination. There is a major role of different learning environments, faculty support, and choice of discipline on the tendency of young adults to procrastinate academically. Peer pressure and a positive learning environment act as moderators in the link between career calling and academic procrastination. Academic psychological capital also helps to overcome academic

procrastination and helps students perform well in academics.

Other related psychological constructs, including motivation, personality, resilience, grit, and peer pressure, need to be explored in relation to the variables highlighted in this paper. Educators, parents, and policymakers can further use these findings to help reduce academic procrastination among young adults. Fostering academic psychological capital among young learners through training programs, workshops, and awareness programs can help them in the long run. The external factors that influence the experience of academic procrastination can also be manipulated once they are rightly identified.

However, the studies reviewed were limited to those published from 2016 to 2025 in the English language only. The studies were all based on a cross-sectional research design with quantitative data, done only on young adults (within the age range of 18 to 25 years). Qualitative data and longitudinal research designs should be considered for future research. Cross-cultural studies and experiments can also be beneficial in revealing the intricacies of the relationships among the variables under study. Analysis of research work done beyond the period mentioned for this particular literature review could provide more insights into the subject matter.

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