

Unpacking Influences of Socioeconomic Status and Self-Regulation on Transition to Higher Education: A Systematic Review

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Abstract

This paper examines the impact of socioeconomic status (SES) and self-regulation on students' transition to higher education. A systematic review was conducted using the SCOPUS and Web of Science (WOS) databases, focusing on empirical studies published between 2013 and 2024. From this search, 71 relevant articles were identified. The analysis revealed that both SES and self-regulation significantly influence students' adjustment to higher education. Four key themes related to SES emerged: financial constraints and access limitations, family support, academic and social integration, and coping strategies. Similarly, four themes were identified for self-regulation: academic performance and success, cognitive regulation and learning strategies, emotion regulation and well-being, and motivation. The interplay between SES and self-regulation was also explored, underscoring the need for further research to promote inclusivity in higher education. Insights gained from this review highlight the importance of addressing individual differences, enabling institutions to better support students during their transition to university life. The review also acknowledges its limitations, calling for continued research in this field.

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Practitioner Notes

1. Educators should recognise that students from different socioeconomic backgrounds may require differentiated self-regulatory support.
2. Institutional transition programs must explicitly integrate self-regulation skills to enhance student adaptation.
3. Policy design should consider SES-related disparities that influence students' readiness for independent learning.
4. Evidence-based transition frameworks should align support services with both cognitive and structural student needs.
5. Cross-national research on student transition should account for how SES is contextually defined and how it influences self-regulation within each education system.

Keywords

socioeconomic status, self-regulation, higher education transition, systematic literature review

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Introduction

Many studies on the transition to higher education tend to focus extensively on the investigation of academic outcomes and academic performance. Undoubtedly, it is imperative to investigate the lenses of academic achievement to predict the success of transition to higher education. However, it is also crucial to examine individual differences as variables in shaping students' transition to higher education in both success and failure rates.

Students come from different backgrounds, and one characteristic that is often discussed amongst the academic scholars is their socioeconomic background. Literature commonly reported that students with low SES tend to be on the struggling end as compared to their affluent counterparts in transitioning to higher education. A recent systematic review by Lopez et al. (2023) of academic performance and adjustment of first-generation students to higher education confirmed the continued difference in academic performance and adjustment between first-generation and continuing generation. First-generation students are often thought to come from lower socioeconomic backgrounds, which can influence their educational journey. However, the review in question focused specifically on the unique aspects of being a first-generation student rather than examining their socioeconomic status (SES). Therefore, the socioeconomic background perspective must be systematically reviewed to provide actual insights on the influences of SES on the transition to higher education. As the educational landscape is constantly evolving, it is crucial to use the newly published findings of empirical studies on the transition to higher education.

Another individual difference that is worth noting and is often examined as a variable that shapes students' transition to higher education is self-regulation abilities. Successfully navigating the transition to higher education requires students to self-regulate not only their academic behaviour, but also their lifestyle and social interactions in the new learning environment. To our findings, there is no systematic literature review that exclusively investigates students' self-regulation abilities during the transition to higher education. Consequently, a systematic review dedicated to the topic of how self-regulation abilities influence student adjustment and success in higher education is necessary and timely. By situating the analysis within the context of learning and teaching, this review seeks to inform institutional practices and pedagogical strategies that can better support diverse learners particularly those from disadvantaged backgrounds or with underdeveloped self-regulatory skills thereby enhancing student engagement, retention, and overall academic success.

Although prior empirical studies have examined socioeconomic status and self-regulation in relation to students' adjustment to higher education, these constructs are frequently considered in isolation, limiting integrated understanding of how they jointly shape transition to higher education. This systematic review therefore synthesises empirical evidence on the influences of socioeconomic status and self-regulation during this transition, with particular attention to how these factors have been examined independently and in interaction across existing studies. The review is guided by the following research questions:

RQ.1: What themes emerge in the literature regarding the influence of socioeconomic status on students' transition to higher education?

RQ.2: In what ways does the literature describe the role of self-regulation in shaping students' transition to higher education?

RQ.3: How does socioeconomic status influence students' self-regulation abilities, and how does this relationship affect their transition to higher education?

Literature

Transition Theory and Models

Chickering and Schlossberg (2002) proposed that transitions create disruptions to individuals' usual roles, routines, and relationships. It is a period of disequilibrium during which students are making sense of a new unfamiliar environment (Jackson, 2010). The discussion will begin with an examination of Musamali's (2018) Kennedy's Integrated Transition Model (KIT), which provides information on how students navigate and adapt to transition in their educational journeys. This will be followed with an overview of Tinto's Student Integration Theory (1975, 1993), which highlighted how academic and social integration processes affect students as they enter higher education.

The transition to higher education has been widely recognised as a period of uncertainty and adjustment (Gravett & Winstone, 2019). Building on this, Thompson, Pawson, and Evans (2021) found that students often encounter unexpected pressures, including new academic demands, shifting domestic responsibilities, and the complex role of social life, which can function both as a source of support and additional stress. These overlapping academic, social, and personal disruptions align with Kennedy's Integrated Transition Model (KIT), developed by Musamali (2018), which conceptualises transition as a cyclical process of adjustment and adaptation. The adjustment phase comprises deconstruction, which encompasses two stages, namely disruption and reorganisation. Disruptions, as defined by Kralik et al. (2006), are disturbing interruptions to one's familiar sense-making process, signalling the need for adjustments. They can vary in intensity and may require different responses. During this stage, disruptions are assessed, and familiar behaviours are unpacked to identify areas for reconstruction. As students transition to higher education, disruptions may come in a form of interruption in their familiar routine, social circle, and academic environment, which differ significantly from their school setting. This was especially pronounced during the COVID-19 pandemic, when the rapid shift to online learning redefined traditional learning experiences. Practical demonstrations that were once easily conducted face-to-face became challenging, requiring subject matter experts to navigate unfamiliar and rapidly evolving digital tools not commonly used in hands-on instruction (Mitchell, 2020). Such circumstances intensified the disruption phase described in Kennedy's Integrated Transition Model, compelling students to reassess and reorganise their learning strategies amid a landscape of academic uncertainty and institutional adaptation.

This is followed by the reorganisation stage. During the reorganisation stage, old assumptions and behaviours are reassembled to meet the demands of change events (Musamali, 2018), aiming to reduce distress and facilitate acceptance of the new situation in preparation for reconstruction. First-year students gradually begin to reorganise their priorities, especially in accommodating new academic and social demands at university. In today's increasingly digital learning environments, this stage can involve navigating unfamiliar modes of instruction and assessment. As Lassoued et al. (2020) found, students often face difficulties in adjusting to online

learning formats, particularly when institutional support or digital competencies are lacking. Reorganisation in such contexts requires not only academic reprioritisation but also adaptation to new learning technologies and pedagogical expectations that may differ considerably from prior experiences.

Moving into the adaptation phase, the model suggests that individuals in the reconstruction process engage in both integration and internalisation. Integration, as defined by Bridges (1980), involves merging elements of new and old identities, reframing assumptions, and adapting values to fit new situations (Brammer & Abrego, 1981). A successful integration of both academic and social life is crucial to facilitate a smooth transition to higher education and to improve students' sense of belonging within the institution. Recent qualitative findings by Sá (2023) further emphasise this point, showing that students' academic engagement is closely intertwined with their social and functional experiences. Beyond classroom activities, participation in academic events such as seminars, conferences, and workshops was seen not only as enriching their academic development but also as fostering informal learning, professional orientation, and a stronger institutional connection.

Subsequently, the internalisation stage involves accepting and assimilating new realities into one's mindset. Musamali (2018) describes this as the alignment of cognitive, emotional, and behavioural responses to meet emerging demands. It concludes when new assumptions and routines become embedded in daily life (Bussolari & Goodell, 2009), replacing distress with stability and a sense of mastery. In higher education, this stage is marked by students developing effective study habits, managing time, and adapting to academic norms. As Willems et al. (2019) observe, non-cognitive factors such as motivation and regulation strategies play a crucial role in this adjustment, reinforcing the view that successful internalisation depends not only on behavioural change but also on psychological readiness.

Student Integration Theory (Tinto, 1975, 1993) emphasised the connection between the environments of colleges and universities, which contributed to insights into student dropout rates and persistence. Within this framework, the first-year experience at university is considered the crucial period during which students make decisions to persist or withdraw from higher education (Tinto, 1987; Elkins, Braxton, & James, 2000). Tinto pointed out that student integration into an institution can happen through two dimensions, namely academic integration and social integration. Academic integration occurs when students engage in the intellectual pursuits of the university. Grades are indicators of successful academic integration, reflecting how effectively students have adhered to the academic norms of the institutions. This, in turn, becomes a crucial measure in the decision of students to persist. On the other hand, social integration involves students forming relationships and connections outside the classroom, such as participating in study groups, extracurricular activities, and interacting with faculty and administrators. These relationships could lead to an increase in the students' sense of affirmation (Naylor et al., 2023). According to Tinto, the background of the students or what he referred to as their entry characteristics, such as gender, race, ethnicity, income, sexual orientation, first generation status and socioeconomic status, play a significant role in influencing their commitments to stay at university or drop out of it. These commitments are continually shaped by students' interactions within the institution's social and academic systems (Fincham et al., 2021). Therefore, experiences in transitioning may vary, with some encountering difficulties in adapting to the process, while others finding it easier.

Socioeconomic Status

The American Psychological Association (APA) (2007) proposed three fundamental aspects for measuring socioeconomic status, namely education, income, and occupation. Reynolds and Cruise (2020) also agreed with this belief, defining socioeconomic status as a composite measure that reflects an individual's sociological and economic standing in society, which is typically determined by factors such as education, income, and occupation. Meanwhile, Munisamy et al. (2022) referred to socioeconomic status as the access of a person to collectively desired resources, including material goods, money, power, friendship networks, healthcare, leisure, or education, along with their access to these resources that enable them to function optimally in the social world. Considerable literature has reported the influence of parental socioeconomic background on children's educational achievement (Triventi & Trivellato, 2009; Steinmayr, Dinger & Spinath, 2010; Aina, 2013; Wiborg & Grätz, 2022). Therefore, this review focuses on assessing the impact of socioeconomic status on students' experiences of transition to higher education.

According to Riley, Scaramella, and McGoron (2014), economic disadvantage can dampen parents' ability to provide nurturing and responsive parenting, thus limiting access to cognitively stimulating materials such as toys and books. Families from lower SES backgrounds often prioritise basic needs, whereas higher SES families are more equipped to invest in developmental resources. Consequently, children from socioeconomically disadvantaged households may enter higher education with reduced access to preparatory experiences, limited exposure to supportive social networks, and underdeveloped cognitive and noncognitive skills essential for academic adjustment (Bradley & Corwyn, 2002). These constraints can manifest in higher dropout risks, lower academic performance, and reduced engagement during the transitional period. These pre-existing disparities are further exacerbated by the growing reliance on digital modes of instruction in higher education (Kamali & Bagheri-Nesami, 2022) which introduces a new layer of complexity for students from disadvantaged backgrounds. As digital learning becomes a standard expectation, students are required to navigate independently through evolving technological and pedagogical environments. Those lacking stable internet access, personal learning devices, or quiet study spaces may find it particularly difficult to meet these demands. In turn, these challenges may deepen existing inequalities in student outcomes, limiting not only academic success but also the sense of integration and belonging essential for a successful transition.

Self-Regulation

Usher and Schunk (2018) defined self-regulation as the systematic organisation of thoughts, feelings, and actions to achieve goals. Theoretical perspectives on self-regulation highlight five common characteristics. First, self-regulation involves actively engaging behaviourally, cognitively, metacognitively, and motivationally in one's learning and performance (Zimmerman, 2001). Second, goal setting and striving are key aspects of self-regulation, as they help to maintain students' focus on goal-directed activities and the use of relevant strategies (Sitzmann & Ely, 2011). The third common feature is that self-regulation is a dynamic and cyclical process comprising feedback loops (Lord et al., 2010). Fourth, motivation plays a crucial role in self-regulation, since the reasons of individuals for self-regulation and sustaining their efforts, particularly for learning, can influence their likelihood of pursuing or abandoning goals (Schunk & Zimmerman, 2008). Lastly, emotions are integral to direct self-regulation and maintain the energy

required to achieve goals. It is also important to recognise that both internal and external circumstances could influence individuals' level of self-regulation.

Bandura's (1986) social cognitive theory identifies self-regulation as comprising three keys cognitive subfunctions namely self-observation, self-judgment, and self-reaction. These capacities are particularly critical for first-year students as they navigate the unfamiliar academic and social terrain of higher education. In the university setting, students encounter a wide range of new experiences that demand active reflection and adaptive responses. They must observe their performance, evaluate outcomes, and adjust strategies accordingly, processes that are often shaped through trial and error. This is especially evident in the shift from the structured, teacher-guided learning environment of secondary school to the autonomy-driven model of university education. Additionally, the growing adoption of digital instructional formats in higher education, such as blended and hybrid learning, further require students to navigate complex technological platforms and independently manage their learning process (Gqibani, 2022). This shift places considerable demands on students' self-regulatory skills, including their ability to set goals, monitor progress, and adapt strategies in unfamiliar digital environments. For many students, particularly those with limited prior exposure to such modes of learning, the need to simultaneously master content and manage these digital tools may intensify the challenges of transitioning to higher education.

For many, this transition is challenging, as it requires students to take ownership of their learning, manage time effectively, and respond flexibly to changing academic demands. Cultivating self-regulation, therefore, becomes essential to navigating this shift successfully. As noted by Yahya et al. (2021), students who self-regulate tend to achieve greater academic success as they consistently engage in planning, goal setting, organising, and self-evaluating throughout their learning journey.

Method

This review was conducted in four phases. The first phase began with searching the literature within scientific databases. The relevant literature retrieved from these databases was then selected for inclusion based on several criteria. In the third phase, the quality of the selected studies was critically assessed and, finally, the primary studies were analysed.

Literature Search

Two databases, Scopus and Web of Science (WOS), were used to collect literature for this review due to their strong indexing of high-quality, peer-reviewed publications. To explore the roles of socioeconomic status (SES) and self-regulation in the context of students' transition to higher education, a structured Boolean search strategy was employed across three levels.

In both databases, the core string focused on the transition construct: ("transition to higher education" OR "student adjustment" OR "first-year experience" OR "first-year university" OR "college experience" OR "college adjustment" OR "university adjustment" OR "transition to university" OR "college adaptation" OR "university adaptation").

This core was combined with the following variables in separate queries:

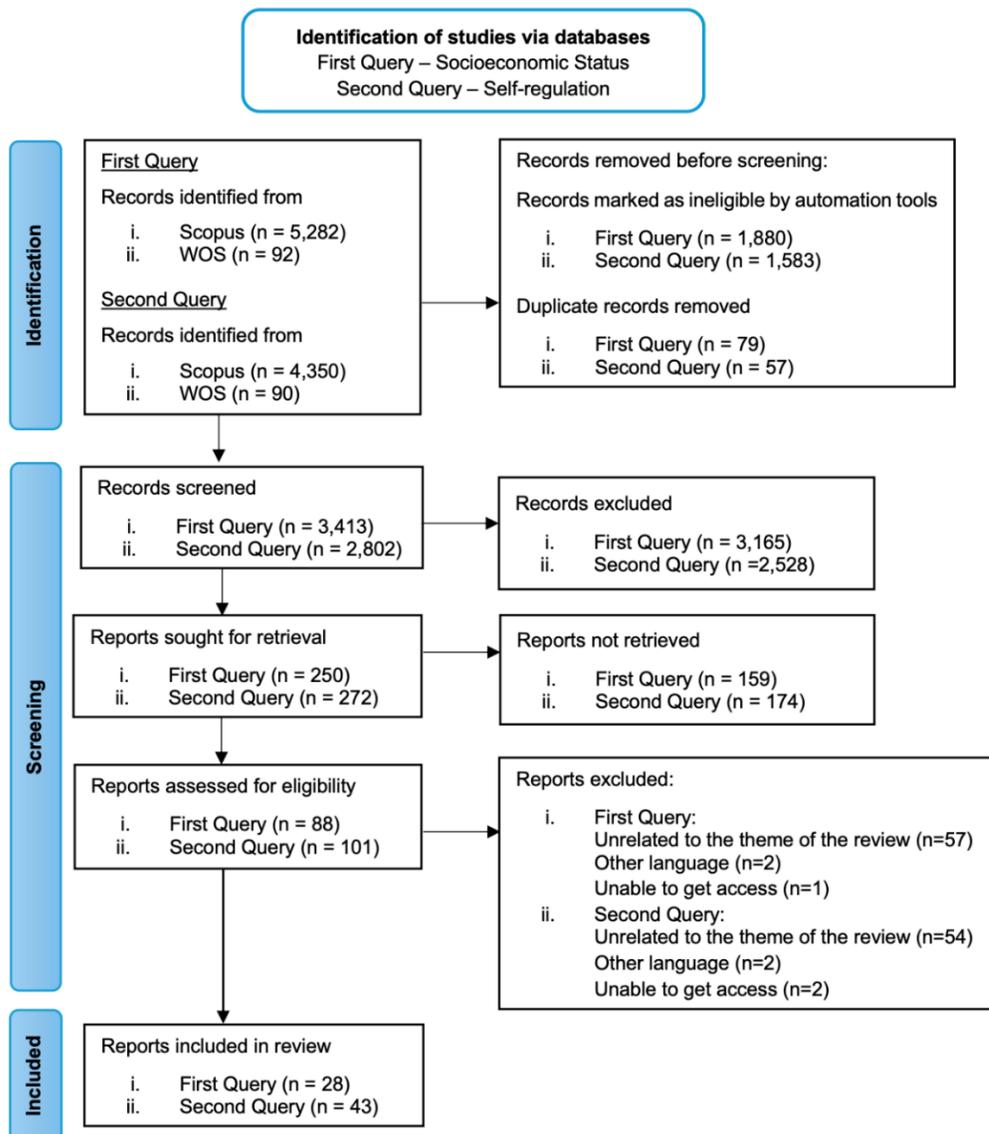
1. First query (SES): AND ("socioeconomic status" OR "socioeconomic background" OR "SES")

2. Second query (Self-regulation): AND (“self-regulation” OR “self-regulate”)
3. Third query (Combined): AND (“socioeconomic status” OR “SES” OR “socioeconomic”) AND (“self-regulation” OR “self-regulate”)

All searches were limited to English-language articles published from 2013 onwards, and the search field was set to “All fields” to maximise coverage. A total of 9,814 records were retrieved from both databases. After removing duplicates and screening titles and abstracts for relevance, a refined pool of studies was identified for full-text review. The third combined query yielded only a few articles, which were excluded due to lack of relevance. The screening and selection process followed the PRISMA guidelines (Moher et al., 2010), and EndNote was used to assist with reference management and duplicate removal (see Figure 1).

Figure 1

PRISMA Flow Diagram



Inclusion Criteria

Entering the search terms for socioeconomic status resulted in 5,374 hits, while self-regulation resulted in 4,440 hits. Automation tools were also used to screen eligible documents with publication year (2013-2024), language (English), and types of documents (journal article) filters. A total of 3,463 documents were excluded using the automation tools. Later, a total of 136 duplicate documents were also removed using Endnote.

To further systematically select appropriate studies, several inclusion and exclusion criteria were used. First, studies published between 2013, and 6 May 2024 were chosen, as a 10-year period is deemed appropriate for establishing recent findings. Second, only empirical research on the transition to higher education was considered. The third criterion specified the inclusion of studies focusing on undergraduates, excluding those addressing post-graduates. The last criterion was that studies that addressed the influence of socioeconomic status and self-regulation were included, aligning with the focus of the review.

The initial selection of the remaining 6,215 articles involved reviewing their titles, leading to the exclusion of 5,693 articles. Next, abstracts were evaluated to ensure alignment with the focus of our systematic review. This process resulted in the removal of 333 articles, leaving 189 articles for eligibility evaluation. During this evaluation, 118 articles were deemed irrelevant to the scope of the review. Consequently, the final number of articles included in both queries was 71 studies.

Critical Evaluation

Each included study was subjected to a rigorous and thorough methodological evaluation. We examined various aspects including study design and sample size to assess the validity of the outcome measures. Data extraction and coding were performed by two independent reviewers using a standardised protocol. Each study was coded for relevant variables including authors, country, study design, participant demographics, and key findings. Any discrepancies in the coding were resolved through a discussion and mutual agreement between the two reviewers.

Analysis of the Literature

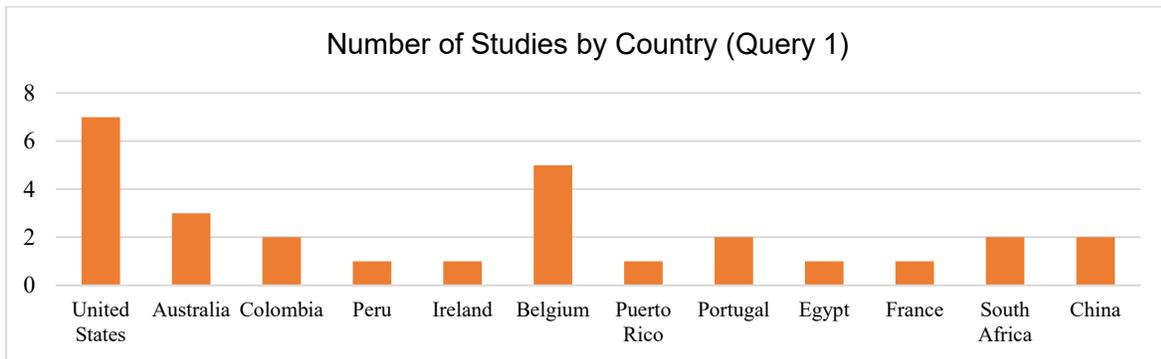
The adopted analysis is a thematic analysis. It involves identifying and analysing patterns and themes that capture key ideas or concepts. Subsequently, the recurring themes were quantified based on the number of studies that reported such themes, with the aim of gaining information on the common patterns or trends for the topic under discussion.

Data Synthesis

As a first step, the data characteristics for both queries will be reported. In the first query, the included studies are from a diverse set of countries across multiple continents. Reviewing studies from multiple continents will ensure a diverse representation of the findings across different cultural, economic, and environmental contexts. The United States contributed to the largest number of studies, followed by European countries, particularly Belgium (see Figure 2).

Figure 2

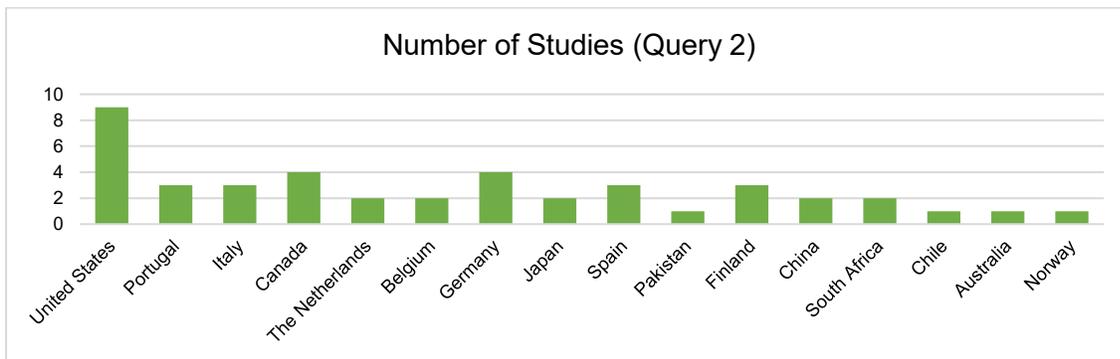
Number of studies by country (Query 1)



For the second query, the same pattern was observed with studies originating from a diverse range of countries spanning multiple continents. The United States is also the main contributor to the second query, followed by European countries, which are also well represented with substantial data from multiple countries. The Asia-based contributions include studies from both developed and developing nations, adding depth to the analysis of this review (see Figure 3).

Figure 3

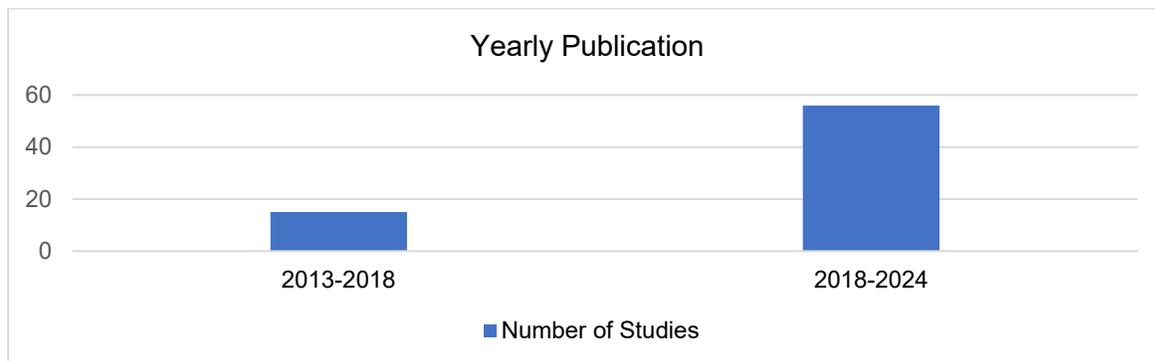
Number of studies by country (Query 2)



Of the 71 studies included in this review, 15 were published between 2013 and 2018, while a total of 56 studies were published from 2018 to May 6th, 2024. During the early period of the 10 year-time frames, a relatively small number of studies were published, indicating the initial stage of interest and research in this area. Meanwhile, most of the studies were published in the more recent period, reflecting a significant increase in research activity in this area (see Figure 4).

Figure 4

Number of studies by year



Results

Query 1: Analysis of Studies on the Impact of Socioeconomic Status on the Transition to Higher Education

The analysis of the first query on socioeconomic status revealed that out of 28 studies, 19 studies (68%) used a quantitative approach, 6 studies (21%) used a qualitative approach, and the remaining 3 studies (11%) used a mixed method approach. Quantitative methodologies encompassed two types of techniques, which were questionnaires (Daniels et al., 2020; De Clercq et al., 2013; De Clercq et al., 2020; De Clercq et al., 2021; De Clercq et al., 2024; Dika, 2014; Ferrao & Almeida, 2021; Khatiry & Abdallah, 2023; Lardy et al., 2021; Mtshweni, 2021; Niu & Li, 2022; Reynolds & Cruise, 2020; Roksa & Kinsley, 2018; Sangayarapu et al., 2023; Tinajero et al., 2014; Veldman et al., 2023; Wu et al., 2021; Zembrodt, 2021) and survival analysis (Crispin et al., 2022). Qualitative methodologies that were used consisted of in-depth interviews (Corredor et al., 2020; Michel & Durdelia, 2019; Zembrodt, 2021), focus group interview (Gibbons et al., 2019; Mendoza et al., 2016; Mkonto, 2021), semi structured interviews (Mendoza et al., 2016), field observations (Mendoza et al., 2016; Michel & Durdelia, 2019), and institutional document analysis (Mendoza et al., 2016). Regarding mixed method studies, the techniques used included a combination of questionnaire and semi structured focus group interview (Azpeitia et al., 2023; Buchanan et al., 2015) and archival data and semi structured telephone interview (Vanderburg et al., 2023).

Four themes emerged from the analysis of studies examining socioeconomic status in relation to students' transition to higher education: (1) financial constraints and lack of access, (2) the role of family, (3) academic and social integration, and (4) coping styles. Table 1 presents an overview of these themes and their associated sub-themes.

Table 1*Themes and Sub-themes for Query 1*

Theme	Sub-theme	References
Financial Constraints and Lack of Access	Financial Instability	Dika, 2014; Azpeitia et al., 2023; De Clercq et al., 2013; DeAngelo & Franke, 2016; Gibbons, 2019; Mendoza et al., 2016; Mkonto, 2021
	Limited access to academic resources	Dika, 2014; De Clercq et al., 2013; De Clercq et al., 2020; De Clercq, 2021; De Clercq et al., 2024; Mkonto, 2021
	Less support system	Dika, 2014; De Clercq et al., 2013; De Clercq, 2021; Gibbons, 2019
	Lack of opportunities	Gibbons, 2019
	Limited social networks	Gibbons, 2019
	Social mobility challenges	Mendoza et al., 2016.
Role of Family	Familial Expectation for career choices	Azpeitia et al., 2023
	Parental emotional level	Crispin et al., 2022; Mkonto, 2021; Reynold & Cruise, 2020
	Family income and wealth	DeAngelo, 2016; Khatiry & Abdallah, 2023
	Level of family support	Gibbons, 2019; Michel & Durdleia, 2019; Roksa & Kinsley, 2018
	Family residence	Khatiry & Abdallah, 2023
	Family obligations	Mendoza et al., 2016
Academic and Social Integrations	Autonomy and independence	Buchanan et al., 2015
	Self-regulation skills	De Clercq et al., 2013
	Self-efficacy	De Clercq et al., 2021; De Clercq et al., 2024
	Engagement and participation	De Clercq et al., 2021; Ferrao, 2021, Mendoza et al., 2016; Sanagavarapu et al., 2023
	Intention to persist or drop out	De Clercq et al., 2021, Ferrao, 2021; Mtshweni, 2021; Roksa & Kinsely, 2018
	Academic achievement	De Clercq et al., 2024, Lardy et al., 2021; Roksa & Kinsley, 2018; Wu et al., 2021
	Study methods	Ferrao, 2021
	Social Isolation	Buchanan et al., 2015
	Internalised stereotypes and perceptions of inferiority	Mendoza et al., 2016
Coping Style	Seeking support	Buchanan et al., 2015
	Cultural and psychological resources	Corredor et al., 2020
	Financial aid	Mtshweni, 2021
	Motivation, resilience and commitment	Daniels et al., 2020; De Clercq, 2020; Mkonto, 2021

Work schedules and living arrangements	DeAngelo & Franke, 2016
Self-exploration and growth	Gibbons, 2019
Self-care abilities	Niu et al., 2022
Concealing social backgrounds	Veldman et al., 2023

Ten studies addressed financial constraints and limited access experienced by students from lower socioeconomic backgrounds. These constraints included financial instability, restricted access to academic resources, limited institutional and social support, reduced educational opportunities, constrained social networks, and challenges related to social mobility. Across these studies, such conditions were consistently reported to negatively affect students' overall adaptability to the university environment, influencing both academic engagement and social integration.

Ten studies indicated that the role of the family impacted students' transition to higher education. The aspects included family expectation for career choices, parental educational level, family income and wealth, level of family support, family residence and family obligations. Findings in this area were mixed. Eight studies reported that family-related factors contributed to difficulties during transition, particularly through heightened expectations, financial pressures, or limited academic guidance. In contrast, two studies highlighted the supportive role of families in disadvantaged contexts, noting that parents made significant sacrifices and provided emotional support to facilitate their children's transition to higher education (Mkonto, 2021; Roksa & Kinsley, 2018).

Ten studies revealed the findings on the influences of SES on student academic integration during the transition to higher education. Factors that were reported include adjustment to autonomy and independence, self-regulation skills, self-efficacy, engagement and participation, intention to persist or drop out, academic achievement and study methods. The results of these studies showed mixed results. seven studies indicated that students from lower SES backgrounds experienced greater academic difficulties during transition, while three studies reported no significant association between SES and academic adjustment or performance. Social integration was examined in two studies, both of which found that students from lower SES backgrounds encountered challenges adapting to the social demands of university life. These challenges were attributed to social isolation, internalised stereotypes, reduced self-esteem, and a diminished sense of belonging within the university environment.

Ten studies reported on the impact of SES on student coping styles during the transition to higher education. Coping approaches include seeking support, cultural and psychological resources financial aid motivation, resilience and commitment, work schedules and living arrangements self-exploration and growth, self-care abilities and concealing social background. Findings were again mixed. Five studies reported that students from lower SES backgrounds struggled to cope with transition demands, which hindered successful adjustment (Buchanan et al., 2015; De Clercq, 2020; DeAngelo & Franke, 2016; Mtshweni, 2021; Veldman et al., 2023). Conversely, five studies highlighted adaptive coping patterns, demonstrating that students from lower SES backgrounds could exhibit strong commitment and resilience by mobilising available resources and developing

strategies to persist in higher education (Corredor et al., 2020; Daniels et al., 2020; Gibbons, 2019; Mkonto, 2021; Niu, 2022).

Among the 29 studies addressing socioeconomic status, seven explicitly examined the joint influence of socioeconomic status and self-regulation on students' transition to higher education. All seven studies reported that socioeconomic conditions shaped students' capacity to self-regulate their learning behaviours, including the selection of study strategies and learning approaches (De Clercq et al., 2013; 2020; 2021; 2024; Dika, 2014; Ferrao & Almeida, 2021; Gibbons et al., 2019). These findings suggest that greater access to educational resources and support systems among students from more advantaged socioeconomic backgrounds facilitates the development and enactment of effective self-regulation skills, thereby supporting a smoother transition to higher education.

Taken together, the findings across SES-related themes indicate that socioeconomic status and self-regulation are closely intertwined in shaping students' transition to higher education. Financial constraints, limited access to resources, and family-related pressures associated with lower SES appear to influence not only students' academic and social integration, but also the development and enactment of self-regulatory skills. At the same time, evidence from studies examining coping styles and learning strategies suggests that self-regulation may function as a key mechanism through which students navigate socioeconomic disadvantage. Students who can mobilise effective self-regulatory strategies such as planning, adaptive coping, and sustained effort are better positioned to persist despite structural constraints, whereas limited self-regulation may exacerbate SES-related challenges during transition.

Query 2: Analysis of Studies on the Impact of Self-Regulation on the Transition to Higher Education

The analysis of the second query on self-regulation showed that of 43 studies, 28 studies (65%) applied a quantitative approach, 14 studies (33%) used a qualitative approach and only one study (2%) used a mixed method approach. Quantitative methodologies that were used included questionnaires (Allaire, 2022; Anwar & Menekse, 2023; Barbosa et al., 2016; Barros & Simao, 2018; Berzonsky & Kuk, 2022; Buizza et al., 2024; Case, 2022; Cassady et al., 2022; Cho et al., 2021; Fryer et al., 2016; Galve-Gonzales et al., 2023; Johnson et al., 2014; Kayani et al., 2022; Kroshus et al., 2021; Lin et al., 2021; Mason, 2021; McGuinness & Nordstokke, 2023; Mettler et al., 2019; Mujica et al., 2019; Raisanen et al., 2020; Ribeiro et al., 2019; Grøm Sæle et al., 2017; Valenti & Faraci, 2021; van Rooij et al., 2017; Waldeyer et al., 2022; Wang et al., 2021; Wild & Grassinger, 2023; Wilson et al., 2019) and exam scores (Waldeyer et al., 2022). Qualitative methodologies encompassed various techniques such as in-depth interviews (Cameron & Rideout, 2022; Ishikawa, 2023; Liu & Zhang, 2023), focus group interviews (David et al., 2024; Van Doren et al., 2020), semi-structured interviews (De Clercq et al., 2018; Eberle & Hobrecht, 2021; Garcia-Perez et al., 2020; Lindblom-Ylänne et al., 2017; Xavier & Meneses, 2022), unstructured interviews (Mason, 2019), audio diaries (Liebendörfer et al., 2022), reflective journals (Liu & Zhang, 2023; Perander et al., 2020; Willems et al., 2018), and narrative sketches (Mason, 2019). The only mixed-method study used open-ended questions as an instrument for both quantitative and qualitative analysis (Rutenberg et al., 2022).

Across the reviewed studies, self-regulation consistently emerged as a central factor supporting students' transition to higher education. Four interrelated thematic domains were identified: (1)

academic performance and success, (2) cognitive regulation and learning strategies, (3) emotional regulation and well-being, and (4) motivation. Table 2 presents an overview of these themes and their associated sub-themes.

Evidence from all 43 studies examining academic performance and university success indicated a positive association between self-regulation and key transition outcomes, including academic adjustment, persistence, performance in remote learning contexts, and overall academic achievement. Students demonstrating higher levels of self-regulation were consistently reported to achieve stronger academic outcomes and to adapt more effectively to the demands of university life.

Cognitive regulation and learning strategies were examined in 26 studies, with a focus on skills such as planning, time management, goal setting, self-monitoring, metacognitive awareness, and sustained effort. Collectively, these studies suggest that students' capacity to regulate their learning cognitively and to adapt strategies to increased academic autonomy plays a significant role in facilitating successful transition to higher education.

Fourteen studies explored emotional regulation and its implications for student well-being during transition. While the majority reported positive associations between emotional regulation and adjustment outcomes, findings in this domain were more mixed than in other areas. Students who demonstrated effective emotional regulation, emotional intelligence, or dispositional mindfulness generally reported better adjustment and well-being. In contrast, one study (Valenti & Faraci, 2021) found that reliance on emotion-oriented coping strategies was negatively associated with university adjustment, suggesting that strategies focused primarily on alleviating emotional discomfort may hinder effective academic and social integration. Despite these variations, the collective evidence highlights emotional regulation as an important component of successful transition.

Seven studies examined the relationship between self-regulation and motivation, consistently reporting a positive interaction between the two constructs. Higher levels of self-regulation were associated with stronger intrinsic and extrinsic motivation, greater task engagement, and sustained interest, all of which contributed to more successful transition experiences.

Although most studies examined self-regulation independently of students' socioeconomic context, one study explicitly addressed the interplay between socioeconomic status and self-regulation. Ribeiro et al. (2019) reported that students from higher sociocultural backgrounds were more likely to adopt deep learning strategies, which were in turn associated with stronger academic achievement. This finding suggests that socioeconomic conditions may shape not only academic outcomes directly, but also the development and deployment of self-regulatory strategies during the transition to higher education.

Taken together, the findings indicate that self-regulation is consistently associated with successful transition to higher education across academic, cognitive, emotional, and motivational domains. At the same time, emerging evidence points to the potential influence of socioeconomic context in shaping how self-regulatory strategies are enacted, underscoring the importance of considering these factors in an integrated manner.

Table 2*Themes and Sub-themes for Query 2*

Theme	Sub-theme	References
Academic performance and success in university	Adjustment to university	De Clercq et al., 2018; Willems et al., 2018; Barbosa et al., 2018; Mettler et al., 2019; Garcia-Perez et al., 2020; Raisanen et al., 2020; Kroshus et al., 2021; Berzonsky & Kuk, 2022; Cameron & Rideout, 2022; Case, 2022; Kayani et al., 2022; Liu & Zhang, 2023; McGuinness & Nordstokke, 2023
	Decisions to persist or drop out	Mujica et al., 2019; Van Doren et al., 2020; van Rooij et al., 2020; Valenti & Faraci, 2021; Wang et al., 2021; Galve-Gonzales et al., 2023; Wild & Grassinger, 2023; Buizza et al., 2024
	Impact on Grade Point Average (GPA)	Nergård-Nilssen, et al., 2017; Wilson, 2019; Lin et al., 2021; Cassady et al., 2022
	Success in remote learning	Eberle & Hobrecht, 2021; Xavier & Meneses, 2022; Liebendörfer et al., 2022; Anwar & Menekse, 2023
	Overall academic performance	Johnson et al., 2014; Fryer et al., 2016; Lindblom-Ylänne et al., 2017; Barros & Simao, 2018; Mason, 2019; Ribeiro et al., 2019; Perander et al., 2020; Cho et al., 2021; Mason, 2021; Allaire, 2022; Waldeyer et al., 2022; Ishikawa, 2023; David et al., 2024
Cognitive Regulation and Learning Strategies	Planning and time management skills	(Anwar & Menekse, 2023; Cameron & Rideout, 2022; Garcia-Perez et al., 2020; Ishikawa, 2023; Johnson et al., 2014; Lindblom-Ylänne et al., 2017; Grøm Sæle et al., 2017; Xavier & Meneses, 2022)
	Task engagement	Anwar & Menekse, 2023; Ribeiro et al., 2019; Willems et al., 2018
	Self-directedness and self-monitoring	Barbosa et al., 2016; Mason, 2019; Rutenberg, et al., 2022; Case, 2022
	Setting goals	David et al., 2024; De Clercq, 2018; Ishikawa, 2023; Liebendörfer et al., 2022; Liu & Zhang, 2023; Mason, 2019; Raisanen et al., 2020; Wang, et al., 2021
	Metacognitive knowledge and strategies	Cho et al., 2021; David et al., 2024; Ribeiro et al., 2019), self-efficacy (Fryer et al., 2016; Kayani et al., 2022, Lin et al., 2021; McGuinness & Nordstokke, 2023; Rutenberg, et al., 2022; Valenti & Faraci, 2021
Emotional regulation	Continuous effort	Liu & Zhang, 2023; Cameron & Rideout, 2022
	Emotional intelligence	Mason, 2021; Allaire, 2022; Van Doren, 2020; Wilson, 2019

and well-being	Mental health	(Berzonsky & Kuk, 2022; Kroshus, 2021; Raisanen, 2020; Willems et al., 2018)
	Optimism	(Lindblom-Ylänne et al., 2017),
	Application of learning strategies	(Mason, 2019; Valenti & Faraci, 2021)
	dispositional mindfulness	Mettler et al., 2019; Willems et al., 2018; Waldeyer et al., 2022)
	Academic emotion	(Perander et al., 2020),
	Mental flexibility	(Valenti & Faraci, 2021)
Motivation	Motivation Dynamics	(Allaire, 2022; David et al., 2024; Fryer et al., 2016)
	Task and content interest	(Anwar & Menekse, 2023; Liebendörfer et al., 2022)
	Intrinsic and extrinsic motivation	(Barros & Simao, 2018; Mujica et al., 2019)

Overview of Research Designs in Reviewed Studies

The analysis indicated that most studies used a quantitative design followed by qualitative approaches, with mixed-method studies being the least represented. While quantitative methods offer broad generalisability and systematic analysis, and qualitative methods provide in-depth personal insights, neither alone fully addresses the complexities of the transition to higher education. Only four studies (5%) used a mixed method research approach, suggesting the need for future research to integrate both methodologies. This integration has the potential to provide a more comprehensive understanding of the complexities surrounding the transition to higher education. Future research should prioritise mixed-method approaches to capture the full spectrum of experiences and factors influencing first-year university students.

Discussion

Socioeconomic Status and the Transition Landscape

A systematic review of the literature on the influence of socioeconomic status (SES) on student transition to higher education reveals not only recurring themes but also important contradictions and methodological gaps. Four central themes emerged: (1) financial constraints and access disparities, (2) the role of family, (3) academic and social integration, and (4) coping strategies. However, rather than treating these themes as isolated descriptors, a deeper analysis suggests that they operate as interconnected dimensions of the broader SES experience, shaping transition outcomes through complex and context-specific mechanisms.

Students from lower-SES backgrounds are repeatedly found to face structural disadvantages such as limited access to academic resources, weak social networks, and inadequate institutional support, all of which constrain their capacity to navigate the university environment. These material and social limitations often impair their ability to develop the autonomy, confidence, and regulatory skills demanded by higher education. Moreover, SES is not a static background variable but a dynamic influence that intersects with familial culture, expectations, and economic pressures. Parental education levels, income, household responsibilities, and even geographical location shape students' aspirations, perceived options, and eventual adjustment outcomes

(Azpeitia et al., 2023; De Clercq et al., 2013; De Angelo & Franke, 2016; Khatiry & Abdallah, 2023).

Yet the role of family is not uniformly negative. Some evidence suggests that despite financial hardship, parental sacrifice and support may act as powerful buffers, reinforcing students' motivation and persistence (Mkonto, 2021; Roksa & Kinsley, 2018). This finding disrupts the deficit narrative often associated with low-SES backgrounds and signals a need for more comprehensive interpretations of familial influence.

Academic and social integration challenges are frequently traced back to SES-related factors such as low self-efficacy, poor engagement, internalised stigma, and diminished self-regulation, all of which may contribute to higher dropout intentions and weaker academic outcomes. However, the extent of this impact is not uncontested. Some studies argue that SES may not be a direct determinant of transitional success, suggesting the presence of mediating factors such as institutional support, peer engagement, or psychological resilience (Lardy et al., 2021; Roksa & Kinsley, 2018; Sanagavarapu et al., 2023).

Further complicating this landscape is the variability in coping styles reported among lower-SES students. While some struggle silently or disengage, others employ adaptive strategies such as seeking institutional help, leveraging financial aid, or cultivating self-care and resilience (Corredor et al., 2020; Daniels et al., 2020; Gibbons, 2019; Mkonto, 2021; Niu, 2022). These diverse responses highlight the agency and heterogeneity within SES-labelled groups, challenging any singular portrayal of lower-SES students as inherently disadvantaged. This variability reflects wider inconsistencies in how SES is defined and measured, with different indicators (e.g. income, education, occupation) often yielding distinct outcomes and only modestly correlating with each other. Such conceptual fragmentation limits generalisation and helps explain the differing trajectories observed within SES groups (Zaneva et al., 2024)

While this review synthesises the influence of SES on students' transition to higher education, however it is important to interpret these findings considering two key contextual considerations. First, the studies reviewed were conducted across diverse national settings, where structural, cultural, and policy differences may shape how SES influences student experiences. For example, access to financial aid, expectations around academic independence, and family involvement in education vary widely across systems, potentially moderating the impact of SES on transition outcomes. Second, there is considerable variation in how SES is defined and operationalised across the studies. For instance, in Australia, student socioeconomic status is commonly inferred through residential postcode indicators, which are mapped to the Australian Bureau of Statistics' Index of Education and Occupation (Australian Bureau of Statistics, 2021). This area-based approach reflects the socioeconomic characteristics of the broader community rather than the individual or household, which may not fully reflect students lived experiences. In contrast, the United States relies on eligibility for the Free and Reduced-Price Lunch (FRPL) program as a proxy for student socioeconomic status. While this method is widely used, its accuracy in capturing educational disadvantage has been subject to critique due to limitations in its scope and underlying assumptions (Domina et al., 2018). These inconsistencies in definition and measurement can affect the comparability of findings and point to the need for more comprehensive and multidimensional approaches in future research. Together, these factors underscore the importance of context-sensitive interpretations when evaluating the influence of SES on student transition.

Self-Regulation as a Mechanism of Adaptation

This review also examined how self-regulation influences students' transition to higher education, identifying four interrelated themes: (1) academic performance and success, (2) cognitive regulation and learning strategies, (3) emotional regulation and well-being, and (4) motivation. Rather than viewing these themes as discrete domains, the analysis reveals that self-regulation functions as a multi-dimensional capacity that underpins students' adaptive responses to the academic, social, and emotional challenges of university life.

Across the reviewed studies, self-regulation consistently emerged as a significant predictor of academic achievement, adjustment, and persistence in higher education. This pattern aligns with existing empirical research that links self-regulated learning to enhanced academic performance and improved retention (Barrera Hernández et al., 2020). Students with higher self-regulatory capacity not only achieved stronger academic outcomes such as elevated GPA and effective task completion but also reported greater integration into university life. Taken together, these findings reaffirm self-regulation as a pivotal mechanism that enables students to navigate the multifaceted demands of transitioning into higher education. As noted by Šteh and Šarić (2020), fostering self-regulated learning should be a central aim of higher education, as it encourages students to take proactive ownership of their learning, clarify their academic goals, monitor their progress, and critically evaluate the quality of their achievements. Supporting students in developing these capacities is essential for promoting resilience, autonomy, and long-term academic success.

Beyond academic outcomes, self-regulation was shown to shape students' cognitive engagement and learning strategies. High self-regulating students were more likely to exhibit effective planning, time management, and task engagement. They adopted metacognitive strategies, such as goal setting, self-monitoring, and strategy selection, which enabled them to adaptively respond to new learning contexts. Crucially, this ongoing self-regulation was not static but involved a continual refinement of learning behaviours in response to evolving academic demands. This points to the role of cognitive regulation not merely as a skill set, but as an active process essential to long-term academic adaptation contributing to the kind of academic commitment Tinto (1993) describes as necessary for sustained university engagement.

Another key dimension of self-regulation identified in the analysis is emotional regulation, which plays a significant role in students' well-being during their transition. Students with stronger emotional regulation reported greater psychological resilience and mental health stability, supported by traits such as optimism, mindfulness, and mental flexibility. These emotional competencies were also linked to students' ability to select and sustain effective learning strategies. Nevertheless, the review also reveals that not all emotion-related strategies are adaptive. For example, Valenti and Faraci (2021) found that emotion-oriented coping was negatively associated with university adjustment, suggesting that certain emotion-regulation styles may hinder rather than help student transitions. This indicates the need to differentiate between constructive and maladaptive emotional coping strategies within self-regulation research. This finding reinforces Tinto's emphasis on the affective domain of integration stating that students who struggle emotionally may find it more difficult to connect with peers, faculty, and institutional culture ultimately compromising their persistence.

The final theme, motivation intersects closely with all dimensions of self-regulation. The studies reviewed highlight that self-regulated learners tend to exhibit stronger intrinsic and extrinsic

motivation, greater interest in academic content, and more consistent engagement across the transition period. Motivation was not treated as a fixed trait but as a dynamic element that both shapes and is shaped by self-regulatory behaviour. For instance, Fryer et al. (2016) reported that self-regulation predicts future motivation, while David et al. (2024) observed that fluctuating motivation levels during transition can undermine students' efforts to self-regulate effectively. These insights suggest that motivation operates as both an input and an outcome of self-regulatory capacity, reinforcing the cyclical nature of adjustment in higher education.

Taken together, these findings position self-regulation not merely as a complementary factor in student success, but as a central determinant of how students cognitively, emotionally, and motivationally engage with the challenges of higher education. Nonetheless, the contribution of self-regulation to students' transition to higher education, as demonstrated in this review, should be viewed with an understanding that the included studies were conducted within different educational systems. Although this review did not explore contextual variations in detail, factors such as institutional expectations, academic culture, and available support mechanisms likely play a role in shaping how self-regulation is developed and enacted across settings. These underlying differences may influence students' adjustment experiences and outcomes, and they should be considered in interpreting the broader relevance of the findings.

The SES–Self-Regulation Nexus in Transition Research

The interplay between socioeconomic status (SES) and self-regulation was examined in eight studies included in this review, directly addressing the question of whether and how these two variables jointly influence students' transition to higher education. The synthesis of findings challenges the notion of SES as a mere background variable, positioning it instead as a structural determinant of students' capacity for self-regulated learning. Rather than exerting a direct effect, SES appears to shape self-regulatory behaviours indirectly through differential access to cognitively enriching environments. A recent systematic review underscores this pathway, identifying cognitive stimulation as a key mediator between SES and executive function, an essential foundation for self-regulation processes such as goal setting, sustained attention, and cognitive flexibility. This mediating role reveals how structural inequality translates into cognitive disparities with tangible consequences for students' learning autonomy and strategic engagement (Rakesh et al., 2024)

Consistent with this mechanism, the reviewed studies reported that students from higher-SES backgrounds tended to demonstrate stronger self-regulation, enabled by greater access to educational resources, structured learning environments, and external support systems, factors that collectively enhance metacognitive awareness, academic planning, and goal-directed behaviour. In contrast, students from lower-SES backgrounds, often lacking such supports, faced barriers in regulating their learning, which negatively impacted their adjustment and success during the transition period.

These findings reveal an asymmetrical interaction that translates SES indirectly shapes students' transition experiences by influencing their capacity to self-regulate, thereby reinforcing educational inequalities at the point of higher education entry. This intersectional effect underscores the importance of addressing structural disparities alongside individual skill development in both research and practice.

Conclusion

This systematic literature review offers insight into how socioeconomic status and self-regulation affect students' transition to higher education. In summary, the review findings demonstrate that socioeconomic status and self-regulation are influencing the transition of students to higher education. Additionally, analysis of previous studies also illustrated a notable relationship between the two variables and students' first-year experience at the university. Nevertheless, there are some limitations to these analyses. First, a key limitation of this review is the restriction to two databases, Scopus and Web of Science. While both offer extensive coverage of high-quality, peer-reviewed literature, relying solely on them may have led to the omission of relevant studies indexed elsewhere. As such, future iterations of systematic reviews in this area could strengthen the breadth and robustness of evidence synthesis by expanding search strategies to include additional databases, such as ERIC or PsycINFO, to enhance the comprehensiveness and depth of understanding of the variables examined. Secondly, although this review foregrounds key determinants such as socioeconomic status and self-regulation, the specific role of contextual and cultural diversity in shaping the transition experience remains underexplored. Existing literature (De Clercq et al., 2020; Winstone & Hulme, 2019) suggests that diversity characteristics may interact in complex ways with students' transition journeys, yet these dynamics remain insufficiently theorised across varied educational settings. Additionally, the review lacks a detailed examination of the methodologies used in the studies and the reported effect sizes, if any, potentially overlooking variations in the strength of these relationships and the influence of different research designs. Future systematic reviews could address these gaps by incorporating more explicit methodological synthesis and by examining contextual and cultural dimensions more systematically.

At the time of this review, only a few studies have examined how socioeconomic status and self-regulation interact during the transition of students to higher education. This opens an opportunity for future research to delve deeper into the connections between these variables. Gaining insight into the complexities of these relationships is essential to help students from disadvantaged backgrounds achieve academic success on a par with their more advantaged counterparts. The theoretical implications of this review of the literature lie in advancing our understanding of the complex interaction between socioeconomic status (SES), self-regulation, and first-year experience of students at university. By synthesising existing research, the review contributes to theoretical frameworks that elucidate how these factors interact to shape academic performance, social integration, and general well-being.

On a practical level, the findings of this review offer meaningful guidance for designing interventions, programs, and policies that support students' transition to higher education. For educators, this includes embedding structured opportunities within the curriculum to develop students' self-regulation skills such as goal setting, time management, and reflective learning particularly during the first year. However, ensuring equitable access to such supports remains a challenge. As highlighted by Ramsetty and Adams (2020), the digital divide continues to widen educational disparities, with students from lower socioeconomic backgrounds disproportionately affected by limited access to technology and connectivity. This underscores the importance of designing transition programs that are not only pedagogically sound but also sensitive to issues of accessibility and inclusion. Therefore, at the policy level, institutions should consider expanding access to academic support services and learning resources in a way that actively accounts for

SES disparities. Financial aid programs, mentoring schemes, and targeted outreach initiatives can be more effective when coupled with intentional efforts to build students' capacity for self-directed learning. Together, these efforts can reduce structural barriers and promote more equitable pathways to student success.

Despite the limited scope of the literature collected, these findings highlighted the importance of understanding the dimensions of student differences, particularly in terms of their socioeconomic background and self-regulation abilities. This is crucial to ensure that equality is practiced in higher education. Navigating the transition to university can be challenging for students from diverse backgrounds, particularly those with a disability. Therefore, exploring how socioeconomic status and self-regulation intersect in shaping their experiences will provide crucial information to develop more inclusive and supportive educational practices.

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Note. References marked with an asterisk (*) were included in the final set of empirical studies reviewed in the systematic literature review (SLR). All other references were cited for theoretical, contextual, or methodological support.