

Student's Perceptions About Parental Disputes and Its Effect on Educational Performance

Sumera Tul Hasan¹, Sumaira Bano², Muhammad Imran³ and Hina Maryam⁴

<https://doi.org/10.62345/jads.2024.13.3.81>

Abstract

This descriptive study investigated the influence of parental disputes on the educational accomplishment of their offspring, with a specific emphasis on three primary dimensions: academic performance, study motivation, and attitudes toward education. The data obtained from Ghazi University DG Khan (N= 391) students indicates a significant degree of variability in the views held by these individuals. The data reveals that a substantial proportion of participants agree that disputes between parents have a negative impact on their scholastic accomplishments, as shown by an average rating of 2.52 on a five-point Likert scale. Moreover, students have reported that they experience a decrease in motivation (mean= 2.59) and develop a negative attitude towards their academic pursuits (mean= 2.82) due to disputes within their parental relationships. The statistical analysis of variance (ANOVA) provides further evidence to support the existence of these variations, demonstrating that there are highly significant differences between groups about all features ($p < 0.005$). The results above underscore the need to provide assistance and implement interventions to effectively mitigate the repercussions of family disagreements on adolescents' educational outcomes and facilitate academic achievement. The study concluded that students' perceptions of parental disputes are closely related to their emotional and psychological well-being, which directly impacts their academic performance. These perceptions, combined with the frequency and intensity of parental conflict, create an environment that can either deter or encourage resilience in children.

Keywords: Educational Achievements, Parental Conflicts, Motivation, Attitude.

Introduction

Education plays a pivotal role in an individual's career and overall development by providing knowledge, skills, opportunities, personal growth, adaptability, empowerment, and societal impact. It provides individuals with the opportunity to acquire knowledge, skills, and competencies that are essential for personal and professional growth (So et al., 2022). A higher level of education often leads to greater recognition and respect in society. Education not only imparts academic knowledge but also helps in personal development. It promotes creative thinking, problem-solving abilities, creativity, and operational communication skills. Education empowers individuals by providing them with the necessary tools and knowledge to make informed decisions. Education helps individuals break the cycle of poverty by opening up opportunities for better jobs and higher

¹Assistant Professor, Department of Sociology, University of Okara, Punjab, Pakistan.

²Lecturer, Department of Sociology, Ghazi University, Dera Ghazi Khan.

³Lecturer, Department of Economics, Ghazi University, Dera Ghazi Khan.

⁴MPhil in Sociology, Department of Sociology, University of Okara, Punjab, Pakistan.



Copyright: © This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

Compliance with ethical standards: There are no conflicts of interest (financial or non-financial). This study did not receive any funding.

income levels. It has intrinsic value and can bring a sense of personal fulfilment and satisfaction (Ran et al., 2023).

Parent-child conflicts can certainly arise from a wide range of issues, both minor and major. While trivial issues like clothing choices or bedtime routines may seem insignificant in the grand scheme of things, they can still contribute to conflicts and tensions within the parent-child relationship. On the other hand, serious conflicts may involve issues related to the safety, well-being, or moral development of the child. These conflicts often require immediate attention and resolution to ensure the child's best interests are protected. One of the fundamental goals of parenting is socialization (Le et al., 2024). Socialization refers to the process through which parents teach their children the values, norms, and behaviors that are considered appropriate within a particular society. It involves imparting moral values, cultural beliefs, and social skills to help children become functioning members of society (Zhang et al., 2024).

There are various kinds of conflict in relationships, and not all conflict is necessarily harmful. However, it's essential to consider how conflict is expressed, its frequency, and how it is managed, particularly in the situation of children's well-being. Parental conflict impacts on children can be significant regardless of the family structure. Some ways in which conflict within families can affect children are emotional distress, behavioral problems, psychological well-being, relationship difficulties, and academic performance (Abdel et al., 2024).

It is moderately normal for individuals to have differences of opinion, and the same is true for family members. Still, if the changes of views become very strong and important to active hostility, it is termed a family conflict. Children are more likely to experience emotional, social, and behavioral issues, in addition to low academic performance and reduced attention, when children's parents are often at odds. Family conflict can be spoken, physical, sensual, financial, or emotional, leading to harmful and risky behaviors, poor attachment styles, and interactive relationship struggles. Bickering, cold shoulder, and eye-rolling are common features in many families. However, it may lead to psychological difficulties for various children, including depression, anxiety, poor sleep, and violent behavior (Madhani et al., 2017).

Family issues can have a significant impact on students and their ability to succeed in school. Stress, anxiety, and depression related to family problems can affect a student's emotional well-being and ability to focus in class (Yang et al., 2024). Financial difficulties caused by family problems can also affect a student's ability to afford school supplies and extra-curricular activities. Additionally, parental conflicts, substance abuse, and other serious issues within the family can create an insecure home environment that can negatively impact a student's academic performance. Educators and school staff need to be aware of these potential issues and provide support and resources to students who may be affected by family problems (Wątróbski et al., 2022).

Parents serve as role models for their children. Children are more likely to model their relationships after those of their parents. Children are strongly influenced to replicate those policies in their relationships with their couples when they observe and practice behaviors in the family situation, such as conflict handling. In the meantime, if the parental conflict is handled correctly, positive relationships between parents and children can develop during conflict. Positive parent-child relationships are also associated with improved behavior among siblings (Aslan et al., 2024).

Conflicts between parents have a long-term effect on a child's self-esteem. Parental clashes have destructive consequences for the character of kids. They exhibit spirits of being trapped, lack of energy, motivation, and physical activity, as well as depression and potentially harmful behaviors, a sense that they are powerless to change anything, relationship problems, poor academic performance, and low self-esteem. Children who experience conflict with their parents develop

personality gaps, exhibit low self-esteem, and engage in conflict in both their professional and marital lives (Hu et al., 2021).

Statement of the Problem

Although parental disagreements are widely acknowledged as a significant psychosocial stressor within the home setting, more thorough research is still needed about the precise impact of such conflicts on children's educational achievement. The primary objective of this research was to examine the scope and characteristics of these impacts and to identify prospective variables that may influence or mitigate the association between parental disputes and children's educational achievements. By elucidating this information deficit, the study contributed to a more comprehensive understanding of ways to promote academic achievement in children amidst parental disagreement.

Objectives of the Study

1. To examine the effects of parental conflicts on children's academic performance.
2. To find out the impact of parental educational background on children's academic performance.
3. To find out some measures to minimize parental conflicts and their impact on children's academic performance.

Hypothesis

Hypothesis-1: More will be parent's conflicts; less will be academic achievement

Hypothesis-2: More will be parents' conflicts; less will be motivation to study

Hypothesis-3: More will be parents' conflicts; more will be a negative attitude towards the study

Hypothesis-4: More will be parent's conflicts; more will be students' academic careers demolished

Hypothesis-5: Higher the parents' education; the more will be check and balance on students' academic performance.

Literature Review

Parental relationships can influence children's academic performance and emotional well-being; it is not exact to make sweeping generalizations about the outcomes based just on the frequency of parental disputes. The effects are complex and dependent on various factors, and it's crucial to consider the individual experiences and circumstances of each child. Children learn about relationships through observation and experience, and their parents serve as primary examples for understanding how relationships work (Guo et al., 2024). Suppose they witness unhealthy dynamics, such as frequent arguments, lack of affection, or poor communication. In that case, they may internalize these negative patterns and carry them into their interactions with others, including their classmates (Anjum et al., 2021).

Parental conflict can manifest in various ways, depending on the nature and intensity of the disagreements. The frequency, mode of expression, and intensity of conflicts between parents can all influence how these conflicts affect the parent-child relationship (Sunikka-Blank, 2020). When parental conflict is intense, it often involves more hostile and negative behaviors. This can include things like criticism, screaming, verbal and physical threats, and even physical aggression, such as pushing and shoving (Croney et al., 2023).

Sun et al. (2024) studied surviving solitary verbal conflict by children visible to spouse abuse and children. In the conflict related to a political candidate, 62% of the children offered negative responses, while only 38% responded positively. Conversely, in the conflict regarding money, only

3% of children gave negative responses, while 97% responded positively. For the conflict related to money, just over half of the responses (53%) were considered primary control methods, while most of the remaining responses (42%) were categorized as secondary control methods. A small percentage (5%) of reactions was classified as abandoned control. The study also examined the age differences in children's coping strategies (Li et al., 2020).

The youngest age group showed a higher tendency to use primary control methods for coping with all conflict topics (71%). In comparison, a smaller percentage used secondary control strategies (20%) or indicated relinquished control (9%). In the oldest age group, more than half of the children (63%) used primary control methods. In comparison, a larger portion (33%) described secondary control strategies and only a small percentage (4%) indicated relinquished control. Although the study did not consider children's sense of responsibility for conflict, the majority did respond with primary coping strategies to all conflict scenarios.

Nti et al. (2023) scrutinized the risk and defensive factors associated with lower academic performance among Asian American first-year undergraduates. Approximately 42% of the Hmong participants in the study self-identified as immigrants or first-generation immigrants. The study found that 38% of the participants reported that their fathers had an education level at or below high school, while the rest reported education levels above high school. The study found that both parents' marital status and academic aptitude rating significantly influenced first-semester GPA (Mattioli & Scheiner, 2022). Parent-marital status accounted for 7.5% of the total variance, indicating that students' parents being married or not had an impact on their academic performance. Academic aptitude rating accounted for 4.3% of the total variance, suggesting that students' perceived academic ability affected their GPA. The study indicated that the impact of family conflict on academic performance may be influenced by students' overall satisfaction with their lives.

Cai and Zhao (2024) explored how children respond emotionally, physiologically, cognitively, and behaviorally when showing different types of spousal conflict. The trials by which parental conflict forms development and mental health over time are illuminated. The study integrated findings from cutting-edge research programs, including both laboratory and home-based studies. Applications of longitudinal and multi-method measures are thoroughly explained. Further details on featured instruments and approaches are provided in the appendices (Zhang et al., 2024). Synthesizing an impressive body of knowledge, the study identified key directions for future work in the field. For researchers in evolving psychology and family studies, child clinical psychologists and psychiatrists, family therapists and counsellors, and social workers, it provides crucial insights and tools. Graduate students will find it a highly informative supplemental text.

Zheng et al. (2024) analyzed the connection between students' academic success at school and family violence in their lives in the seventh and eighth grades. One hundred thirty-seven parents answered the students' about the students' academic success. This issue is not limited to violence committed by mothers against their husbands. Domestic violence can occur in various forms and involve individuals of any gender. The impact on children's success depends on the overall environment of violence and the level of exposure rather than the specific gender dynamics. It seems that the study suggested that society may view violent behaviors from fathers toward mothers as more socially acceptable compared to violent behaviors from mothers toward fathers. Additionally, the study proposes that children may experience more negative psychological effects when exposed to violent behaviors from their mothers toward their fathers compared to the reverse situation (Labore et al., 2021).

The research conducted by Al-Sulaiti et al. (2010) examined the impact of adverse home environments on academic achievement. The majority of the enrolled students in the study came from married biological parents (44.4%). Interestingly, students from separated parents showed the highest correlation with marks/GPA, indicating that this group performed well academically. Moreover, while 61.1% of students reported coming from an average social and economic status, it is worth mentioning that the single participant from a significantly less average social and economic status achieved higher marks/GPA than the average of additional groups combined. The study hypothesized that adverse home environment factors would be related to GPA. However, when conducting bivariate correlation tests, no significant relationships were found between any of the unfavorable factors and GPA. These results indicated that the independent variables considered in the study had no effects on academic achievement. It was concluded that people with favorable home circumstances were more likely to pursue post-secondary education than those with family environments. The findings revealed that students who pursued post-secondary education and came from challenging home circumstances (Ramzan et al., 2023).

Methodology

This descriptive study used a quantitative method. The study population was male and female students drawn randomly from different departments at Ghazi University, D.G. Khan. The total population of Ghazi University is 10938 students, while 391 students (260 male and 131 female) were selected randomly in Ghazi University, Dera Ghazi Khan.

Results & Discussion

Table 1: Association between student's academic achievements and parental conflicts

Categories	Parental conflicts effects on their academic performance					Total
Strongly agree	48	15	1	1	1	66
Agree	40	114	11	5	0	170
Neutral	10	25	20	3	0	58
Disagree	9	23	10	35	1	78
Strongly disagree	2	2	2	2	11	19
Total	109	179	44	46	13	391

Chi-Square Value = 403.271 (p - value = .000) Degree of Freedom = 16 Gamma Value = .666 (p - value = .000)

The table presents statistical results related to the association between variables, specifically between students' academic achievements, parental conflicts, and their effects on academic performance. The chi-square value of 403.271 indicates a significant association between the variables, with a probability of 0.000. Additionally, the Gamma value of 0.666 suggests a positive correlation between the variables. In this case, the researcher has found that there is a relationship between students' low academic achievements and parental conflicts, which significantly impact their academic performance (P = 0.000). Based on these quantitative figures, the researcher can conclude that if conflicts between parents persist, they have profound effects on their children's academic performance, resulting in lower marks or CGPA in exams. Therefore, the hypothesis titled "less academic achievement was associated with more parents' conflicts" is statistically accepted based on the obtained results".

Table 2: Association between parental conflicts and effects on academic performance of students

Categories	Students have no motivation to study due to parental conflicts					Total
Strongly agree	36	41	11	19	2	109
Agree	22	98	27	26	6	179
Neutral	2	18	11	12	1	44
Disagree	1	10	3	29	3	46
Strongly disagree	1	0	0	4	8	13
Total	62	167	52	90	20	391

Chi-Square Value = 182.361 (p - value = .000) Degree of Freedom = 16 Gamma Value = .470 (p - value = .000)

The chi-square value of 182.361 indicates a significant association between the variables, with a probability of 0.000 or ($p < .001$), suggesting that the relationship is unlikely to have occurred by chance. The positive correlation between the variables, which has a Gamma value of 0.470, suggests that students tend to be less motivated to study when there are more conflicts between parents. The relationship between parental conflicts and students' lack of motivation to study is also found to be significant ($P = .000$), further supporting the idea that there is a strong connection between these factors.

Based on these findings, the researcher can conclude that when conflicts between parents persist, their children become less motivated to study. Therefore, the researcher can accept the hypothesis that "more parents' conflicts are associated with less motivation to study" based on the statistically significant results obtained from the analysis.

Table 3: Association between parental and attitude of student towards studies

Categories	Students have a negative attitude towards studies due to parental conflicts					Total
Strongly agree	29	38	14	25	3	109
Agree	12	90	29	39	9	179
Neutral	2	12	14	15	1	44
Disagree	0	8	2	35	1	46
Strongly disagree	0	1	0	3	9	13
Total	43	149	59	117	23	391

There is a significant association between parental conflicts and students' attitude towards studies. The chi-square value of 198.135 indicates a significant relationship between the variables, with a probability of 0.000 (or $p = .000$), suggesting that this association is not likely due to chance. The Gamma value of 0.447 specifies a positive relationship between the variables, indicating that students' negative attitudes toward their studies tend to rise in tandem with an increase in parental conflict. Based on these findings and the obtained hypothesis, the researcher can conclude that when conflicts between parents persist, students tend to develop a more negative attitude towards studies due to parental conflicts. The statistical acceptance of the hypothesis, titled "more parents' conflicts were associated with a more negative attitude towards study," suggests that the data supports this conclusion.

Table 4: Association between parental conflicts effects and student's academic career

Categories	Students' academic career has been demolished due to parental conflicts					Total
Strongly agree	38	31	17	16	7	109
Agree	17	75	39	44	4	179
Neutral	1	11	17	12	3	44
Disagree	2	14	3	26	1	46
Strongly disagree	0	1	1	4	7	13
Total	58	132	77	102	22	391

Chi-Square Value = 146.123 (p - value = .000) Degree of Freedom = 16 Gamma Value = .401 (p - Value = .000).

In this table chi-square (146.123) esteem investigated a critical (likelihood = .000) relationship between the factors. The variables are correlated positively by the Gamma value (.401). Due to parental conflict, the relationship between academic performance and students' academic careers has been destroyed, but it is still significant (P = .000). In light of the quantitative results obtained for the hypothesis, the researcher can state in this table that, if parental disputes persist, students' academic careers will be ruined. Consequently, keeping in mind these obtained results presents hypothesis titled "more parents' conflicts was associated with more students' academic career demolished" is statistically accepted.

Table 5: Association between parents check and children's academic performance

	Parental educational background effects on children's academic performance					Total
Strongly agree	40	26	7	8	5	86
Agree	19	129	20	23	3	194
Neutral	12	12	23	10	0	57
Disagree	7	12	7	16	0	42
Strongly disagree	1	1	1	3	6	12
Total	79	180	58	60	14	391

Chi-Square Value = 206.095 (p - value = .000) Degree of Freedom = 16 Gamma Value = .376 (p - Value = .000)

In this table chi-square (206.095) value explored a significant (probability = .000) association between the variables. The Gamma value (.376) shows a positive correlation between the variables. The relationship between parents kept check and balance on their studies and parental educational background effects on children's academic performance but significant (P = .000). Keeping in mind obtained hypothesis quantitative figures the researcher can say that in this table if parents never keep check and balance on their studies so parental educational background effects on children's academic performance. Consequently, keeping in mind these obtained results presents hypothesis titled "more check and balance on students studies was connected with more parents' educational background effects on student academic performance" is statistically accepted.

Table No. 7 Descriptive Analysis

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Students' have low academic achievements due to parental conflicts	Strongly agree	109	1.8716	1.01014	.09675	1.6798	2.0633
	Agree	179	2.3464	.84974	.06351	2.2210	2.4717
	Neutral	44	3.0227	.87574	.13202	2.7565	3.2890
	Disagree	46	3.6957	.81294	.11986	3.4542	3.9371
	Strongly disagree	13	4.6154	1.12090	.31088	3.9380	5.2927
	Total	391	2.5243	1.13173	.05723	2.4118	2.6368
Students' have no motivation to study due to parental conflicts	Strongly agree	109	2.1743	1.12911	.10815	1.9599	2.3887
	Agree	179	2.4190	.99317	.07423	2.2725	2.5655
	Neutral	44	2.8182	.97104	.14639	2.5230	3.1134
	Disagree	46	3.5000	.98319	.14496	3.2080	3.7920
	Strongly disagree	13	4.3846	1.12090	.31088	3.7073	5.0620
	Total	391	2.5882	1.15326	.05832	2.4736	2.7029
Students' have a negative attitude towards studies due to parental conflicts	Strongly agree	109	2.4037	1.18727	.11372	2.1783	2.6291
	Agree	179	2.6816	1.04626	.07820	2.5272	2.8359
	Neutral	44	3.0227	.95208	.14353	2.7333	3.3122
	Disagree	46	3.6304	.79885	.11778	3.3932	3.8677
	Strongly disagree	13	4.5385	.87706	.24325	4.0085	5.0685
	Total	391	2.8159	1.15108	.05821	2.7014	2.9303

Table (7) indicates substantial variation among students in their assessments of the influence of parental disputes on their academic achievement; desire to engage in studying, and overall attitude toward their studies. Regarding academic accomplishments, a significant majority of individuals agree or strongly concur that parental disputes adversely impact their academic success. The average answer to this statement is approximately 2.52 on a five-point scale. Likewise, it has been seen that adolescents exhibit reduced levels of motivation and adopt a pessimistic outlook toward their academic pursuits due to disputes within the family sphere. The average scores for these variables were 2.59 and 2.82, respectively. The results of this study indicate that a significant proportion of the students surveyed believe that parental conflicts negatively affect their education, specifically concerning their motivation and attitude. This highlights the importance of supporting and implementing interventions to address these concerns and enhance their educational achievements effectively.

Table 8: Analysis of Variance

ANOVA		Sum of Squares	DF	Mean Square	F	Sig.
Students' have low academic achievements due to parental conflicts	Between Groups	182.999	4	45.750	55.792	.000
	Within Groups	316.520	386	.820		
	Total	499.519	390			
Students' have no motivation to study due to parental conflicts	Between Groups	106.320	4	26.580	24.879	.000
	Within Groups	412.386	386	1.068		
	Total	518.706	390			
Students' have a negative attitude towards studies due to parental conflicts	Between Groups	92.729	4	23.182	21.104	.000
	Within Groups	424.013	386	1.098		
	Total	516.742	390			

The analysis of variance (ANOVA) findings reveal statistically significant variations between the groups concerning students' opinions of the influence of parental disputes on their academic accomplishments; desire to engage in studying, and attitude towards their studies. Concerning each of the three factors mentioned, it is seen that the variation between groups is much greater than the variance within groups. This is shown by the very significant F-statistics obtained for academic accomplishments ($F = 55.792$), motivation ($F = 24.879$), and attitude ($F = 21.104$), all of which have p-values less than 0.001. Various findings indicate significant variations in students' reactions across the different answer categories (strongly agree, agree, neutral, disagree, and strongly disagree), suggesting that parental disputes have a noticeable influence on various elements of their academic experience.

Societal Analysis

Parental conflicts can profoundly affect students' academic achievement and emotional well-being. This analysis explores the intricate relationship between parental disputes and educational performance, delving into the emotional, psychological, social, and long-term consequences for students. The findings of this study shows the following key points

Emotional Distress and Psychological Impact: Parental disputes often lead to heightened anxiety and depression among students. This emotional turmoil distracts them from their studies, significantly hindering their ability to concentrate and perform academically.

Disrupted Family Dynamics: Ongoing conflicts disrupt household routines, affecting sleep schedules, study habits, and overall academic support. This instability can result in inconsistent academic performance and increased stress for students.

Devaluation of Education: In the midst of family struggles, students may come to view education as less significant. This shift in perception can lead to a lack of motivation and engagement in their studies.

Social Consequences: The fallout from parental disputes can manifest in social challenges, such as bullying and isolation. Students may struggle to form and maintain relationships, which further diminishes their academic motivation and performance.

Long-term Consequences: The impacts of parental conflicts can outspread into the future, with low academic performance and unsettled emotional disturbance potentially harming students' educational and career prospects.

Conclusion

The study was about “students’ perception about parental conflicts and its effects on their educational achievements: A study in Ghazi University”. The aimed of the study were to investigate the effects of parental conflicts on children’s academic performance; to find out the effects of parental educational background on children’s academic performance; and to investigate some measures how to control/minimize parental conflicts and their effects on children’s performance. It was concluded that less academic achievement was associated with more parent’s conflicts. Bi-variate analysis results showed more parents’ conflicts had significant relationship between less motivated to study; more negative attitude towards study and more students’ academic career demolished. In this hypothesis, researcher explained that more check and balance on students was associated with more parents’ educational background effects on student academic performance. It is concluded that if “checking of progress report had significant relationship between parent’s educational background effects on student academic performance. The societal analysis suggests that parental conflicts can be deeply detrimental to the academic success and overall well-being of students. Educational institutions, counselors, and policymakers should prioritize programs that offer psychological support and interventions to help mitigate the negative effects of family disputes on student performance.

Recommendations

- School counseling services
- Family therapy programs
- Teacher training on conflict resolution
- Peer support groups
- Community-based initiatives
- To promote a supportive learning environment and foster academic resilience.
- Parents resolving their marital conflicts are indeed important to minimize the potential negative effects on a child's education.
- Parents should indeed meet their children's needs. It is crucial for parents to provide for their children's physical, emotional, and psychological well-being. Meeting these needs helps children develop a sense of security, trust, and overall healthy development.
- Balancing work and family roles are important for parents to establish close relationships with their children. When parents are able to strike a healthy work-life balance, they can dedicate quality time and attention to their children.
- Creating a conducive learning environment is crucial for promoting academic motivation and developing effective coping mechanisms in children. Parents assume an imperative part in laying out such a climate at home.
- Parents should be actively involved in their children's education by showing interest in their progress, helping with homework, and engaging in discussions about their academic goals and aspirations.

References

- Abdel Aziz, M. H., Rowe, C., Southwood, R., Nogid, A., Berman, S., & Gustafson, K. (2024). A scoping review of artificial intelligence within pharmacy education. *American Journal of Pharmaceutical Education*, 88(1), 100615. <https://doi.org/https://doi.org/10.1016/j.ajpe.2023.100615>
- Al-Sulaiti, K. I., Baker, M. J., Bryman, A., Baker, M. J., Ballington, L., Bilkey, W. J., Nes, E., Bryman, A., Bell, E., Chen, C., Gurhan-canli, Z., Maheswaran, D., Han, C. M., Terpstra, V., Thyer, B. A., Gorey, K. M., Daly, C., Richter, N. L., Gleason, D. R., Saunders, M. N. K. K. (2010). Research Methods for Business Students. *International Marketing Review*, 14(2), 656. <https://doi.org/10.4135/9781412986182>
- Anjum, M. S., Ali, S. M., Imad-ud-din, M., Subhani, M. A., Anwar, M. N., Nizami, A. S., Ashraf, U., & Khokhar, M. F. (2021). An Emerged Challenge of Air Pollution and Ever-Increasing Particulate Matter in Pakistan; A Critical Review. *Journal of Hazardous Materials*, 402. <https://doi.org/10.1016/j.jhazmat.2020.123943>
- Aslan, S., Durham, L. M., Alyuz, N., Okur, E., Sharma, S., Savur, C., & Nachman, L. (2024). Immersive multi-modal pedagogical conversational artificial intelligence for early childhood education: An exploratory case study in the wild. *Computers and Education: Artificial Intelligence*, 6. <https://doi.org/10.1016/j.caeai.2024.100220>
- Cai, J., & Zhao, K. (2024). Uniform agricultural tax abolition and differential household labor supply: Evidence from China's urban household survey. *China Economic Review*, 86, 102175. <https://doi.org/https://doi.org/10.1016/j.chieco.2024.102175>
- Croney, C., Udell, M., Delgado, M., Ekenstedt, K., & Shoveller, A. K. (2023). CATastrophic myths part 1: Common misconceptions about the social behavior of domestic cats and implications for their health, welfare, and management. *The Veterinary Journal*, 300–302, 106028. <https://doi.org/https://doi.org/10.1016/j.tvjl.2023.106028>
- Guo, L., Cheng, Z., Tani, M., & Cook, S. (2024). Air pollution and education investment. *Energy Economics*, 132. <https://doi.org/10.1016/j.eneco.2024.107496>
- Hu, G., Zeng, W., Yao, R., Xie, Y., & Liang, S. (2021). An integrated assessment system for the carrying capacity of the water environment based on system dynamics. *Journal of Environmental Management*, 295. <https://doi.org/10.1016/J.JENVMAN.2021.113045>
- LaBore, K., Ahmed, T., Rizwan-ur-Rashid, & Ahmed, R. (2021). Prevalence and Predictors of Violence Against Women in Pakistan. *Journal of Interpersonal Violence*, 36(13–14), NP7246–NP7263. <https://doi.org/10.1177/0886260518824652>
- Le, T. T., Pham, T. T., Nguyen, A. T., Phuong, H. Y., Huynh, T. A. T., & Nguyen, H. T. (2024). “Becoming a trilingual learner may be harder than I thought!”: Difficulties encountered by Vietnamese French-major students when studying English as a foreign language. *Ampersand*, 12, 100168. <https://doi.org/https://doi.org/10.1016/j.amper.2024.100168>
- Li, D., Liu, T., & Shi, J. (2020). Fluid intelligence and neural mechanisms of emotional conflict adaptation. *International Journal of Psychophysiology*, 152, 1–14. <https://doi.org/10.1016/j.ijpsycho.2020.03.004>
- Madhani, F. I., Karmaliani, R., Patel, C., Bann, C. M., McClure, E. M., Pasha, O., & Goldenberg, R. L. (2017). Women's Perceptions and Experiences of Domestic Violence. *Journal of Interpersonal Violence*, 32(1), 76–100. <https://doi.org/10.1177/0886260515585533>
- Mattioli, G., & Scheiner, J. (2022). The impact of migration background, ethnicity and social network dispersion on air and car travel in the UK. *Travel Behaviour and Society*, 27, 65–78.

<https://doi.org/https://doi.org/10.1016/j.tbs.2021.12.001>

- Nti, E. K., Kranjac-Berisavljevic, G., Doke, D. A., Wongnaa, C. A., Attafuah, E. E., & Gyan, M. A. (2023). The impact of artisanal gold mining on the sustainability of Ghana's river basins: The case of the Pra basin. *Environmental and Sustainability Indicators*, 19. <https://doi.org/10.1016/j.indic.2023.100264>
- Ramzan, M., Ullah, S., Raza, S. A., & Nadeem, M. (2023). A step towards achieving SDG 2030 agenda: Analyzing the predictive power of information globalization amidst technological innovation-environmental stewardship nexus in the greenest economies. *Journal of Environmental Management*, 335. <https://doi.org/10.1016/j.jenvman.2023.117541>
- Ran, R., Xie, M., & Hua, L. (2023). How to break the environment-economic trap in rocky desertification contiguous poverty-stricken areas: the mediating effect of industrial structure upgrading. *International Journal of Sustainable Development and World Ecology*. <https://doi.org/10.1080/13504509.2023.2169966>
- So, M. K. P., Mak, A. S. W., & Chu, A. M. Y. (2022). Assessing systemic risk in financial markets using dynamic topic networks. *Scientific Reports*, 12, 2668. <https://doi.org/10.1038/s41598-022-06399-x>
- Sun, C., Khan, A., & Cai, W. (2024). The response of energy aid and natural resources consumption in load capacity factor of the Asia Pacific emerging countries. *Energy Policy*, 190. <https://doi.org/10.1016/j.enpol.2024.114150>
- Sunikka-Blank, M. (2020). Why are women always cold? Gendered realities of energy injustice. *Inequality and Energy: How Extremes of Wealth and Poverty in High Income Countries Affect CO2 Emissions and Access to Energy*, 173–188. <https://doi.org/10.1016/B978-0-12-817674-0.00008-4>
- Wątróbski, J., Bączkiewicz, A., & Sałabun, W. (2022). pyrepo-mcda — Reference objects based MCDA software package. *SoftwareX*, 19. <https://doi.org/10.1016/j.softx.2022.101107>
- Yang, C., Zhou, D., Zou, M., Yang, X., Lai, Q., & Liu, F. (2024). The impact of social capital on rural residents' income and its mechanism analysis —Based on the intermediary effect test of non-agricultural employment. *Heliyon*, 10(14), e34228. <https://doi.org/https://doi.org/10.1016/j.heliyon.2024.e34228>
- Zhang, H., Chai, J., & Li, C. (2024). On innovative strategies of youth sports teaching and training based on the internet of things and artificial intelligence technology from the perspective of humanism. *Learning and Motivation*, 86, 101969. <https://doi.org/https://doi.org/10.1016/j.lmot.2024.101969>
- Zhang, H., Ge, S., & Mohd Saad, M. R. Bin. (2024). Formative assessment in K-12 English as a foreign language education: A systematic review. *Heliyon*, 10(10), e31367. <https://doi.org/https://doi.org/10.1016/j.heliyon.2024.e31367>
- Zheng, G., Li, K., Yue, X., & Zhang, Y. (2024). A multifactor hybrid model for carbon price interval prediction based on decomposition-integration framework. *Journal of Environmental Management*, 363. <https://doi.org/10.1016/J.JENVMAN.2024.121273>