Academic Resilience of Students with Disabilities in Higher Education: The Role of Peer Relationships and Academic Self-Efficacy

Miftachul Jannah[1], Yulina Eva Riany[2], Melly Latifah[3]
Department of Family Science and Child Development, Faculty of Human Ecology, Institut Pertanian Bogor , Indonesia[1]
Department of Family Science and Child Development, Faculty of Human Ecology, Institut Pertanian Bogor, Indonesia[2]
Centre for Gender and Child Studies, Institut Pertanian Bogor, Indonesia[2]
Department of Family Science and Child Development, Faculty of Human Ecology, Institut Pertanian Bogor, Indonesia[3]
E-mail: miftachul.jannah@apps.ipb.ac.id[1], yriany@apps.ipb.ac.id[2], mellylatifah@gmail.com[3]
Correspondent Author: Miftachul Jannah, miftachul.jannah@apps.ipb.ac.id
Doi: 10.31316/g-couns.v10i01.8131

Abstract

Access to higher education for student with disabilities is increasing, yet they still face challenges affecting their academic performance and psychological well-being. This study examines the role of peer relationships and academic self-efficacy on academic resilience among students with disabilities. Using a quantitative approach and voluntary sampling, 155 students with visual, hearing, and physical-motor impairments completed an online survey from February to May 2025. Data were analyzed using multiple linear regression. The analysis revealed that academic self-efficacy significantly predicted academic resilience ($\beta = 0.606$, $p < 0.010$), while peer relationships showed a weaker but still significant effect ($\beta = 0.141$, $p = 0.074$). The model explained 51.2% of the variance in academic resilience ($R^2 = 0.512$). These findings highlight the crucial role of academic self-efficacy in promoting resilience. Practically, interventions aimed at strengthening academic self-efficacy may enhance the persistence and success of students with disabilities in higher education settings.
Keywords: academic resilience, peer relationships, academic self-efficacy, student with disability

Abstrak

Akses ke pendidikan tinggi bagi siswa penyandang disabilitas semakin meningkat, namun mereka masih menghadapi tantangan yang memengaruhi kinerja akademik dan kesejahteraan psikologis mereka. Studi ini mengkaji peran hubungan teman sebaya dan efikasi diri akademik terhadap ketahanan akademik di antara siswa penyandang disabilitas. Dengan menggunakan pendekatan kuantitatif dan pengambilan sampel sukarela, 155 siswa dengan gangguan penglihatan, pendengaran, dan fisik-motorik menyelesaikan survei online dari Februari hingga Mei 2025. Data dianalisis menggunakan regresi linier berganda. Analisis mengungkapkan bahwa efikasi diri akademik secara signifikan memprediksi ketahanan akademik (β = 0,606, p < 0,010), sedangkan hubungan sebaya menunjukkan efek yang lebih lemah tetapi masih signifikan (β = 0,141, p = 0,074). Model ini menjelaskan 51,2% dari varians ketahanan akademik (R2 = 0,512). Temuan ini menyoroti peran penting dari efikasi diri akademik dalam mempromosikan ketahanan. Secara praktis, intervensi yang ditujukan untuk memperkuat efikasi diri akademik dapat meningkatkan ketekunan dan keberhasilan siswa penyandang disabilitas di lingkungan pendidikan tinggi.
***Keywords**: resiliensi akademik, hubungan teman sebaya, efikasi diri akademik, mahasiswa disabilitas*

Article info
Received June 2025, accepted July 2025, published January 2026

INTRODUCTION

Higher education serves as a crucial means for social mobility and improving the quality of life, including for individuals with disabilities. Over the past few decades, following the World Conference on Special Needs Education in Salamanca in 1994, UNESCO and its partners have consistently promoted the implementation of inclusion as a core principle across all levels of education systems worldwide (Kiuppis & Hausstätter, 2015). A literature review Karellou (2019) indicates that individuals with disabilities are increasingly engaged in higher education across various countries, particularly in Western contexts. Similarly, a study Koshy & Seymour (2015) reveals that in Australia, since 2007, the participation of students with disabilities in higher education has risen sharply, with enrollment increasing by 43.5%, more than twice the overall system growth rate. Additionally, a study conducted in Zimbabwe reveals a significant increase in the number of students with disabilities in higher education following policy reforms (Majoko, 2018).

The participation of students with disabilities in higher education has shown a global upward trend; however, numerous structural, social, and cultural challenges still need to be addressed to achieve inclusive education. In the United States, students with disabilities continue to face barriers to access and inclusion despite significant legal and policy advancements (Lehrer-Stein & Berger, 2023). A study conducted at two South African universities identified key obstacles to participation, including funding limitations, difficulties in establishing social networks, and ineffective teaching and learning practices (Mutanga, 2018). Similarly, although inclusive policies exist in the United Kingdom, students with disabilities remain at a high risk of dropping out and continue to face disparities in academic outcomes (Shaw, 2021). Ganguly & Perera (2019) argue that students with disabilities face various sources of stress that can increase the likelihood of negative impacts on their academic achievement and psychological well-being. In line with the opinion of Cedeño et al. (2018), students with disabilities often encounter various obstacles in the learning process and their participation in the academic environment. Various studies have shown that students with disabilities face barriers to inclusion, such as personal problems, communication, physical environment, attitudes, and limited learning resources (Martins & Moriña, 2022). These findings collectively suggest that while opportunities for accessing higher education are expanding, students with disabilities in many countries continue to face complex structural and psychological barriers.

The Indonesian Government has enacted Law No. 8 of 2016 on Persons with Disabilities to ensure the fulfillment of equal rights and opportunities for individuals with disabilities, in support of an independent, prosperous, and discrimination-free life. In addition, according to Regulation No. 46 of 2017 issued by the Ministry of Research, Technology, and Higher Education, which governs inclusive and special education services, the government has formally regulated the implementation of inclusive education at the higher education level. Despite the adoption of inclusive education policies, the number of students with disabilities who successfully pursue higher education remains relatively low compared to their non-disabled peers. Data show that out of 4,522 higher education institutions in Indonesia (Higher Education Statistics, 2022), only 152 institutions were recorded as having admitted students with disabilities, totaling 401 individuals, according to the Directorate of Learning, Ministry of Research, Technology, and Higher Education (2017). Moreover, as of 2022, only 73 higher

education institutions had established Disability Service Units (Ministry of Education and Culture, 2022).

In line with global challenges, students with disabilities in Indonesia also face complex structural and social barriers within higher education settings. A literature review Rahajeng et al. (2024) reveals that the primary challenges experienced by students with disabilities in Indonesia include inaccessible facilities, social stigma, and a lack of institutional support. The low participation rate of students with disabilities compared to their non-disabled peers is influenced by limited accessibility, insufficient social support, and persistent stigma and discrimination (Soeparman, 2014). Findings from Damastuti et al. (2018) indicate that students with disabilities in higher education encounter, multiple obstacles, such as limited understanding from lectures, un-adapted learning materials and assessments, lack of assistive technology and volunteers, weak coordination mechanisms, and difficulties in accessing and comprehending lectures, despite some support from fellow regular students. These challenges not only affect academic achievement but also have implications for the psychological well-being of students with disabilities, thereby underscoring the importance of developing the capacity to persist and recover in the face of adversity – commonly referred to as academic resilience.

Resilience involves the personal ability to adapt and progress by strengthening social, educational and professional skills amid difficult conditions (Delgado et al., 2018). Within the academic setting, students demonstrate resilience through their ability to manage and overcome various forms of stress, challenges, and academic pressures effectively (Kalaivani, 2021). In line with this opinion, Martín (2022) argues that a resilience approach can help understand the experiences, obstacles, and challenges faced by students in college. Students with disabilities are an important group to study for their resilience profiles, as they face a variety of stressors that are risk factors for low academic achievement and psychological well-being (Ganguly & Perera, 2019). Killam & Castillo (2021) revealed that students with disabilities who are in the first year tend to have a higher risk of experiencing mental health disorders and a higher likelihood of dropping out of college than other students. Rudd et al. (2021) emphasized that academic resilience plays a crucial role in maintaining students' mental well-being and enhancing academic performance, particularly among those vulnerable to learning challenges or academic setbacks. In addition, resilience can help explain why some students with disabilities feel more satisfied with their academic environment, despite facing limitations and various pressures (Ganguly & Perera, 2019). In fostering academic resilience, both internal and external factors play a critical role, including support and self-belief in one's academic abilities.

According to Khan et al. (2016), social support plays a crucial role in an individual's ability to overcome difficulties. This is evident as social networks, such as family, friends, and school, begin to form and strengthen their resilience to various challenges. Peer relationship quality is in an external factor that contributes to variations in academic resilience. Routine interactions that students have with their peers shape their views of the academic support provided by their peers, which also strengthens their confidence in their academic abilities (Altermatt, 2019). The presence of peers as social support can contribute to improved performance by encouraging enthusiasm for learning, strengthening group cooperation, providing positive encouragement to teachers, or building supportive social networks (Golsteyn et al., 2021). Strengthened by the opinion

of Jumraeni et al. (2023), that support from peers has a strong relationship with increased resilience in students.

Academic self-efficacy is an internal factor that supports resilience and academic achievement, as an individual's belief in their abilities has been shown to positively affect learning performance (Cassidy, 2015; Wulandari & Istiani, 2021). Fatia et al. (2022) state that academic self-efficacy comprises four keys: mastery experience, vicarious experience, social persuasion, and emotional state. These components collectively shape students' confidence in facing academic challenges. According to Ben-Naim et al. (2017), reflecting Bandura's view, people with high self-efficacy approach difficulties as challenges, aim high, and remain persistent even after failure. Findings Cassidy (2015) indicate that academic self-efficacy significantly predicts academic resilience, particularly when students encounter personal or academic difficulties. Similarly, Abedi et al. (2023) found that academic self-efficacy serves as a direct predictor of academic resilience, which in turn enhances students' academic adjustment. Based on previous literature, it can be concluded that peer social support and academic self-efficacy play a crucial role in strengthening academic resilience. Although these two factors have been widely studied in the general student population, there has been limited research specifically examining their role in shaping academic resilience among students with disabilities, particularly within the Indonesian context.

Research on the academic resilience of students with disabilities, influenced by peer relationships and academic self-efficacy, has been conducted separately, employing different research methods, and remains limited in the Indonesian context. Studies exploring the lived experiences of students with disabilities in Indonesian higher education institutions are still constrained in thoroughly examining the factors that influence their academic resilience. For instance, Mir'atannisa (2017) described the resilience of blind students through a case study at the Faculty of Education, Yogyakarta State University; Grafiyana (2018) explored the dynamics of resilience among students with disabilities at Gadjah Mada University using a qualitative approach; and Rahma et al. (2020) studied school well-being among students with visual, hearing, and physical impairments at Brawijaya University, also using qualitative methods. These studies highlight a research gap that needs to be addressed, particularly concerning the contribution of peer relationships and academic self-efficacy to the academic resilience of students with disabilities in higher education settings in Indonesia.

Given the complex interplay of internal and external factors in shaping academic resilience, it is essential to view student development through a systemic and ecological lens. Bronfenbrenner's ecological systems theory (1979) Provides a valuable framework for understanding how individuals interact dynamically with multiple layers of their environment. According to this theory, development is influenced not only by immediate contexts such as peer relationships and personal beliefs (microsystems), but also by interactions between those contexts (mesosystem), institutional structures (exosystem), and cultural norms (macrosystem). In the context of students with disabilities, the microsystems encompassing peer support and academic self-efficacy —are particularly critical in fostering resilience in the face of adversity. This framework underpins the present study, which explores how peer relationships and academic self-efficacy contribute to academic resilience among students with disabilities in Indonesian universities.

Although numerous studies have examined academic resilience and its influencing factors, research specifically investigating the role of peer relationships and academic self-efficacy in shaping the academic resilience of students with disabilities in Indonesian higher education remains limited. This limitation highlights the need for a focused inquiry into the disability population within the context of higher education in Indonesia. Addressing this research gap, the present study aims to analyze how peer relationships and academic self-efficacy contribute to the academic resilience of students with disabilities in Indonesian universities.

METHOD

This research employs a quantitative approach with a cross-sectional survey design collecting data at a single point in time to examine the associations among variables (Creswell et al., 2018). The focus of the study is to investigate hoe peer relationships and academic self-efficacy contribute to the academic resilience of students with disability.

The independent variables in this study are peer relationships and academic self-efficacy, while the dependent variable is academic resilience. The instruments used are as follows: 1) The peer relationship instrument in this study is the Peer Relationship Scale by Aydoğdu (2021) with 29 questions with a Cronbach's alpha score (α = .93); 2) Academic self-efficacy using the Academic Self-Efficacy Scale (TASES) instrument by Sagone & Caroli (2014) with 28 questions, this instrument was then adapted into Indonesian by Darmayanti et al. (2021) with a Cronbach's alpha score (α = .89); 3) Academic resilience using the Academic Resilience Scale (The ARS 30) instrument by Cassidy (2016) with 30 questions, this measuring instrument was also adapted into Indonesian by Dewi Kumalasari et al. (2020) with a Cronbach's alpha score of (α = .89).

This study involved a population of students with disabilities–specifically those with visual, hearing, and physical-motor impairments–who were enrolled in diploma to undergraduate programs, considering that students at these levels previously took high school education, whose situation and conditions were different from college, so that they required a pretty good adaptation process to the academic environment. The justification for selecting these student groups was that the three types of disabilities tended to have more precise and structured verbal and non-verbal communication skills, thus facilitating the process of filling out the questionnaire without requiring substantial methodological adaptation. Additionally, the three groups of students with disabilities have a significant presence in college, enabling adequate sampling to produce representative data.

This study uses a non-probability sampling technique. The specific technique used is voluntary sampling, considering that this method allows for the wide distribution of questionnaires and reaches diverse populations, especially in the context of limited accessibility to the population of disabled students in higher education. The voluntary sampling technique is a data collection method in which participants voluntarily participate in a survey after being informed about its purpose and the time of its implementation (Murairwa, 2014).

Furthermore, data collection in the field uses Google Forms media. Then, from the results obtained, the data is scored using Microsoft Excel to determine the final score, average, interval, and category division, as well as statistical data processing. The Statistical Package for the Social Sciences (SPSS) version 26 application was used to process statistical data. The first stage is to conduct an assumption test, namely the

normality test, using the Kolmogorov-Smirnov and Shapiro-Wilk methods to ensure that the residual data from the regression model has a normal distribution (Fatmala, 2017). Additionally, a linearity test is conducted to verify that the linear regression model is suitable, given that the relationship between the independent and dependent variables is linear (Fridayanti & Prasetyanto, 2019).

Following the completion of assumption testing, hypothesis testing was conducted using the coefficient of determination to evaluate the joint contribution of the independent variables, along with multiple regression analysis to examine their individual and combined effects on the dependent variable.

RESULT AND DISCUSSION

Characteristics of Participants and Families

Data collection took place from February 2025 to May 2025, and a total of 155 participants were included in this study, with a distribution of 47.7% male and 52.3% female participants. The average age of participants was 22.9 years. The youngest participant was 18 years old, and the oldest was 35. This study was represented by 23.2 percent of students with visual impairments, 52.9 percent of students with hearing impairments, and the remaining 23.9 percent were students with physical-motor disabilities, spread across universities in Indonesia.

The participants had the following family characteristics: the father's education was mostly high school graduates, namely 39.4 percent (61 people), followed by college graduates, at 38.7 percent (60 people). The mothers' education levels were mainly college graduates, comprising 40 percent (62 people), and mothers who had graduated from high school were 32.3 percent (50 people). This finding suggests that a higher level of parental education can provide greater access and opportunities for children with disabilities to pursue higher education at the college level. The average family income ranges from 2,000,001 to 3,000,000 rupiah, and the average participant has a family consisting of 4 family members. The distribution of the data is presented in Table 1.

Table 1.
Distribution Of Participants Characteristics and Family Characteristics

Category		Distribution	
		n	%
Participants Characteristics			
Gender	Male	74	47.7
	Female	81	52.3
	Total	155	100
Age	18-19 (Adolescence)	16	10.3
	20-35 (Early Adulthood)	139	89.7
	Total	155	100.0
Type of Impairments	Visual Impairment	36	23.2
	Hearing Impairment	82	52.9
	Physical-Motor Impairment	37	23.9
	Total	155	100.0
Previous Education	Inclusive School	99	63.9
	Special Needs School	54	34.8
	Home Schooling	2	

Family Characteristics			
Father's Education	No Schooling	3	1.9
	Elementary School	18	11.6
	Junior High School	13	8.4
	High School	61	39.4
	College	60	38.7
	Total	155	100.0
Mother's Education	No Schooling	5	3.2
	Elementary School	23	14.8
	Junior High School	15	9.7
	High School	50	32.3
	College	62	40.0
	Total	155	100.0
Family Income	< 1.000.000	37	23.9
	1.000.001-2.000.000	38	24.5
	2.000.001-3.000.000	17	11.0
	3.000.001-4.000.000	17	11.0
	4.000.001-5.000.000	23	14.8
	> 5.000.000	23	14.8
	Total	155	100
Number of Family	3	44	28.4
Member	4	48	31.0
	> 4	63	40.6
	Total	155	100.0

Preliminary Test: Assumption Checks and Correlation Matrix

Before conducting a hypothesis analysis, the researchers first conducted a test of classical assumptions. The residuals were tested for normality to determine whether the multiple linear regression model satisfied the assumption of normal distribution. The test is conducted using the Kolmogorov-Smirnov and Shapiro-Wilk methods. Since the number of samples in this study was 155 participants (fewer than 200), the Shapiro-Wilk test is more considered in decision-making. Based on the Shapiro-Wilk significance value of 0.292 (p>0.05), these results indicate that the residuals follow a normal distribution. Thus, the normality assumption in multiple linear regression analysis has been met.

The results of the linearity test reveal a significant linear association between peer relationship and academic resilience variable ($p < 0.05$). The significance value of the deviation from the linear relationship ($p = 0.130$) indicates that there is no deviation from the linear relationship form. Furthermore, academic self-efficacy and resilience variables exhibit a significant linear relationship ($p < 0.05$). However, the significance value of the deviation from the linear relationship ($p = 0.022$) indicates a mismatch in the linear pattern.

A Spearman's rho correlation test was conducted to examine the associations among the study variables, including demographic characteristics (e.g., age, gender, type of impairment, previous education), family background (e.g., parental education, family income, family size), peer relationships, academic self-efficacy, and academic resilience. An overview of all correlation test results is presented in Table 2.

The analysis revealed that academic resilience was significantly associated with several variables. Notably, it was positively correlated with peer relationships (r_s=.439, p<.01) and academic self-efficacy (r=.686, *p*<.01), indicating that stronger peer connections and greater confidence in academic abilities are closely related to higher levels of resilience. Additionally, type of disability showed a significant positive correlation with academic resilience (r=.187, *p*<.05), while previous educational background was negatively correlated (r=-.185, *p*<.05), suggesting that students form inclusive schools may exhibit slightly higher resilience than those from special needs school.

In terms of family-related variables, father's education was significantly correlated with mother's education (r=.649, *p*<.01), family income (r=.448, *p*<.01), and peer relationships (r=.158, *p*<.05). Similarly, mother's education was positively associated with family income (r=.531, *p*<.01). These findings underscore the interrelation of parental education and economic conditions within the household context.

Furthermore, family income was positively correlated with peer relationships (r=.298, *p*<.01), suggesting that better socioeconomic conditions may indirectly facilitate stronger social connections among students. Finally, a strong positive correlation was observed between peer relationships and academic self-efficacy (r=.556, *p*<.01), which, in turn, was strongly linked to academic resilience. Overall, the result highlight that psychosocial and family economic factors, rather than basic demographic, play a more substantial role in shaping academic resilience among students with disabilities.

Table 2.
Result of Correlation Among Participants Characteristics, Family Characteristics, Peer Relationships, Academic Self-Efficacy, with Academic Resilience of Students with Disabilities

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age (year)	1	-.195*	-.196*	.206*	.022	-.279**	-.299**	-.141	-.024	.026	.032
2. Gender (0=Male; 1=Female)		1	.025	.127	-.050	-.062	-.063	-.103	.035	-.012	-.061
3. Type of Disabilities (0=Visual; 1=Hearing; Physical as reference)			1	-.172*	.090	.312**	.262**	.206*	-.135	.029	**.187***
4. Previous Education (0=Inclusive School; 1=Special Needs School; Homeschooling as reference)				1	-.062	-.046	-.038	-.048	-.043	-.052	**-.185***
5. Number of Family Member					1	.067	.121	.210**	.074	-.055	.052
6. Father's Education (0=< Senior High School; 1=Higher Education)						1	.649**	.448**	**.158***	-.118	-.080
7. Mother's Education (0=< Senior High School; 1=Higher Education)							1	.531**	.154	-.145	-.100
8. Family Income (0=<3 juta; 1=>3 juta)								1	**.298****	.075	.028
9. Peer Relationship									1	**.559****	**.439****
10. Academic Self-Efficacy										1	**.686****
11. Academic Resilience											1

Note: * p<.05, two-tailed; ** p<.01, two-tailed,

Table 3.
Descriptive Statistics for Peer Relationship, Academic Self-Efficacy, and Academic Resilience Scores Among Students with Disabilities

Category	Score Range	n	%	Mean	Std. Dev
Peer Relationships					
Low	≤57	1	0.6		
Moderate	58-86	54	34.8		
High	≥87	100	64.5		
Total	29-116	155	100	90.03	10.695
Academic Self-Efficacy					
Low	≤56	2	1.3		
Moderate	57-85	100	64.5		
High	≥86	53	34.2		
Total	28-112	155	100	81.67	9.206
Academic Resilience					
Low	≤59	2	1.3		
Moderate	60-89	76	49.0		
High	≥90	77	49.7		
Total	30-120	155	100	90.48	10.183

Peer Relationships Among Students with Disabilities

The quality of good peer relationships can be observed in the level of familiarity students with disabilities have with friends who have the same or different disabilities. In Bronfenbrenner's ecological developmental framework, peer relationships are an important part of the microsystem, which are the direct interactions and relationships that shape an individual's experience in their environment (Bronfenbrenner, 1979).

Indicators of strong peer relationships can be observed in the level of peer activity, having best friends, the acceptance felt by peers, and friendship commitment (Aydoğdu, 2021). Table 3 presents the descriptive statistics for peer relationship scores among students with disabilities. Most students (64.5%) reported high levels of peer relationships, with a mean score of 90.03 (SD = 10.70), indicating generally strong peer connections within the sample. In contrast, the research by Naraian & Natarajan (2013) suggests that young people with disabilities in India strive to form friendships. However, the conditions they face make it difficult to build quality relationships.

The correlation test results in Table 2 showed that age, gender, and type of disabilities did not correlate with the quality of peer relationships, academic self-efficacy, or academic resilience. Riany & Handayani's (2021) study shows that age and gender do not correlate with peer attachment. This result is in contrast to the findings of Petry (2018) that there is a relationship between classmates' attitudes towards students with disabilities and their social participation, where this relationship is influenced by the type of disability they have. Research by Jaleel et al. (2022) found that students with visual impairments benefit significantly from having supportive peer relationships. According to Lombardi et al. (2016), peer support is associated with positive outcomes for adults with disabilities. The greater this support, the better the social and academic adjustment of students with and without disabilities.

Meanwhile, the education of the father and the amount of family income are correlated with the quality of peer relationships. Research by Li et al. (2020) indicates that indicators of socioeconomic status, such as the mother's education, father's education, and parents' occupation, exhibit a very weak positive correlation with the quality of social relationships. In this model, the interaction between the family context and social experiences outside the home – including peer relationships – is part of the mesosystem, which is the reciprocal relationship between elements of the microsystem (Bronfenbrenner, 1979). Higher parental education and better family economic conditions can create a home environment that supports social engagement, provides broader access to resources, and forms parenting patterns that strengthen children's social skills.

Academic Self-Efficacy Among Students with Disabilities

Self-efficacy refers to an individual's confidence in their capacity to achieve success within a specific academic domain (Sharma & Nasa, 2014). Then, academic self-efficacy represents an individual's belief in their capability to succeed in academic tasks, an is a central construct in Albert Bandura's social cognitive theory (Bandura, 2000). According to Cassidy (2015) self-efficacy plays a crucial role in academic success, as individual with higher self-efficacy tend to demonstrate improved learning outcomes. Students who possess strong academic self-efficacy are generally more confident when confronting academic challenges, show greater persistence in completing tasks, and put forth increased effort throughout the learning process (Kolo et al., 2017). In line with Yokoyama's opinion (2019), students with high self-efficacy tend to have greater learning motivation, thereby achieving higher academic achievement, as they believe they can attain their desired goals.

The results of the correlation test in Table 2 show that individual and family characteristics did not have a significant relationship with the academic self-efficacy of students with disabilities. According to Bronfenbrenner, individual development does not merely stem from environmental factors. Still, it is primarily shaped by proximal processes – ongoing and meaningful interactions with people and symbols within the microsystem that support personal growth and adaptation (Tudge, 2016). In this case, academic self-efficacy is more likely to be formed by concrete learning experiences at university, support from lectures, involvement in academic activities, and interactions with peers, as well as other factors within the educational microsystem.

Most students (64.5 per cent) fell into the moderate category, while 34. Two percent showed high self-efficacy; the overall mean score was 81.67 (SD = 9.21) (Table 3), suggesting a relatively confident academic self-perception among participants. The findings indicate that most students with disabilities in this study possess a moderate level of academic self-efficacy, although their results are not optimal. This phenomenon has also been observed in several previous studies. Hen & Goroshit's (2014) found that students with learning disabilities tend to exhibit lower levels of self-efficacy and are more likely to engage in academic procrastination than their non-disabled peers. Sachitra & Bandara (2017) reported that a significant number of students demonstrated limited academic self-efficacy across various academic tasks, including asking and answering questions in class, planning studies, requesting help from lecturers, participating in academic discussions, expressing opinions, and speaking in front of their peers.

Academic Resilience of Students with Disabilities in Higher Education

Academic resilience refers to a student's ability to persist, adapt, and succeed in academic tasks despite encountering stress, pressure, or adversity. The adversity quotient reflects an individual's capacity to respond to challenges. A high adversity quotient enables a person to overcome setbacks, whereas a low level often results in withdrawal or avoidance before any effort is made to confront the difficulty (Francis, 2000). the research results of Mutiara Putri Amelia et al. (2023) show that students with higher AQ tend to exhibit greater persistence and psychological flexibility, which directly support academic resilience.

The results of this study indicate that the level of academic resilience in students with disabilities is quite balanced, falling within the medium and high categories. The descriptive statistics for academic resilience indicate a relatively balanced distribution between moderate (49%) and high (49.7%) categories. The average score was 90.48 (SD = 10.18), indicating a generally high level of academic resilience in the sample. These findings suggest that, on average, students with disabilities in this study exhibit considerable resilience when facing academic challenges in college.

A study by Butler (2018) found that the level of resilience of students with hearing impairments and students with visual impairments did not differ much from that of non-disabled students. Both personal and environmental factors contribute to the academic resilience of students with disabilities. As stated by Cedeño et al. (2018), the resilience level of students with disabilities is positively associated with the strength of their social support systems, including support from family and peers. Similarly, Martín (2022) highlighted that elements such as self-esteem, family involvement, subjective well-being, and psychological health play a vital role in helping students with disabilities adjust and integrate successfully into college life.

Other findings from the correlation test in this study indicate that peer relationships are correlated with academic self-efficacy and resilience. These results align with Lombres (2024), who found a strong positive relationship between peer relationships and academic self-efficacy. Similarly, Llorca et al. (2017) report that peer attachment is significantly associated with a higher level of academic self-efficacy. In addition, Frisby et al. (2024) demonstrated that peer connectedness has a positive contribution to academic resilience. Research on students in rural areas indicates that peer social support has a positive correlation with academic resilience (Gunawan & Huwae, 2022). Additionally, the results of this study also revealed that academic self-efficacy is correlated with academic resilience. In line with the research of Salim and Fakhrurrozi (2020), which shows a significant positive relationship between academic self-efficacy and resilience

A multiple linear regression analysis was conducted to examine the extent to which participant characteristics, family background, peer relationships, and academic self-efficacy predict academic resilience among students with disabilities. As shown in Table 4, the regression model was statistically significant ($F = 15.751$, $p < .001$), explaining 54.8% of the variance in academic resilience (adjusted $R^2 = .513$).

The analysis identified academic self-efficacy as the strongest predictor of academic resilience ($\beta = 0.607$, $p < 0.001$), followed by the type of disability ($\beta = 0.181$, $p = 0.015$). Students with higher academic self-efficacy and those with hearing or physical disabilities (compared to visual impairments) demonstrated higher levels of academic resilience. Other variables, including age, gender, previous education, family size, parental education, and family income, were not significant predictors ($p>.05$). While

peer relationships showed a positive association with academic resilience (β=.147), it narrowly missed the significance threshold (p=.060), suggesting a potential indirect or mediating role.

Table 4.
Regression Coefficient of Participants and Family Characteristics, Peer Relationship, and Academic Sel-Efficacy on Academic Resilience

Variable	Academic Resilience		
	B	**β**	**Sig.**
(Constanta)	19.732		**.013***
Participants Characteristics			
Age (year)	.075	.022	.731
Gender (0=Male; 1=Female)	-.904	-.044	.455
Type of Disabilities (0=Visual; 1=Hearing; Physical as reference)	3.683	.181	**.015***
Previous Education (0=Inclusive School; 1=Special Needs School; Homeschooling as reference)	-1.968	-.093	.119
Family Characteristics			
Number of Family Member	.236	.019	.746
Father's Education (0=< Senior High School; 1=Higher Education)	-.018	-.001	.991
Mother's Education (0=< Senior High School; 1=Higher Education)	-.588	-.028	.730
Family Income (0=<3 juta; 1=>3 juta)	.213	.010	.885
Peer Relationship	.140	.147	.060
Academic Self-Efficacy	.671	.607	**.000****
R^2		.548	
Adjusted R^2		.513	
F		15.751	
Sig		0.000	

Note: * p<.05, two-tailed; ** p<.01, two-tailed,

Peer relationships and academic self-efficacy are crucial factors that influence academic resilience, ultimately contributing to students' success in college. Peer interaction is a relationship between group members that influences each other, usually occurring between individuals with relatively equal age or maturity levels (Alfi Rahmadani et al., 2024). According to Aydoğdu (2021), peer relationships serve as a channel for reinforcing common values and personal attributes. Being part of a secure peer group has a significant influence on an individual's social and emotional well-being (Foubister, 2017). Frisby et al. (2020) explained that good peer relationships can help students cope with adverse events or challenging views when they experience academic difficulties.

The results of this study suggest that partial peer relationships do not have a significant impact on the academic resilience of students with disabilities. Contrary to the findings of Shao & Kang (2022), who found a positive relationship between peer relationships and academic resilience. Chen et al. (2018) demonstrated that peer relationships are a consistent predictor of academic resilience. Romano et al. (2021) stated

that academic resilience is more effective in preventing burnout when students receive high levels of support from their classmates. In addition to supportive peer interactions, academic self-efficacy, the belief in one's ability to overcome academic difficulties, is considered a contributing factor to the academic resilience of students with disabilities.

The findings of this study further demonstrate that academic self-efficacy has a substantial impact on the academic resilience of students with disabilities. Similar conditions were also found in the study by Sari et al. (2022), which revealed that academic self-efficacy has a positive influence on academic resilience among first-year students. Abedi et al. (2023) found that academic self-efficacy has a direct impact on academic resilience. Students who possess high self-efficacy are generally more capable of overcoming challenges and maintaining focus on their educational objectives. Yoelianita & Toga (2022) similarly found that students with strong self-efficacy tend to develop greater academic resilience, either directly or indirectly through the mediating effect of self-regulating learning. Consistent with these results, self-efficacy is recognized as a key contributor to academic resilience, as students with strong self-efficacy are more likely to interpret difficulties as opportunities for development rather than obstacles to avoid (Hayat et al., 2021; Klassen & Klassen, 2018).

CONCLUSION

This study concludes that peer relationships and academic self-efficacy jointly contribute to the academic resilience of students with disabilities in higher education. The findings affirm that both interpersonal support and personal beliefs play a significant role in helping students navigate academic challenges.

Theoretically, this study reinforces the relevance of Bronfenbrenner's ecological systems theory by showing that resilience does not emerge in isolation, but is shaped through dynamic interactions between the individual and their surrounding social contexts. Practically, these results suggest that higher education institutions should develop comprehensive and inclusive social support programs that enhance peer attachment and self-efficacy. Institutions must not only remove physical barriers, but also actively build environments where students with disabilities are socially connected and emotionally supported.

This study, however, has several limitations. Although it involved multiple universities that enroll students with disabilities, it did not assess campus accessibility or the implementation of inclusive policies. The study was limited to students from three disability groups and employed a quantitative approach only. Future research would benefit from incorporating qualitative methods to explore in-depth perspectives of students with diverse disabilities, as well as from expanding the focus to institutional factors such as inclusive practices, accessibility infrastructure, and staff training.

RFERENCES

Abedi, E., Kazemi, M., Mirlohi, M., Haghdan, T., & Rezaee, F. (2023). The Relationship Between Academic Self-Efficacy and Academic Adaptation: The Mediating Role of Academic Resilience. Journal of Assessment and Research in Applied Counseling, 5(1), 148–156. https://doi.org/10.61838/kman.jarac.5.1.19

Alfi Rahmadani, Despita Pramesti, Rosma Fyki Kamala, & Winda Rofiyati. (2024). Hubungan Interaksi Teman Sebaya Dengan Kejadian Depresi Pada Remaja

Madya. jurnal keperawatan tropis papua, 07(1), 74–79. https://doi.org/10.47539/jktp.v6i1.378

Altermatt, E. R. (2019). Academic Support from Peers as a Predictor of Academic Self-Efficacy Among College Students. Journal of College Student Retention: Research, Theory & Practice, 21(1), 21–37. https://doi.org/10.1177/1521025116686588

Aydoğdu, F. (2021). Developing a Peer Relationship Scale for Adolescents: A validity and reliability study. Current Issues in Personality Psychology, 10(2), 164–176. https://doi.org/10.5114/cipp.2021.109461

Bandura, A. (2000). Self-efficacy. In Encyclopedia of psychology (Vol. 7, pp. 212–213) (Vol. 7, pp. 212–213). Oxford Universuty Press.

Ben-Naim, S., Laslo-Roth, R., Einav, M., Biran, H., & Margalit, M. (2017). Academic self-efficacy, sense of coherence, hope and tiredness among college students with learning disabilities. European Journal of Special Needs Education, 32(1), 18–34. https://doi.org/10.1080/08856257.2016.1254973

Bronfenbrenner, U. (1979). The Ecology of Human Development: Experiments by Nature and Desgn. Cambridge, MA: Harvard University Press.

Butler, M. A. (2018). Assessing resilience in students who are deaf or blind: Supplementing standardized achievement testing. Journal of Educational Research, 111(3), 352–362. https://doi.org/10.1080/00220671.2016.1264052

Cassidy, S. (2015). Resilience Building in Students: The Role of Academic Self-Efficacy. Frontiers in Psychology, 6. https://doi.org/10.3389/fpsyg.2015.01781

Cassidy, S. (2016a). The Academic Resilience Scale (ARS-30): A New Multidimensional Construct Measure. Frontiers in Psychology, 7. https://doi.org/10.3389/fpsyg.2016.01787

Cassidy, S. (2016b). The Academic Resilience Scale (ARS-30): A New Multidimensional Construct Measure. Frontiers in Psychology, 7. https://doi.org/10.3389/fpsyg.2016.01787

Cedeño, M. L. G., Meza, A. K. T., & Mejía, R. G. C. (2018). Resilience and Support Networks for University Students with Disabilities: A Correlational Study. International Research Journal of Management, IT & Social Sciences, 5(2), 164~174.

Chen, X., Cheung, H. Y., Fan, X., & Wu, J. (2018). Factors related to resilience of academically gifted students in the chinese cultural and educational environment. Psychology in the Schools, 55(2), 107–119. https://doi.org/10.1002/pits.22044

Creswell, J. W., Creswell, J. D., Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approach (Fifth edition). SAGE.

Damastuti, E., Kusumastuti, D. E., Mirnawati, M., & Mursita, R. A. (2018). The Problem of Special Needs Student in the Learning Process at Lambung Mangkurat University. Proceedings of the 2nd INDOEDUC4ALL - Indonesian Education for All (INDOEDUC 2018). Proceedings of the 2nd INDOEDUC4ALL - Indonesian Education for All (INDOEDUC 2018), Banjarmasin, Indonesia. https://doi.org/10.2991/indoeduc-18.2018.12

Darmayanti, K. K. H., Anggraini, E., Winata, E. Y., & Mardianto, M. F. F. (2021). Confirmatory Factor Analysis of the Academic Self-Efficacy Scale: An

Indonesian Version. Jurnal Pengukuran Psikologi dan Pendidikan Indonesia (JP3I), 10(2), 118–132. https://doi.org/10.15408/jp3i.v10i2.19777

Delgado, G. R. E., Meza, A. K. T., & García, A. E. G. (2018). Resilient Factors in Students with Disabilities: Universidad Técnica de Manabí. International Research Journal of Management, IT & Social Sciences, 5(2), 23–31.

Dewi Kumalasari, Azmi Luthfiyani, N., & Grasiawaty, N. (2020). Analisis Faktor Adaptasi Instrumen Resiliensi Akademik Versi Indonesia: Pendekatan Eksploratori dan Konfirmatori. JPPP - Jurnal Penelitian Dan Pengukuran Psikologi, 9(2), 84–95. https://doi.org/10.21009/JPPP.092.06

Fatia, A., Alfaiz, A., Yuzarion, Y., Julius, A., Hidayat Rafiola, R., Singgih Sendayu, F., Valdez, A. V., & Juliawati, D. (2022). Synthesis of Self-Efficacy of Academic Resilience Capacity (SEARC) as the Implication of Self-Efficacy Contribution to Student Academic. Tarbawi: Jurnal Ilmu Pendidikan, 18(1), 12–21. https://doi.org/10.32939/tarbawi.v18i1.1522

Fatmala, C. (2017). Pengaruh Sistem Pengendalian Intern, Prinsip Pengelolaan Keuangan Daerah, Dan Penerapan Standar Akuntansi Pemerintahan, Terhadap Kualitas Laporan Keuangan Daerah Pada Organisasi Perangkat Daerah Kabupaten Jepara. Accounting Global Journal, 1(1). https://doi.org/10.24176/agj.v1i1.3332

Foubister, L. (2017). The role of secure peer groups in social and emotional outcomes for adolescents in an academically selective high school setting. Journal of Student Engagement: Education Matters, 7(1), 28–48.

Francis, D. (2000). Adversity Quotient: Turning Obstacles into Opportunities. Technovation, 20(7), 402. https://doi.org/10.1016/s0166-4972(00)00010-9

Fridayanti, V. D., & Prasetyanto, D. (2019). Model Hubungan antara Angka Korban Kecelakaan Lalu Lintas dan Faktor Penyebab Kecelakaan pada Jalan Tol Purbaleunyi. (Hal. 124-132). RekaRacana: Jurnal Teknil Sipil, 5(2), 124. https://doi.org/10.26760/rekaracana.v5i2.123

Frisby, B. N., Hosek, A. M., & Beck, A. C. (2020). The role of classroom relationships as sources of academic resilience and hope. Communication Quarterly, 68(3), 289–305. https://doi.org/10.1080/01463373.2020.1779099

Ganguly, R. (2019). Profiles of Psychological Resilience in College Students With Disabilities. Journal of Psychoeducational Assessment, 37(5), 635–651. https://doi.org/10.1177/0734282918783604

Golsteyn, B. H. H., Non, A., & Zölitz, U. (2021). The Impact of Peer Personality on Academic Achievement. Journal of Political Economy, 129(4), 1052–1099. https://doi.org/10.1086/712638

Grafiyana, G. A. (2018). Dinamika Resiliensi Pada Mahasiswa Difabel Universitas Gadjah Mada. Psycho Idea, 16(2), 119. https://doi.org/10.30595/psychoidea.v16i2.3364

Hayat, A., Choupani, H., & Dehsorkhi, H. (2021). The mediating role of students' academic resilience in the relationship between self-efficacy and test anxiety. Journal of Education and Health Promotion, 10(1), 297. https://doi.org/10.4103/jehp.jehp_35_21

Hen, M., & Goroshit, M. (2014). Academic Procrastination, Emotional Intelligence, Academic Self-Efficacy, and GPA: A Comparison Between Students With and Without Learning Disabilities. Journal of Learning Disabilities, 47(2), 116–124. https://doi.org/10.1177/0022219412439325

Jaleel, F., Kanwal, A., & Aasma. (2022). Peer Relations and Positive Development in Students with Visual Impairment. Journal of Business and Social Review in Emerging Economies, 8(2). https://doi.org/10.26710/jbsee.v8i2.2457

Jumraeni, Suarja, S., Galugu, N., & Zainuri, M. (2023). Academic resilience the roles of parent support and peer support. Jurnal Psikologi Pendidikan & Konseling: Jurnal Kajian Psikologi Pendidikan Dan Bimbingan Konseling, 9(1), 22–28. https://doi.org/10.26858/jpkk.v9i1.38854

Kalaivani, D. (2021). Academic Resilience among Students: A Review of Literature. International Journal of Research and Review, 8(6), 360–369. https://doi.org/10.52403/ijrr.20210646

Karellou, J. (2019). Enabling disability in higher education: A literature review. Journal of Disability Study, 5(2), 47–54.

Khan, A., Hamdan, A. R., Ahmad, R., Mustaffa, M. S., & Mahalle, S. (2016). Problem-Solving Coping and Social Support as Mediators of Academic Stress and Suicidal Ideation Among Malaysian and Indian Adolescents. Community Mental Health Journal, 52(2), 245–250. https://doi.org/10.1007/s10597-015-9937-6

Killam, W., & Castillo, Y. (2021). First Generation College Students and Disability: Assistance with College Experience. Journal of Disability Studies, 7(2), 91–96.

Kiuppis, F., & Hausstätter, R. S. (Eds.). (2015). Inclusive education twenty years after Salamanca. Peter Lang.

Klassen, R. M., & Klassen, J. R. L. (2018). Self-efficacy beliefs of medical students: A critical review. Perspectives on Medical Education, 7(2), 76–82. https://doi.org/10.1007/S40037-018-0411-3

Kolo, A. G., Jaafa, W. M. B. W., & Ahmad, N. B. (2017). Relationship between Academic Self-efficacy Believed of College Students and Academic Performance. IOSR Journal of Humanities and Social Science, 22(01), 75–80. https://doi.org/10.9790/0837-2201067580

Koshy, P., & Seymour, R. (2015). Student Equity Performance in Australian Higher Education: 2007 to 2014. Perth: Curtin University. ncsehe.edu.au

Lehrer-Stein, J., & Berger, J. (2023). A path towards true inclusion: Disabled students and higher education in America. International Journal of Discrimination and the Law, 23(1–2), 126–143. https://doi.org/10.1177/13582291231162215

Lombardi, A., Murray, C., & Kowitt, J. (2016). Social support and academic success for college students with disabilities: Do relationship types matter? Journal of Vocational Rehabilitation, 44(1), 1–13. https://doi.org/10.3233/JVR-150776

Majoko, T. (2018). Participation in higher education: Voices of students with disabilities. Cogent Education, 5(1), 1542761. https://doi.org/10.1080/2331186X.2018.1542761

Martins, M. H. V., & Moriña, A. (2022). Resilience factors in students with Disabilities at a Portuguese University. Pedagogika, 146(2), 110–128. https://doi.org/10.15823/p.2022.146.6

Mir'atannisa, I. M. (2017). Resiliensi Mahasiswa Tunanetra (Studi Kasus Terhadap Mahasiswa Tunanetra Tidak Dari Lahir Di Fakultas Ilmu Pendidikan Universitas Negeri Yogyakarta). E-Journal Bimbingan Dan Konseling.

Murairwa, S. (2014). Voluntary Sampling Design. International Journal of Futuristic Trends in Engineering and Technology, 1(07). http://www.ijftet.wix.com/research

Mutanga, O. (2018). Inclusion of Students with Disabilities in South African Higher Education. International Journal of Disability, Development and Education, 65(2), 229–242. https://doi.org/10.1080/1034912X.2017.1368460

Mutiara Putri Amelia, Sariwulan, Rd. T., & Wahono, P. (2023). Peer Social Support, Adversity Quotient, and Self-Efficacy on Academic Resilience Among Vocational Schools Students. Jurnal Pendidikan Ekonomi, Perkantoran, Dan Akuntansi, 4(2), 64–77. https://doi.org/10.21009/jpepa.0402.06

Naraian, S., & Natarajan, P. (2013). Negotiating Normalcy with Peers in Contexts of Inclusion: Perceptions of youth with disabilities in India. International Journal of Disability, Development and Education, 60(2), 146–166. https://doi.org/10.1080/1034912X.2013.786565

Rahajeng, U. W., Hendriani, W., & Paramita, P. P. (2024). Navigating Higher Education Challenges: A Review of Strategies among Students with Disabilities in Indonesia. Disabilities, 4(3), 678–695. https://doi.org/10.3390/disabilities4030042

Rahma, U., Faizah, F., Perwiradara, Y., Ikawikanti, A., Mayasari, B. M., & Rinanda, T. D. (2020). Analisa School Wellbeing Pada Mahasiswa Disabilitas Tunadaksa, Tuli dan Tunanetra di Perguruan Tinggi Inklusi. Psikovidya, 24(1), 16–32. https://doi.org/10.37303/psikovidya.v24i1.153

Romano, L., Consiglio, P., Angelini, G., & Fiorilli, C. (2021). Between Academic Resilience and Burnout: The Moderating Role of Satisfaction on School Context Relationships. European Journal of Investigation in Health, Psychology and Education, 11(3), 770–780. https://doi.org/10.3390/ejihpe11030055

Permenristekdikti Nomor 46 Tahun 2017. Pendidikan Khusus dan Layanan Khusus di Perguruan Tinggi. BN 2017/No 926; kemenristekdikti.go.id: 10 hlm.

Sachitra, V., & Bandara, U. (2017). Measuring The Academic Self-Efficacy Of Undergraduates: The Role of Gender and Academic Year Experience. https://doi.org/10.5281/ZENODO.1132491

Sagone, E., & Caroli, M. E. D. (2014). Locus of Control and Academic Self-efficacy in University Students: The Effects of Self-concepts. Procedia - Social and Behavioral Sciences, 114, 222–228. https://doi.org/10.1016/j.sbspro.2013.12.689

Sari, L., Afifah, N., & Purna, R. S. (2022). Peran Self-Efficacy Akademik terhadap Resiliensi Akademik pada Mahasiswa Tahun Pertama. Jurnal Consulenza : Jurnal Bimbingan Konseling Dan Psikologi, 5(2), 217–225. https://doi.org/10.56013/jcbkp.v5i2.1526

Shao, Y., & Kang, S. (2022). The association between peer relationship and learning engagement among adolescents: The chain mediating roles of self-efficacy and academic resilience. Frontiers in Psychology, 13, 938756. https://doi.org/10.3389/fpsyg.2022.938756

Sharma, H. L., & Nasa, G. (2014). ACADEMIC SELF-EFFICACY: A RELIABLE PREDICTOR OF EDUCATIONAL PERFORMANCES. British Journal of Education, 2(3), 57–64.

Tudge, J. R. H. (2016). Implicit versus Explicit Ways of Using Bronfenbrenner's Bioecological Theory. Human Development, 59(4), 195–199. https://doi.org/10.1159/000449453

Wulandari, A. P. J. & Istiani. (2021). The effect of self-esteem and self-efficacy on the academic resilience of undergraduate students in Jakarta. IOP Conference Series:

Earth and Environmental Science, 729(1), 012094. https://doi.org/10.1088/1755-1315/729/1/012094

Yoelianita, B. E., & Toga, E. (2022). Hubungan Self-Efficacy dengan Academic Resilience Dimediasi Self-Regulated Learning pada Mahasiswa di Masa Pandemi COVID-19. Holistic Nursing and Health Science, 5(2), 226–237. https://doi.org/10.14710/hnhs.5.2.2022.82-93

Yokoyama, S. (2019). Academic Self-Efficacy and Academic Performance in Online Learning: A Mini Review. Frontiers in Psychology, 9, 2794. https://doi.org/10.3389/fpsyg.2018.02794