

A MULTIDIMENSIONAL STUDY OF SOCIOECONOMIC, INSTITUTIONAL, AND INDIVIDUAL FACTORS REVEALING THE CAUSES AND CONSEQUENCES OF STUDENT DROPOUT RATIO

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Abstract

To study the causes and consequences of school dropout ratio of students, a multidimensional study of socioeconomic, institutional, and individual factors was conducted. The data was collected from the dropout students using snow ball sampling technique. The perception of the dropout students, provided informed consent (n=21), were recorded on a questionnaire tool having 3 main sections entitled as socioeconomic, institutional, and individual factors, each having 8, 6, and 5 close ended items based on 5 point Likert scale, respectively. The results declared that parental illiteracy, unemployment, low income, huge household size, gender inequality and early marriages are the major socioeconomic factors negatively affecting students' dropout ratio. On the other hand, institutional factors are not concomitantly involved in student's dropout from schools, as the schools of district Swabi provided each required facility for the female students to continue their education. Consequently, individual factors are somehow involved in the students' dropout from schools. It could be hypothesized that socioeconomic factors that adversely affect the continuation of female education could also lead the students to develop individual factors with health problems like psychological stress and anxiety, educational aspiration while compelling them to be acutely involved in domestic chores. This study provided a baseline for further qualitative research works to provide in depth studies of these factors that adversely affect the students dropout ratio in schools.

INTRODUCTION

Student dropout from schools is a complex and multidimensional issue in education. It is mainly influenced by various factors such as socioeconomic factors, institutional factors, and individual factors (Bardales et al. 2025; Hirakawa and Taniguchi 2021; Paksi, Széll, and Fehérvári 2023). School dropout is one of the most persistent challenge in world's education systems. While access to schooling has improved in many countries recently, student retention in schools is still a major concern till the accomplishment of formal education. Leaving school before completion not only adversely affect individual learner. But also a major social and economic consequence for families, society, and national development. Dropout students access to limited employment opportunities with low earning.

Socioeconomic conditions play a powerful role in shaping educational experiences. Children from low-income households may struggle with financial instability, food insecurity, or the need to contribute to family income through labor. Parents with limited education may also be less able to provide academic support or navigate school systems. In such circumstances, education can become a secondary priority compared to immediate economic survival (Ewondo Mbebi 2023; Musa and Magaji 2023).

Beyond socioeconomic factors, institutional factors within schools themselves significantly influence students' decisions to remain enrolled or withdraw (Klinke et al. 2024). Qualified teachers, availability of learning resources, school leadership, classroom environment, and school infrastructure are the major institutional factors. These factors shape students' academic experiences. Overcrowded classrooms, lack of basic facilities, teacher absenteeism, or rigid disciplinary practices can weaken students' attachment to school. When students perceive the school environment as unsupportive or irrelevant to their needs, their motivation declines (Van Den Berghe, Vandeveld, and De Pauw 2022).

Subsequently, at the individual level, personal characteristics and experiences further affect dropout outcomes. Academic performance, self-confidence, motivation, peer relationships, and

health conditions can either strengthen or weaken a student's engagement with education. Students who consistently perform poorly or feel socially isolated may gradually lose interest in school. Similarly, psychological stress, early marriage, or behavioral challenges can disrupt educational continuity. These individual factors often interact with socioeconomic and institutional conditions, creating a complex web of influences that shape a student's educational trajectory (Bardales et al. 2025; Delen, Davazdahemami, and Rasouli Dezfouli 2024; Kuno et al. 2021; Limone and Toto 2022).

Research Questions

- What are the effects of socioeconomic factors on student dropout ratio?
- What are the effects of institutional factors on student dropout ratio?
- What are the effects of individual factors on student dropout ratio?

Objectives

- To study the effects of socioeconomic factors on student dropout ratio.
- To study the effects of institutional factors on student dropout ratio.
- To study the effects of individual factors on student dropout ratio.

LITERATURE REVIEW

In order to make a frame of references, the socioeconomic, institutional, and individual factors either increasing or decreasing the school dropout ratio are briefly presented in light of the previous studies.

Socioeconomic Factors affecting Student Dropout Ratio

Socioeconomic factors play a profound role in student dropout rates. These factors are mainly contained household income, community characteristics/norms/cultures, and economic conditions of households (Bardales et al. 2025; Ewondo Mbebi 2023; Guzmán, Barragán, and Cala Vitery 2021; Valencia-Arias et al. 2023). Socioeconomic status is a powerful predictor of

educational accomplishment (Tomaszewski et al. 2021). Socioeconomic factors have a greater impact on student dropout as compared to academic or institutional factors (Bardales et al. 2025). Lower household income frequently correlates with higher dropout rates. Families with limited financial resources may prioritize immediate survival. Such families avoid long-term educational investment (Ewondo Mbebi 2023; Musa and Magaji 2023). Parental education levels also greatly influence the status of a child's schooling. Lower parental literacy lead to reduced support for education (Kuno et al. 2021). Moreover, the lack of financial aid for students like scholarships is also a significant barrier for low-income students. It negatively affect their ability continue education (Silva and Sampaio 2023).

Institutional Factors affecting Student Dropout Ratio

Institutional factors include the characteristics of school and governance structures. These factors significantly impact student retention at various educational stages (Klinke et al. 2024; Santos-Villalba et al. 2023). In primary schools, the facilities available in school, and the characteristics of teaching staff affect dropout rates (Hirakawa and Taniguchi 2021). Some key institutional elements to prevent student dropout include adequate monitoring of attendance, school policy implementation, and limited community participation in school management (Van Den Berghe et al. 2022). Subsequently, the lack of inclusive practices for students with disabilities could increase dropout risks, impacting their access to education (Sasso and Sansour 2024).

Individual Factors affecting Student Dropout Ratio

Individual factors refer students' personal characteristics, academic characteristics, and psychological characteristics (Barragán_Moreno et al. 2025; Paksi et al. 2023; Potane 2024; Valencia Quecano, Guzmán Rincón, and Barragán Moreno 2024). Individual factors include student academic engagement, emotional and behavioral challenges, and insufficient parental support

(Barragán_Moreno et al. 2025; Choi et al. 2023). Academic struggles like learning gaps or repetition of grade, could reduce self-efficacy of students 25. Students' dropout is mainly connected with the psychological/emotional elements, such as educational aspirations, stress/depression, and anxiety (Akbaba Altun and Turan Bora 2024; de Filippis and Foysal 2024; Limone and Toto 2022; Matías-García et al. 2024). Specific demographic characteristics like gender can interact with study conditions. It differentially impact student dropout in various academic fields (Marczuk and Strauss 2023; Verdugo-Castro, Sánchez-Gómez, and García-Holgado 2023). These individual challenges could lead students to either quit or continue their studies (Santos-Villalba et al. 2023; Silva-Martínez, Iglesias-Martínez, and Lozano-Cabezas 2023). Identifying students at risk early, allow for timely interventions (Chinnasamy and Balasubramanian 2022; Delen et al. 2024; Flores, Heras, and Julián 2022; Rodríguez et al. 2023; Sandoval-Palis et al. 2020; Xia and Qi 2024). These interventions are psychological strategies aimed at promoting school well-being as well as providing support for students at risk (Limone and Toto 2022).

RESEARCH METHODS

Sampling Technique

The research was conducted on the drop out students at district Swabi. All the girls' students who intentionally left schools to continue their education were taken as the population. Snow ball sampling technique was used to identify such former students. The dropout students who provided informed consent were included in the sample. Their perceptions were recorded, resulting in a total sample size of 21 participants (n=21).

Data collection Instrument

A quantitative survey tool (questionnaire) was developed having three variables i.e. Socioeconomic Factors, Institutional Factors, and Individual Factors. Each variable consist of close ended items based on Likert scale. The conceptual framework of the study is presented in Figure 1. The items were coded for data analysis and presented in Table 1.

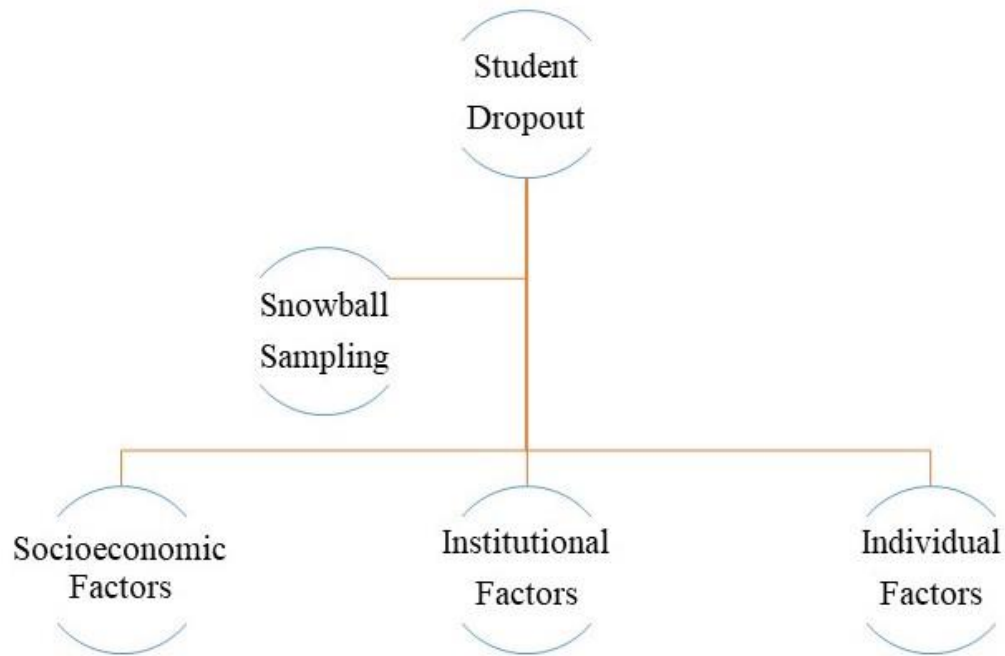


Figure 1. Conceptual framework of multidimensional study of socioeconomic, institutional, and individual factors revealing the causes and consequences of school dropout ratio of students.

Table 1. Variables and items along with its codes used in this study.

Variables	Items	Code
Socioeconomic Factors	Low income of Household	SF1
	Parental unemployment / unstable employment	SF2
	Child labor	SF3
	Parental Illiteracy / low education	SF4
	Large family size / high dependency ratio	SF5
	Cultural norms / Gender inequality	SF6
	Early marriages	SF7
	Migration / displacement / seasonal mobility	SF8
Institutional Factors	Poor quality of teaching and instruction	IF1
	Teacher absenteeism and shortage of trained staff	IF2
	Inadequate school infrastructure and facilities	IF3
	Harsh disciplinary practices or corporal punishment	IF4
	Language of instruction barriers	IF5
	Long distance to school and lack of transport	IF6
Individual Factors	Limited educational aspirations	IndF1
	Learning difficulties and lack of interest in schooling	IndF2
	Health problems, malnutrition, or disability	IndF3
	Psychological stress, anxiety, or low self-esteem	IndF4
	Early entry into work or domestic responsibilities	IndF5

Data Analysis

The data was analyzed using SPSS software, version 20. Descriptive statistic of the data including frequencies, percentages, and weighted means were calculated to get the overall response of each item. To check the overall response of each item, the weighted mean were compared with the selected scale. Moreover the selected scale was developed by coding the Likert scale (Strongly Disagree to Strongly Agree) as 1 to 5, while using the range (5-1=4) and interval (4/5=0.80). Based on this, the selected scale used for the comparison of weighted mean of each item to obtain the overall response for Strongly Disagree (1.00 to 1.79), Disagree (1.80 to 2.53), Neutral (2.60 to 3.39), Agree (3.4 to 4.19), and Strongly Agree (4.2 to 5).

RESULTS

Socioeconomic Factors

The results of socioeconomic factors influencing student’s dropout from schools were presented in Table 2. The perception of dropout students (n=21) were recorded on 8 items (SF1 to SF8 presented in Table 1). The results declared that the response of dropout students was “Strongly Agree” to SF1, SF2, SF4, SF6, and SF8. While their response was “Agree” to SF5, and SF7. Whereas their response was “Disagree” to SF3. Consequently, the percent analysis of socioeconomic factors (SF1 to SF8) presented in Figure 2, revealed that the maximum percent responses were either “Strongly Agree” (34.52%) or “Agree” (32.74%), while the minimum percent responses were either “Disagree” (14.29%), “Strongly Disagree” (12.50), or “Neutral” (12.50%). These results affirmed that socioeconomic factors are strongly influencing the student dropout ratio.

Table 2. Frequencies, total, weighted mean, and overall response of the responses to socioeconomic factors.

Code	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Weighted Mean	Overall Response
SF1	18	3	0	0	0	21	4.85	Strongly Agree
SF2	7	14	0	0	0	21	4.33	Strongly Agree
SF3	0	2	1	18	0	21	2.23	Disagree
SF4	9	12	0	0	0	21	4.42	Strongly Agree
SF5	1	11	9	0	0	21	3.61	Agree
SF6	21	0	0	0	0	21	5.00	Strongly Agree
SF7	2	13	0	6	0	21	3.52	Agree
SF8	0	0	0	0	21	21	1.00	Strongly Disagree

Note: Scale used for the comparison of weighted mean of each item to obtain the overall response: Strongly Disagree (1.00 to 1.79), Disagree (1.80 to 2.53), Neutral (2.60 to 3.39), Agree (3.4 to 4.19), Strongly Agree (4.2 to 5).

Institutional Factors

The results of institutional factors influencing student’s dropout from schools were presented in Table 3. The perception of dropout students (n=21) were recorded on 6 items (IF1 to IF6 presented in Table 1). The results declared that the response of dropout students was “Disagree” to all

the items. Consequently, the percent analysis of institutional factors (IF1 to IF6) presented in Figure 2, revealed that the maximum percent responses were either “Disagree” (87.30%) or “Neutral” (12.70%). These results affirmed that institutional factors do not concomitantly influence the student dropout ratio.

Table 3. Frequencies, total, weighted mean, and overall response of the responses to institutional factors.

Code	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Weighted Mean	Overall Response
IF1	0	0	0	21	0	21	2.00	Disagree
IF2	0	0	0	21	0	21	2.00	Disagree
IF3	0	0	0	21	0	21	2.00	Disagree
IF4	0	0	6	15	0	21	2.29	Disagree
IF5	0	0	10	11	0	21	2.48	Disagree
IF6	0	0	0	21	0	21	2.00	Disagree

Note: Scale used for the comparison of weighted mean of each item to obtain the overall response: Strongly Disagree (1.00 to 1.79), Disagree (1.80 to 2.53), Neutral (2.60 to 3.39), Agree (3.4 to 4.19), Strongly Agree (4.2 to 5).

Individual Factors

The results of socioeconomic factors influencing student's dropout from schools were presented in Table 4. The perception of dropout students (n=21) were recorded on 5 items (IndF1 to IndF8 presented in Table 1). The results declared that the response of dropout students was "Strongly Agree" to IndF1 and IndF4. While their response was "Neutral" to IndF3 and IndF5. Whereas their response was "Disagree" to IndF2. Consequently,

the percent analysis of individual factors (IndF1 to IndF8) presented in Figure 2, revealed that the maximum percent responses were either "Agree" (36.19%) or "Disagree" (36.19%), while the minimum percent responses were either "Strongly Agree" (21.90%) or "Neutral" (5.71%). Interestingly, these results affirmed that individual factors are somehow involved in influencing the student dropout ratio.

Table 4. Frequencies, total, weighted mean, and overall response of the responses to individual factors.

Code	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Weighted Mean	Overall Response
IndF1	14	7	0	0	0	21	4.66	Strongly Agree
IndF2	0	4	0	17	0	21	2.38	Disagree
IndF3	0	7	4	10	0	21	2.85	Neutral
IndF4	9	11	1	0	0	21	4.38	Strongly Agree
IndF5	0	9	1	11	0	21	2.90	Neutral

Note: Scale used for the comparison of weighted mean of each item to obtain the overall response: Strongly Disagree (1.00 to 1.79), Disagree (1.80 to 2.53), Neutral (2.60 to 3.39), Agree (3.4 to 4.19), Strongly Agree (4.2 to 5).

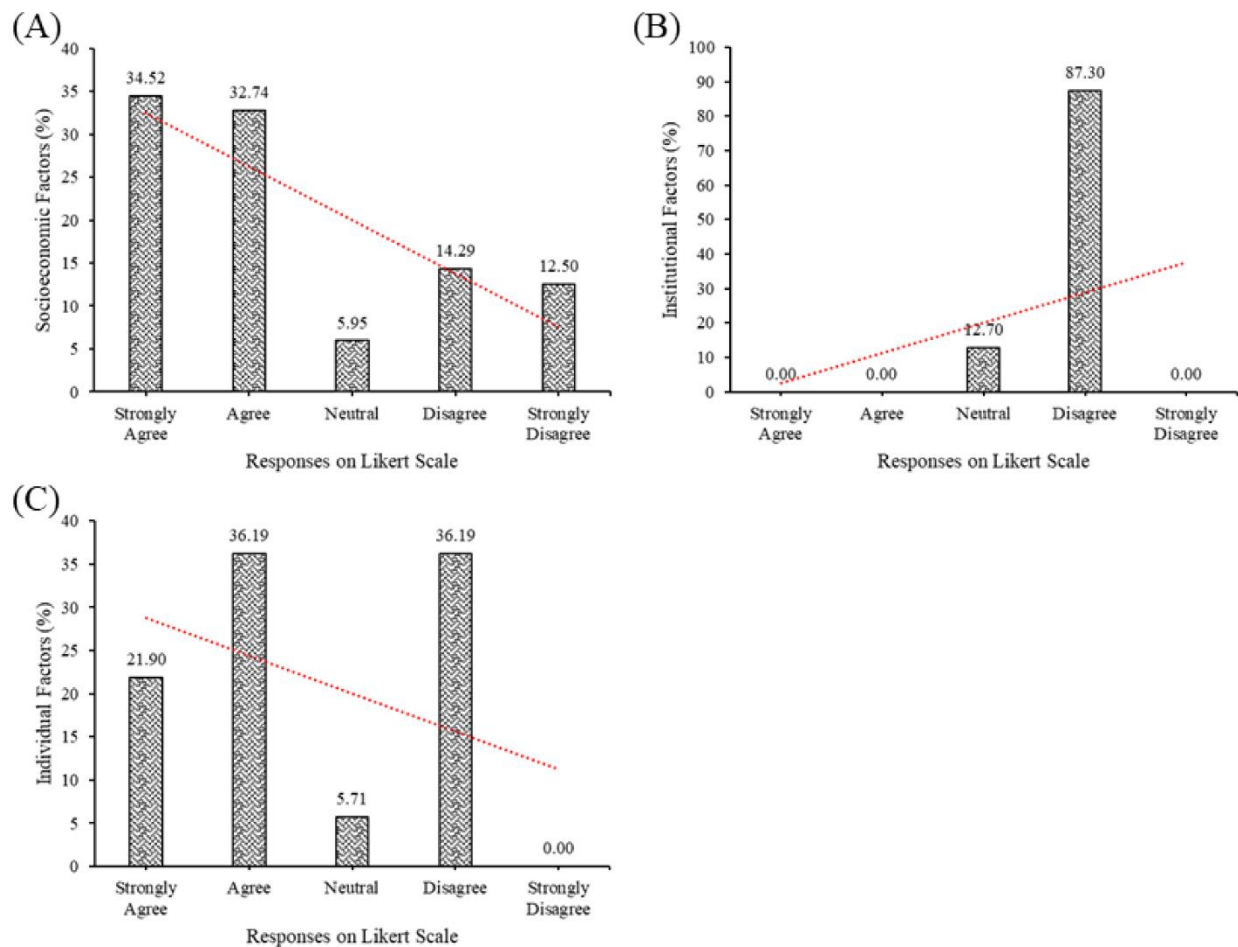


Figure 2. Percentage of all socioeconomic factors (SF1 to SF8 with sum of responses = 168, labelled A), Institutional Factors (IF1 to IF6 with sum of responses = 126, labelled B), and Individual Factors (IndF1 to IndF5 with sum of responses = 105, labelled C), for each response (strongly agree, agree, neutral, disagree, and strongly disagree) on Likert scale (n=21).

DISCUSSION

The socioeconomic factors in this study were included low income of household, parental unemployment / unstable employment, child labor, parental illiteracy / low education, large family size / high dependency ratio, cultural norms / gender inequality, early marriages, and migration / displacement / seasonal mobility. Based on the results presented in Table 2 and Figure 2, it was concluded that socioeconomic factors are significantly involved in student dropout from school. In special case of current study, where the respondents were the female dropout students of district Swabi, it is well documented that the dropout students were not

forced to be involved in child labor activities and/or negatively affected by migration of their families to other places due to some circumstances like seasonal mobility. However, parental illiteracy, unemployment, low income, huge household size, and most significantly, gender inequality and early marriages are the major socioeconomic factors of students' dropout from school. These factors do not let the female candidates to continue their education. On the other hand, the results of institutional factors presented in Table 3 and Figure 2, revealed that these factors are not concomitantly involved in students dropout from schools. The institutional factors studied in current study included, poor

quality of teaching and instruction, teacher absenteeism and shortage of trained staff, inadequate school infrastructure and facilities like overcrowded classrooms, harsh disciplinary practices or corporal punishment, language of instruction barriers, and long distance to school and lack of transport. These results lead us to the idea that government of Pakistan have contributed even efforts in district Swabi to provide each required facility for the female students to continue their education. Moreover, besides the internal school facility, government of Pakistan has adopted well qualified teachers and established the schools near to every community. However, the socioeconomic factors of the community and their cultural norms are adversely affecting the women education in the society. Consequently, individual factors, studied in current study were included, limited educational aspirations, learning difficulties and lack of interest in schooling, health problems, malnutrition, or disability, psychological stress, anxiety, or low self-esteem, and early entry into work or domestic responsibilities. The results of individual factors, presented in Table 4 and Figure 2, are somehow involved in the students' dropout from schools. From these results, it could be hypothesized that socioeconomic factors that adversely affect the continuation of female education could also lead the students to develop individual factors with health problems like psychological stress and anxiety, educational aspiration while compelling them to be acutely involved in domestic chores. The results of current study were supported by prior works (Bardales et al. 2025; Delen et al. 2024; Flores et al. 2022; Hirakawa and Taniguchi 2021; Klinke et al. 2024; Kuno et al. 2021; Marczuk and Strauss 2023; Paksi et al. 2023; Silva and Sampaio 2023; Silva-Martinez et al. 2023; Tomaszewski et al. 2021; Van Den Berghe et al. 2022; Xia and Qi 2024).

CONCLUSION

The multidimensional study of socioeconomic, institutional, and individual factors concluded that the school dropout ratio are mainly affected by socioeconomic factors. Parental illiteracy, unemployment, low income, huge household size,

and most significantly, gender inequality and early marriages are the major socioeconomic factors of students' dropout ratio. On the other hand, institutional factors are not concomitantly involved in student's dropout from schools. However, the socioeconomic factors of the community and their cultural norms are adversely affecting the women education in the society. Consequently, individual factors are somehow involved in the students' dropout from schools. It could be hypothesized that socioeconomic factors that adversely affect the continuation of female education could also lead the students to develop individual factors with health problems like psychological stress and anxiety, educational aspiration while compelling them to be acutely involved in domestic chores.

Author's contributions:

Dr. Rozina Tabassum conducted the study, performed data collection and analysis, and wrote the manuscript. Dr. Mushtaq Ahmad, Ms. Mubashira Akbar, Ms. Tahira Naz, Dr. Maryam Hakeem, and Dr. Farzana Naheed Salim reviewed and revised the manuscript. All authors were agreed to the final version of this manuscript.

Conflicts of Interest

The authors declared that they have no competing interest.

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REFERENCES

- Akbaba Altun, Sadegül, and Hatice Turan Bora. 2024. "Voices from the Field: What Do Turkish Students Suggest? A Socio-Ecological Study on School Belonging." *Child Indicators Research* 17(3):1329-54. doi:10.1007/s12187-024-10130-9.

- Bardales, Einstein Sánchez, Angelica María Carrasco Rituay, Yuri Reina Marín, Omer Cruz Caro, Milena Torres Fernández, and River Chávez Santos. 2025. "Determinants of Academic Desertion: A Case Study in a Peruvian University." *Power and Education* 17577438241312617. doi:10.1177/17577438241312617.
- Barragán_Moreno, Sandra Patricia, Alfredo Guzmán_Rincón, Gloria Patricia Calderón_Carmona, Leandro González_Támara, and Oscar Leonardo Lozano_Galindo. 2025. "Identifying Key Variables of Student Dropout in Preschool, Primary, Secondary, and High School Education: An Umbrella Review Approach." *European Journal of Educational Research* 14(2):585-600. doi:10.12973/eu-jer.14.2.585.
- Chinnasamy, Rajagopal, and Thangavel Balasubramanian. 2022. "Tucker's Congruence Regressive Feature Projected Tversky Discriminant Multiple Instance Learning Boost Data Classification for School Student Dropout Prediction." *Concurrency and Computation: Practice and Experience* 34(18):e7021. doi:10.1002/cpe.7021.
- Choi, Jieun, Jiwon Lee, Mi Yeon Park, and Hyoun K. Kim. 2023. "Heterogeneity in Korean School Dropouts and Its Associations with Emerging Adulthood Adjustment." *Journal of Applied Developmental Psychology* 85(101509). doi:10.1016/j.appdev.2022.101509.
- Delen, Dursun, Behrooz Davazdahemami, and Elham Rasouli Dezfouli. 2024. "Predicting and Mitigating Freshmen Student Attrition: A Local-Explainable Machine Learning Framework." *Information Systems Frontiers* 26(2):641-62. doi:10.1007/s10796-023-10397-3.
- Ewondo Mbebi, Olivier. 2023. "School Dropout in Cameroon and Its Determinants." *International Review of Education* 69(5):691-714. doi:10.1007/s11159-023-10017-x.
- de Filippis, Rocco, and Abdullah Al Foysal. 2024. "Comprehensive Analysis of Stress Factors Affecting Students: A Machine Learning Approach." *Discover Artificial Intelligence* 4(1):62. doi:10.1007/s44163-024-00169-6.
- Flores, Vaneza, Stella Heras, and Vicente Julián. 2022. "A New Methodological Framework for Project Design to Analyse and Prevent Students from Dropping Out of Higher Education." *Electronics* 11(18). doi:10.3390/electronics11182902.
- Guzmán, Alfredo, Sandra Barragán, and Favio Cala Vitery. 2021. "Dropout in Rural Higher Education: A Systematic Review." *Frontiers in Education* 6. doi:10.3389/educ.2021.727833.
- Hirakawa, Yukiko, and Kyoko Taniguchi. 2021. "School Dropout in Primary Schools in Rural Cambodia: School-Level and Student-Level Factors." *Asia Pacific Journal of Education* 41(3):527-42. doi:10.1080/02188791.2020.1832042.
- Klinke, Clemens, Katharina Kulle, Bettina Schreyögg, Katharina Fischer, and Marcus Eckert. 2024. "Equal Opportunities for Non-Traditional Students? Dropout at a Private German Distance University of Applied Sciences." *European Journal of Psychology of Education* 39(4):4003-24. doi:10.1007/s10212-024-00829-2.
- Kuno, Caroline Bena, Sascha Hein, Leslie Frankel, and Han Joe Kim. 2021. "Children's Schooling Status: Household and Individual Factors Associated with School Enrollment, Non-Enrollment and Dropping out among Ugandan Children." *International Journal of Educational Research Open* 2:100033. doi:10.1016/j.ijedro.2021.100033.

- Limone, Pierpaolo, and Giusi Antonia Toto. 2022. "Psychological Strategies and Protocols for Promoting School Well-Being: A Systematic Review." *Frontiers in Psychology* 13. doi:10.3389/fpsyg.2022.914063.
- Marczuk, Anna, and Susanne Strauss. 2023. "Does Context Matter? The Gendered Impact of Study Conditions on Dropout Intentions from Higher Education." *Zeitschrift Für Erziehungswissenschaft* 26(5):1349–71. doi:10.1007/s11618-023-01175-7.
- Matías-García, Jose Antonio, Mercedes Cubero, Andrés Santamaría, and Miguel Jesús Bascón. 2024. "The Learner Identity of Adolescents with Trajectories of Resilience: The Role of Risk, Academic Experience, and Gender." *European Journal of Psychology of Education* 39(3):2739–61. doi:10.1007/s10212-024-00839-0.
- Musa, Ibrahim, and Sule Magaji. 2023. "Nexus Between Household Income and Child Labor in Northeastern Nigeria." *African Journal of Social Sciences and Humanities Research* 6(3):57–70. doi:10.52589/AJSSHR-YLWQGNJ2.
- Paksi, Borbála, Krisztián Széll, and Anikó Fehérvári. 2023. "Empirical Testing of a Multidimensional Model of School Dropout Risk." *Social Sciences* 12(2). doi:10.3390/socsci12020050.
- Potane, Joel D. 2024. "Factors Affecting Student Drop-Out Behavior: A Systematic Review Text." *International Journal of Educational Management and Innovation*. doi:10.12928/IJEMI.V5I1.9396.
- Rodríguez, Patricio, Alexis Villanueva, Liubov Dombrowskaia, and Juan Pablo Valenzuela. 2023. "A Methodology to Design, Develop, and Evaluate Machine Learning Models for Predicting Dropout in School Systems: The Case of Chile." *Education and Information Technologies* 28(8):10103–49. doi:10.1007/s10639-022-11515-5.
- Sandoval-Palis, Iván, David Naranjo, Jack Vidal, and Raquel Gilar-Corbi. 2020. "Early Dropout Prediction Model: A Case Study of University Leveling Course Students." *Sustainability* 12(22). doi:10.3390/su12229314.
- Santos-Villalba, María Jesús, María José Alcalá del Olmo Fernández, Marta Montenegro Rueda, and José Fernández Cerero. 2023. "Incident Factors in Andalusian University Dropout: A Qualitative Approach from the Perspective of Higher Education Students." *Frontiers in Education* 7. doi:10.3389/feduc.2022.1083773.
- Sasso, Isabella, and Teresa Sansour. 2024. "Risk and Influencing Factors for School Absenteeism among Students on the Autism Spectrum—A Systematic Review." *Review Journal of Autism and Developmental Disorders*. doi:10.1007/s40489-024-00474-x.
- Silva, Polyana Tenório de Freitas e, and Luciano Menezes Bezerra Sampaio. 2023. "Does Student Aid Make a Degree More Likely? Evidence of the Permanence Scholarship Program from Survival Models." *International Journal of Educational Development* 96:102697. doi:10.1016/j.ijedudev.2022.102697.
- Silva-Martínez, Gardenia, Marcos Jesús Iglesias-Martínez, and Inés Lozano-Cabezas. 2023. "A Qualitative Study on Barriers in Learning Opportunities in Ecuadorian Higher Education." *Societies* 13(3). doi:10.3390/soc13030056.
- Tomaszewski, Wojtek, Yangtao Huang, Ning Xiang, Anaïd Flesken, Brianna McCourt, and Ian McCarthy. 2021. "Investigating the Drivers of Higher Education Expectations among Students from Low and High Socio-Economic Backgrounds in Australia." *International Journal of Educational Research* 109:101822. doi:10.1016/j.ijer.2021.101822.

- Valencia Quecano, Lira Isis, Alfredo Guzmán Rincón, and Sandra Barragán Moreno. 2024. "Dropout in Postgraduate Programs: A Underexplored Phenomenon - a Scoping Review." *Cogent Education* 11(1):2326705. doi:10.1080/2331186X.2024.2326705.
- Valencia-Arias, Alejandro, Salim Chalela, Marcela Cadavid-Orrego, Ada Gallegos, Martha Benjumea-Arias, and David Yeret Rodríguez-Salazar. 2023. "University Dropout Model for Developing Countries: A Colombian Context Approach." *Behavioral Sciences* 13(5). doi:10.3390/bs13050382.
- Van Den Berghe, Lana, Stijn Vandeveld, and Sarah S. W. De Pauw. 2022. "School Dropout as the Result of a Complex Interplay between Individual and Environmental Factors: A Study on the Perspectives of Support Workers." *Teachers and Teaching* 28(5):603-17. doi:10.1080/13540602.2022.2062748.
- Verdugo-Castro, Sonia, Ma Cruz Sánchez-Gómez, and Alicia García-Holgado. 2023. "Factors Associated with the Gender Gap in the STEM Sector: Comparison of Theoretical and Empirical Concept Maps and Qualitative SWOT Analysis." *Heliyon* 9(6):e17499. doi:10.1016/j.heliyon.2023.e17499.
- Xia, Xiaona, and Wanxue Qi. 2024. "Driving STEM Learning Effectiveness: Dropout Prediction and Intervention in MOOCs Based on One Novel Behavioral Data Analysis Approach." *Humanities and Social Sciences Communications* 11(1):430. doi:10.1057/s41599-024-02882-0.

