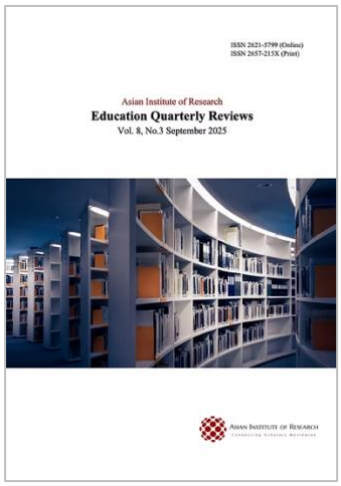

Education Quarterly Reviews

Pattinasarany, I. R. I. (2025). Female-Headed Households and Educational Participation in Indonesia: Exploring Gender and District-Level Disparities. *Education Quarterly Reviews*, 8(3), 1-16.

ISSN 2621-5799

DOI: 10.31014/aior.1993.08.03.589

The online version of this article can be found at:
https://www.asianinstituteofresearch.org/

Published by:
The Asian Institute of Research

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.

ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide

The Asian Institute of Research
Education Quarterly Reviews
Vol.8, No.3, 2025: 1-16
ISSN 2621-5799

DOI: 10.31014/aior.1993.08.03.589

Female-Headed Households and Educational Participation in Indonesia: Exploring Gender and District-Level Disparities

Indera Ratna Irawati Pattinasarany[1]

[1] Department of Sociology, Universitas Indonesia, Depok, Indonesia

Correspondence: Indera Ratna Irawati Pattinasarany, Department of Sociology, Universitas Indonesia, Depok, Indonesia. E-mail: indera.pattinasarany@ui.ac.id

Abstract
This study examines the relationship between household headship and children's school participation in Indonesia, with a particular focus on gender disparities and the district-level educational context. Using six waves of nationally representative SUSENAS data (2019–2024), the analysis investigates how household structure, child gender, and district mean years of schooling shape participation across primary, junior secondary, and senior secondary levels. The findings show that children in female-headed households are significantly more likely to attend school than those in male-headed households, even after controlling for demographic, economic, and contextual factors. This effect is especially pronounced at the junior secondary level, suggesting that female-headed households may serve as protective environments during periods of heightened risk of dropout. While girls generally have higher school participation rates than boys, the interaction between child gender and household headship is not statistically significant overall, indicating that the gender gap does not vary systematically by household headship. However, a modest advantage for girls in female-headed households emerges during the junior secondary stage. Although the three-way interaction with district-level educational context is not significant, two-way interactions reveal that girls benefit more from living in better-educated districts, while the positive effect of female headship is more evident in less-educated areas. These results highlight how household dynamics and local educational environments jointly shape children's schooling trajectories.

Keywords: Female-Headed Household, Gender Disparity, Indonesia, Logistic Model, School Participation

1. Introduction

1.1 Background

Educational inequality remains a pressing challenge in low- and middle-income countries, shaped by intersecting structural disadvantages—including gender, household composition, and regional disparities. While global efforts have expanded access to primary education, disparities widen significantly at the secondary level, particularly during adolescence (UNESCO, 2020). For youth aged 16–18, economic pressures, gender norms, caregiving

responsibilities, and limited institutional support often contribute to school dropout (World Bank, 2020). Adolescent girls face compounded vulnerabilities, including early marriage, domestic labor burdens, and restrictive cultural expectations (UNESCO, 2022).

Household-level factors, especially the gender of the household head, play a key role in shaping children's school participation. Female-headed households (FHHs) are commonly perceived as economically vulnerable; however, the evidence is mixed and increasingly nuanced (Zhang et al., 2024). While some studies associate FHHs with poverty, others suggest they may allocate resources more equitably and prioritize education—particularly for daughters (Bammeke, 2010). These effects are often context-dependent and mediated by broader institutional and cultural environments (Chant, 2004; Quisumbing et al., 2001).

In Indonesia, where household structures are shifting and gender norms are evolving, these dynamics merit closer attention. According to PEKKA and SMERU (2014), 23% of households are female-headed—a figure significantly higher than national estimates from SUSENAS. Despite their growing prevalence, FHHs are frequently viewed through a deficit lens, linked to economic precarity and exclusion (Pujiwati et al., 2025; Soseco et al., 2022). Nevertheless, they may also represent adaptive strategies and greater maternal agency, with positive implications for children's schooling.

Nonetheless, few studies in Indonesia have examined how female headship interacts with child gender and district-level context to shape school participation. This study addresses that gap using six waves of nationally representative data to explore how gender and household structure jointly influence schooling across diverse districts.

1.2 Purpose of the Study and Research Questions

Building on the preceding discussion, this study addresses an important gap in the literature by examining how household headship influences children's school participation in Indonesia, with a particular focus on gender disparities and district-level educational context. Using six waves of nationally representative data from the National Socioeconomic Survey (SUSENAS), covering the years 2019 to 2024, the analysis includes children aged 7 to 18—capturing variation across primary, junior secondary, and senior secondary education levels.

Specifically, the study explores three interrelated issues. First, it investigates whether children living in female-headed households differ in their likelihood of attending school compared to those in male-headed households. Second, it assesses whether the gender gap in school participation is moderated by household headship—evaluating whether girls and boys are affected differently depending on the gender of the household head. Third, it examines how these patterns vary across district-level educational contexts, as proxied by average years of schooling. By addressing these objectives, the study aims to shed light on how gender and family structure interact with broader contextual environments to shape educational inequality.

The following research questions guide the study:

- **RQ1:** To what extent is the gender of the household head associated with children's school participation in Indonesia?
- **RQ2:** How does the gender gap in school participation vary by household headship in Indonesia?
- **RQ3:** How does the gender gap in school participation across household headships vary by district-level educational context in Indonesia?

1.3 Importance and Contribution of the Study

This study makes three key contributions to the literature on educational inequality in Indonesia. First, it presents empirical evidence based on six waves of nationally representative SUSENAS data (2019–2024) to examine how children's school participation is shaped by household headship, gender, and district-level educational context. By focusing on children aged 7–18 across various educational levels, the study addresses a critical yet underexplored dimension of inequality within the Indonesian education system.

Second, it deepens understanding of female-headed households by moving beyond generalized assumptions and highlighting the diverse ways in which household structure interacts with children's gender and local educational conditions. The study reveals that the influence of female headship on school participation is not uniform but instead varies across contexts and educational stages—particularly during adolescence when dropout risks increase.

Third, the study emphasizes the value of situating household-level characteristics within broader structural environments. By examining how gender disparities in school participation are shaped by both family dynamics and district-level education indicators, the analysis contributes a more comprehensive view of the factors driving school attendance. The findings offer policy-relevant insights for targeting support to children in vulnerable household settings and underserved districts, particularly in efforts to reduce dropout and promote equitable access to education.

2. Materials and Methods

2.1 Rethinking Female-Headed Households: Structural Inequality and Educational Outcomes

Female-headed households (FHHs) are often perceived as structurally disadvantaged in low- and middle-income countries, including Indonesia (Nugraha & Widyasthika, 2018). This perception is rooted in overlapping social and economic constraints, such as reliance on a single income source, limited access to secure employment, and reduced control over productive assets (UN Women, 2019). However, recent scholarship cautions against treating FHHs as a homogenous and uniformly vulnerable group (AlAzzawi et al., 2024; Espinoza-Delgado & Klasen, 2018). Their socioeconomic conditions vary widely, shaped by factors such as location, education, access to remittances, and public support systems. In many cases, FHHs demonstrate strong investments in education, particularly for daughters, driven by the head's own experiences with gender inequality and a desire to disrupt intergenerational cycles of disadvantage (Quisumbing, 2004). Moreover, female headship can provide greater decision-making autonomy, including in matters related to children's schooling (Chant, 2004).

Empirical evidence from diverse contexts reinforces this perspective. In Mozambique, Manhisse and Ogawa (2024) find that children in FHHs—especially girls—are more likely to complete primary school, with no gender gap in attendance. Similarly, Singh et al. (2013) report that in India, children in FHHs perform as well as or better than those in male-headed households (MHHs), with no disparities in academic scores—an outcome linked to more equitable educational spending within the household. In Ghana, Asiedu et al. (2024) show that FHHs allocate 31% to 38% more of their income to education than MHHs, despite earning 20% less, suggesting a strong prioritization of schooling.

Differentiation within FHHs is also important. Joshi (2004), for instance, finds that in Bangladesh, children in households headed by married women outperform their peers in MHHs, while those in widow-headed households often face worse outcomes, including child labor. In India, Chudgar (2011) observes that widow-headed households perform comparably to others but are particularly responsive to even modest improvements in household conditions. These findings suggest that marital status, rather than headship alone, can shape household vulnerability. Evidence from the United States (Wang et al., 2004) and Hong Kong (Cheung & Park, 2016) further shows that children in single-mother households perform comparably to peers, reinforcing the idea that caregiving quality and prioritization—not household structure per se—matter most for educational outcomes.

These global insights underscore the importance of reassessing assumptions about female headship in the Indonesian context, where the links between household structure, gender, and child outcomes remain relatively underexplored. Recent data from BPS (2024) reinforce this need. In both 2022 and 2023, the proportion of FHHs was consistently higher among non-poor households than among poor ones—12.89% vs. 10.66% in 2022 and 12.84% vs. 11.29% in 2023. These figures challenge the common assumption that FHHs are inherently economically vulnerable. Instead, they highlight the heterogeneity of FHHs and show that using headship status

alone to identify disadvantage can obscure more complex dynamics of gender, household composition, and socioeconomic well-being.

Building on this perspective, the present study does not assume that FHHs are uniformly disadvantaged. Instead, it investigates whether and how household headship influences children's school participation—specifically, whether outcomes differ for boys and girls and how these patterns vary across district-level educational contexts. In doing so, the study contributes to a more nuanced understanding of how gender and family structure interact with broader structural conditions to shape educational inequality.

2.2 Methodology

This study employs a logistic regression model to analyze the factors influencing school participation among children aged 7–18 in Indonesia. The model includes explanatory variables at three levels: individual characteristics, household attributes, and district-level contextual factors. The primary independent variable of interest is participation in tertiary education.

The Main Model is specified within a latent response framework to establish the baseline relationships between individual, household, and district-level predictors and school participation. Let y_{ij}^{*} represent the unobserved propensity for individual *i* in district *j* to participate in school. This latent variable is modeled as:

$$y_{ij}^{*} = x1_{ij}\beta 1 + x2_{j}\beta 2 + \epsilon_{ij}$$

where $x1_{ij}$ represents individual- and household-level covariates; $x2_{j}$ denotes district-level contextual variables; and ϵ_{ij} is the individual-level error term, assumed to follow a standard logistic distribution with mean 0 and variance $\pi^{2}/3$.

The relationship between the observed binary outcome y_{ij} and the unobserved latent variable y_{ij}^{*} is defined through the following threshold rule:

$$y_{ij} = \begin{cases} 0 \; if \; y_{ij}^{*} > 0 \\ 1 \; if \; y_{ij}^{*} \leq 0 \end{cases}$$

2.3 Data

This study utilizes data from the National Socioeconomic Survey (*Survei Sosial Ekonomi Nasional*, SUSENAS), an annual household survey conducted by Indonesia's Central Statistics Agency (*Badan Pusat Statistik*, BPS). SUSENAS is one of the country's most comprehensive sources of socioeconomic data, designed to produce representative estimates at both the national and subnational levels, covering all 514 districts (regencies/*kabupaten* and municipalities/*kota*). It employs a stratified two-stage sampling design: in the first stage, census blocks are selected based on probability proportional to size, using household counts; in the second stage, a fixed number of households are randomly selected within each block. Each year, approximately 320 000 households are surveyed, generating data on about 1.2 million individuals—enabling robust disaggregation at the provincial and district levels.

The analysis draws on pooled data from six consecutive SUSENAS waves, spanning the years 2019 to 2024. It focuses on a subset of 1 683 902 individuals aged 7 to 18, which corresponds to the official age range for primary (7–12), junior secondary (13–15), and senior secondary (16–18) education levels in Indonesia.

In SUSENAS, a female-headed household is identified based on self-reported information. The household head is the individual recognized by household members as holding that role. If this person is a woman, the household is

classified as female-headed. This recognition-based approach does not impose objective criteria such as income contribution, decision-making authority, or marital status. Instead, it relies on the household's perception of who serves as its head. While this definition is straightforward and widely used, its practical and analytical implications merit consideration. It respects local norms by allowing households to self-identify their head, is easy to implement, and ensures consistency across survey waves. However, it also has limitations. It may obscure intra-household power dynamics, as women might be listed as heads in the absence of a male partner while decision-making authority lies elsewhere. Moreover, it does not distinguish between *de jure* (e.g., widows) and *de facto* (e.g., due to male migration) female headship, which may reflect different forms of vulnerability. As such, while useful for large-scale monitoring, this variable should not be interpreted as a direct proxy for female autonomy or disadvantage without supporting contextual data.

School participation in this study is based on a question asked in SUSENAS to all household members aged five and above: "Does [name of respondent] go to school? (including participation in the A/B/C Package program)." The response options are: (1) not/never attended school, (2) still attending school, and (3) no longer attending school. For analytical purposes, a binary school participation variable is constructed, coded as 1 if the respondent is still attending school and 0 otherwise (i.e., if they have never attended or have left school). The A/B/C Package program refers to Indonesia's non-formal equivalency education, where Package A is equivalent to primary education, Package B to junior secondary education, and Package C to senior secondary education. School participation rates for children aged 7–18 are summarized in Table 1.

Table 1: School Participation Rates of Children Aged 7–18 by Gender and Household Headship, 2019–2024

Year	All Observations			Male-Headed Households			Female-Headed Households		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2019	0.913	0.930	0.921	0.916	0.932	0.924	0.889	0.914	0.901
2020	0.916	0.930	0.922	0.918	0.932	0.925	0.895	0.911	0.903
2021	0.913	0.928	0.920	0.916	0.930	0.923	0.888	0.905	0.896
2022	0.913	0.929	0.921	0.917	0.931	0.924	0.877	0.906	0.891
2023	0.914	0.930	0.922	0.916	0.933	0.924	0.886	0.903	0.894
2024	0.914	0.934	0.923	0.917	0.937	0.926	0.881	0.907	0.893
Average	0.914	0.930	0.922	0.917	0.932	0.924	0.886	0.908	0.897

Source: Author's calculation

Over the six years from 2019 to 2024, the average school participation rate among children aged 7–18 in Indonesia was 92.2%, with a clear gender gap favoring girls (93.0%) over boys (91.4%). When disaggregated by household headship, children from male-headed households consistently demonstrated higher participation rates (92.4%) compared to those from female-headed households (89.7%). The gender gap persists within both household types: in male-headed households, girls' participation (93.2%) surpassed that of boys (91.7%), while in female-headed households, girls also outperformed boys (90.8% vs. 88.6%). These findings suggest both a gender advantage for girls in school participation and a structural disadvantage for children living in female-headed households.

Table 2 presents the descriptive statistics of the variables used in this study, including means and standard deviations by year, which serve to complement and complete the description of the data.

Table 2: Summary Statistics of Key Variables, 2019–2024

Variable	2019		2020		2021		2022		2023		2024		All Observations	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Individual Characteristics														
School Participation	0.921	0.269	0.922	0.268	0.920	0.271	0.921	0.270	0.922	0.269	0.923	0.266	0.922	0.269
Female	0.480	0.500	0.480	0.500	0.483	0.500	0.482	0.500	0.481	0.500	0.481	0.500	0.481	0.500
Age	12.32	3.39	12.31	3.39	12.36	3.43	12.37	3.41	12.34	3.39	12.37	3.37	12.34	3.40
Received Government Programs	0.238	0.426	0.228	0.420	0.226	0.418	0.209	0.406	0.209	0.407	0.225	0.418	0.223	0.416
Household Head Characteristics														
Female-Headed Household (FHH)	0.101	0.302	0.103	0.304	0.095	0.293	0.092	0.290	0.090	0.286	0.090	0.286	0.095	0.294
Age	46.49	9.70	46.59	9.71	45.98	9.46	45.73	9.14	45.82	9.00	46.00	8.92	46.10	9.33
Married	0.889	0.314	0.886	0.318	0.896	0.305	0.897	0.304	0.898	0.303	0.898	0.303	0.894	0.308
Completed Years of Schooling	8.33	4.15	8.46	4.21	8.65	4.09	8.74	4.21	8.88	4.17	9.01	4.02	8.68	4.15
Household Characteristics														
Urban	0.387	0.487	0.388	0.487	0.395	0.489	0.397	0.489	0.401	0.490	0.406	0.491	0.395	0.489
Log (Per Capita Expenditures)	13.59	0.61	13.65	0.60	13.66	0.60	13.74	0.59	13.83	0.59	13.89	0.58	13.72	0.60
Household members aged 0-4	0.37	0.59	0.36	0.58	0.35	0.58	0.32	0.55	0.31	0.54	0.29	0.53	0.33	0.56
Housheold members aged 60+	0.21	0.49	0.21	0.50	0.21	0.50	0.18	0.46	0.18	0.46	0.18	0.46	0.19	0.48
District Contextual														
Mean Years of Schooling (MYS)	8.22	1.65	8.34	1.63	8.44	1.63	8.55	1.62	8.65	1.62	8.74	1.61	8.49	1.64
Observations	276 375		286 091		286 007		280 279		279 200		275 950		1 683 902	

Notes: All means and standard deviations are calculated at the individual level, except for Mean Years of Schooling (MYS), which is calculated at the district level. Individual school participation, gender, receipt of government programs, household head's gender, marital status, and urban residence are expressed as proportions. Individual age, household head's age, completed years of schooling, and district-level MYS are measured in years. Household composition variables (number of members aged 0–4 and 60+) are expressed in persons. Per capita household expenditure is expressed in natural logarithmic form.

Source: Author's calculation

3. Estimation Results

While a multilevel mixed-effects logistic regression was initially considered to account for the hierarchical structure of the data—specifically, the nesting of individuals within districts—the model failed to converge due to infeasible initial values. Such convergence issues are common in cases of sparse data within clusters, quasi-complete separation, or strong multicollinearity, all of which can hinder the reliable estimation of random effects (Rabe-Hesketh & Skrondal, 2021). As a statistically robust and widely accepted alternative, this study employs a population-averaged logistic regression with standard errors clustered at the district level. This approach adjusts for intra-cluster correlation and yields consistent standard errors in the presence of group-level dependence (Angrist & Pischke, 2009). While it does not estimate between-cluster variance components as multilevel models do, it is well-suited for analyzing average marginal effects—especially in large-scale survey data, where model stability and computational feasibility are critical.

Three logistic regression models were estimated to examine the determinants of school attendance among children in Indonesia, and the resulting estimates are presented in Table 3. Model [1], the main specification, includes individual-level variables (gender, age, government program receipt), household head characteristics (sex, age, marital status, education), and additional controls such as urban residence, household consumption (log per capita expenditure), household composition (number of young children and elderly), district-level mean years of schooling (MYS), and year fixed effects. The district-level MYS variable is derived from the education sub-index of the Human Development Index (HDI), providing a standardized measure of educational attainment at the district level. Model [2] extends this by introducing a two-way interaction between the child's gender and whether the household is headed by a female to test whether gender disparities in school attendance vary by household headship. Model [3] builds further by including a three-way interaction, allowing the gender–headship effect to vary across districts with different average schooling levels, thus introducing a contextual moderation component.

Table 3: Logistic Regression Estimates of School Participation

	Main Model [1]		Interaction Model 1 [2]		Interaction Model 2 [3]	
Individual Characteristics						
Female	1.250	(0.014) ***	1.248	(0.015) ***	1.018	(0.072)
Age	0.639	(0.011) ***	0.639	(0.011) ***	0.638	(0.011) ***
Received Government Programs	4.968	(0.201) ***	4.968	(0.201) ***	4.976	(0.20) ***
Household Head Characteristics						
Female-Headed Household (FHH)	1.193	(0.024) ***	1.185	(0.027) ***	2.941	(0.572) ***
Age	1.008	(0.001) ***	1.008	(0.001) ***	1.008	(0.001) ***
Married	1.392	(0.026) ***	1.392	(0.026) ***	1.382	(0.026) ***
Completed Years of Schooling	1.094	(0.003) ***	1.094	(0.003) ***	1.094	(0.003) ***
Household Characteristics						
Urban	0.986	(0.030)	0.986	(0.030)	0.988	(0.030)
Log (Per Capita Expenditures)	1.328	(0.050) ***	1.328	(0.050) ***	1.329	(0.049) ***
Household members aged 0-4	0.892	(0.012) ***	0.892	(0.012) ***	0.892	(0.012) ***
Housheold members aged 60+	1.018	(0.013)	1.018	(0.013)	1.018	(0.013)
District Contextual						
Mean Years of Schooling (MYS)	1.283	(0.044) ***	1.283	(0.044) ***	1.285	(0.044) ***
Interaction terms						
Female x FHH			1.017	(0.022)	0.998	(0.122)
FHH x MYS					0.894	(0.021) ***
Female x MYS					1.026	(0.009) ***
Female x FHH x MYS					1.002	(0.014)
Year						
2020	0.946	(0.012) ***	0.946	(0.012) ***	0.946	(0.012) ***
2021	0.919	(0.013) ***	0.919	(0.013) ***	0.919	(0.013) ***
2022	0.903	(0.017) ***	0.903	(0.017) ***	0.903	(0.017) ***
2023	0.835	(0.018) ***	0.835	(0.018) ***	0.835	(0.018) ***
2024	0.811	(0.019) ***	0.811	(0.019) ***	0.810	(0.019) ***
Constant	3.704	(1.905) **	3.707	(1.906) **	3.632	(1.807) ***
Pseudo R2	0.264		0.264		0.264	
AIC	681 674		681 675		681 293	
BIC	681 896		681 909		681 564	
Observations	1 683 902		1 683 902		1 683 902	

Notes: Odds ratios are reported. Robust standard errors, clustered at the district level, are shown in parentheses. *** statistically significant at the 1% level, ** 5%, * 10%

Source: Author's calculation

The three logistic regression models produce identical Pseudo R^2 values of 0.264, indicating that each explains the same proportion of variance in children's school attendance. This suggests that, at a basic level, the inclusion of interaction terms—whether the two-way interaction in Model [2] or the three-way interaction in Model [3]—does not improve the model's explanatory power in terms of variance captured. However, a closer look at the model fit statistics provides a clearer picture of their comparative performance. The Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC), which account for both model fit and complexity, point to meaningful differences. Models [1] and [2] have nearly identical AIC (681,674–681,675) and BIC (681,896–681,909) values, indicating that adding the two-way interaction does not meaningfully enhance the model. In contrast, Model [3],

which introduces a three-way interaction between gender, female-headed households, and district-level education, substantially reduces both AIC (681,293) and BIC (681,564). These improvements suggest that Model [3] fits the data better while maintaining a more favorable balance between complexity and explanatory value, particularly under the stricter penalty for complexity imposed by the BIC.

The presence of multicollinearity among the explanatory variables was assessed using a variance inflation factor (VIF) test. An ordinary least squares regression was estimated using the same set of covariates specified in the Main Model. The results indicate that all independent variables have VIF scores below 2.5, suggesting a low risk of multicollinearity. This supports the reliability of the coefficient estimates in the subsequent logistic regression analysis (Kutner et al., 2004).

3.1. The Role of Household Head Gender in Shaping School Participation

The estimation results from Model [1] show that the gender of the household head is significantly associated with children's school participation. Children residing in female-headed households are approximately 19.3% more likely to attend school compared to those in male-headed households (OR = 1.193, $p < 0.001$). This association remains robust after controlling for individual characteristics, household demographics, economic status, and district-level educational context. The results suggest that living in a female-headed household is not inherently disadvantageous and may even be associated with a greater prioritization of children's education.

This finding contrasts with the descriptive patterns presented earlier, in which children in female-headed households exhibited lower average school participation rates. The divergence underscores the importance of accounting for compositional differences across households—such as income levels, educational attainment, and demographic structure—when estimating net effects. Empirical evidence from Indonesia and other settings supports this interpretation. Salam et al. (2021) found that female-headed households, particularly those led by employed women, tend to allocate more resources toward children’s education. Similar patterns have been documented in Ghana, where Asiedu et al. (2024) report that female-headed households are more likely to prioritize educational investments than their male-headed counterparts, even when facing financial limitations. These findings suggest that female heads of households may consistently emphasize education as a priority, especially in contexts of constrained resources.

The analysis further disaggregates the association by age group, distinguishing between children aged 7–12 (primary education), 13–15 (junior secondary), and 16–18 (senior secondary). This stratification aligns with key educational transition points in Indonesia’s school system, where dropout risks and household decision-making pressures often differ.

The results, presented in Table 4, indicate that a positive association exists between female-headed households and school attendance across all age groups, although the strength of this relationship varies. Among children aged 7–12, those living in female-headed households are approximately 19.5% more likely to attend school compared to their counterparts in male-headed households (OR = 1.195, $p = 0.012$). While significant, this effect is relatively modest, likely reflecting the high baseline attendance rates in primary school due to compulsory education policies. The association becomes strongest at the junior secondary level: children aged 13–15 in female-headed households are 36.6% more likely to attend school (OR = 1.366, $p < 0.001$). This suggests that female heads may play a critical role in ensuring continued educational participation during a phase where school dropout rates typically rise. For youth aged 16–18, corresponding to senior secondary education, the odds ratio remains positive and significant (OR = 1.156, $p < 0.001$), though smaller in magnitude—possibly due to heightened economic constraints, labor market entry, or shifting household priorities as children near adulthood.

Table 4: Association Between Female-Headed Households and School Participation, by Age Group

	Primary		Junior Secondary		Senior Secondary	
	Age: 7-12 years		Age: 13-15 years		Age: 16-18 years	
Female-Headed Household (FHH)	1.195	(0.085) **	1.366	(0.066) ***	1.156	(0.026) ***
Pseudo R2	0.240		0.135		0.126	
Observations	878 782		418 683		386 437	

Notes: Odds ratios are reported. Robust standard errors, clustered at the district level, are shown in parentheses. *** statistically significant at the 1% level, ** 5%, * 10%

Source: Author's calculation

These findings suggest that female-headed households play a crucial role in sustaining children's school participation during middle adolescence, particularly during the transition from primary to junior secondary education. The pronounced increase in the effect size at the junior secondary level may reflect a stronger educational commitment, more protective decision-making, or a deliberate prioritization of schooling as a strategy to enhance household well-being. Rather than functioning as a constraint, female headship may embody adaptive strategies that support children's continued engagement in education, especially during stages when dropout risk tends to rise. Taken together, the results provide a direct response to Research Question 1, confirming that the gender of the household head is significantly associated with children's school participation and that this association is both positive and robust across different stages of schooling.

Overall, the analysis offers important empirical evidence that challenges conventional narratives portraying female-headed households as uniformly disadvantaged in educational outcomes. By disaggregating the association across age groups and controlling for relevant socioeconomic factors, the results demonstrate that female household heads can serve as effective agents of educational continuity. These findings underscore the need for a more differentiated understanding of household structures and their role in shaping children's schooling trajectories—particularly in contexts marked by socioeconomic vulnerability and unequal access to opportunity.

3.2 Gender Disparities in School Participation Across Household Headship

Model [2] investigates whether gender disparities in school participation differ by household headship through the inclusion of an interaction term between the child's gender and the gender of the household head. The estimated odds ratio for this interaction (female × female-headed household) is 1.017 ($p = 0.432$), indicating that the effect is not statistically significant. This result suggests that the gap in school participation between girls and boys does not vary meaningfully depending on whether a woman or a man heads the household.

Individually, both being female (OR = 1.248, $p < 0.001$) and living in a female-headed household (OR = 1.185, $p < 0.001$) are each positively associated with school participation. However, the lack of a significant interaction implies that these two effects are independent and additive rather than conditional. In other words, being a girl in a female-headed household does not confer any additional advantage—or disadvantage—relative to the sum of their contributions. This pattern holds even after controlling for a comprehensive set of covariates, including age, economic status, household demographics, and district-level educational context.

Taken together, the results provide a direct response to Research Question 2, which asks whether the gender gap in school participation varies by household headship. The analysis shows that while both child gender and household head gender independently influence school participation, their interaction is not statistically significant. This suggests that the gender gap in school participation remains stable across male- and female-headed households, with no evidence that household headship amplifies or mitigates this disparity. The findings reinforce the interpretation that gendered patterns of school participation are consistent regardless of household structure, even after accounting for a range of individual, household, and contextual characteristics.

These findings are consistent with Bammeke (2010), who found that children in female-headed households in Lagos performed on par with their peers in male-headed households. The study emphasized that the educational attainment of the mother strongly influenced children's outcomes and highlighted that female-headed households often maintain a strong commitment to schooling, even under economic constraints—particularly benefiting girls. Similar conclusions were drawn by Singh et al. (2013) in India, who reported no gender gap in academic performance among children in female-headed households, attributing this to more equitable investment practices. Likewise, Cheung and Park (2016) found that students from single-mother households in Hong Kong performed comparably to those from two-parent households, underscoring the positive role of maternal involvement in supporting children's education regardless of gender.

Expanding on this, the analysis further examines whether gender disparities in school participation vary by household headship across different stages of schooling. Interaction models were estimated using the same age-based subgroups: primary (7–12 years), junior secondary (13–15 years), and senior secondary (16–18 years). Across all groups, girls consistently show higher odds of school participation than boys, with the gender gap peaking at the junior secondary level (OR = 1.458, $p < 0.001$). Children in female-headed households also display higher attendance rates, reinforcing earlier findings. While the interaction between gender and household headship is not statistically significant in all cases, the variation in direction and magnitude—particularly at the junior secondary level—warrants further attention.

Table 5: Interaction Effects of Gender and Household Headship on School Participation, by Age Group

	Primary		**Junior Secondary**		**Senior Secondary**	
	Age: 7-12 years		**Age: 13-15 years**		**Age: 16-18 years**	
Female	1.168	(0.027) ***	1.458	(0.034) ***	1.222	(0.016) ***
Female-Headed Household (FHH)	1.253	(0.095) ***	1.319	(0.067) ***	1.147	(0.029) ***
Female x FHH	0.900	(0.061)	1.090	(0.054) *	1.017	(0.025)
Pseudo R2	0.240		0.135		0.126	
Observations	878 782		418 683		386 437	

Notes: Odds ratios are reported. Robust standard errors, clustered at the district level, are shown in parentheses. *** statistically significant at the 1% level, ** 5%, * 10%

Source: Author's calculation

At the primary level, the interaction term is negative and statistically insignificant (OR = 0.900, $p = 0.120$), suggesting that the gender advantage for girls is slightly muted in female-headed households. This aligns with the earlier results in Table 4, where the main effect of female headship at this level was relatively modest. By contrast, the interaction term becomes positive and marginally significant at the junior secondary level (OR = 1.090, $p = 0.079$), indicating that girls in female-headed households are more likely to remain in school than would be expected from the separate effects of gender and headship alone. Although the result is marginally significant ($p < 0.10$), it may still carry policy relevance—particularly during early adolescence, when dropout risks intensify and household-level educational decisions become more consequential. At the senior secondary level, the interaction becomes statistically insignificant again (OR = 1.017, $p = 0.497$), possibly reflecting the growing influence of external economic or structural constraints.

Overall, the results address Research Question 2 by showing that household headship may influence the gender gap in school participation most clearly during the junior secondary stage. Female-headed households offer a modest but meaningful advantage for girls during this critical transition phase, supporting the view that such households can serve as protective environments for continued schooling.

3.3 Contextual Variation in the Gender–Headship Effect on School Participation

Model [3] extends the analysis by including a three-way interaction between the child's gender, household headship, and district-level mean years of schooling (MYS). MYS is derived from the education sub-index of the Human Development Index (HDI) and captures the average number of years of formal education completed by adults in each district. As a contextual indicator, MYS reflects the overall educational environment in which children are raised—shaping social norms, institutional quality, peer influence, and expectations related to schooling. Districts with higher MYS generally offer more robust educational infrastructure, stronger parental networks, and greater institutional support for school participation.

The inclusion of the three-way interaction—female × female-headed household × MYS—tests whether the district's broader educational context conditions the intersectional effects of gender and household headship on school participation. Understanding this conditionality is critical because household-level influences on school participation may depend on the strength of external educational opportunities and institutional supports. A comparable pattern is found in Mozambique, where Manhisse and Ogawa (2024) show that female-headed households are more effective in promoting school completion among girls, especially in primary education settings where broader structural support is limited—underscoring the amplified role of household agency in under-resourced environments.

Additional analyses disaggregated by age group (7–12 for primary, 13–15 for junior secondary, and 16–18 for senior secondary) were also conducted to examine whether the three-way interaction effect varies across stages of schooling. However, these stratified models produced statistically insignificant three-way interaction estimates across all subgroups. In combination with the pooled model, this consistent lack of significance suggests that the combined influence of child gender and female headship does not meaningfully vary by MYS across different levels of schooling. This indicates that the interplay between household-level characteristics and district educational context remains relatively stable regardless of the child's educational stage.

Nonetheless, significant two-way interactions provide important insights. First, the interaction between female × MYS is positive and significant (OR = 1.026, $p = 0.003$), suggesting that girls experience greater educational gains in districts with higher MYS than boys do—possibly due to more gender-equitable norms, improved access, and reduced barriers to female education. Second, the interaction between female-headed households × MYS is negative and highly significant (OR = 0.894, $p < 0.001$), indicating that the educational advantage associated with female headship declines in better-educated districts. This may reflect a diminishing marginal role of household-level agency when broader institutional support structures are stronger, particularly in urbanized or education-rich areas. Similar dynamics are observed in rural China, where school consolidation improved average quality but disproportionately benefited children from wealthier households—highlighting how stronger educational contexts can inadvertently amplify household-level disparities (Guo et al., 2024).

Taken together, these findings address Research Question 3 by showing that while the gender gap in school participation is not significantly shaped by the joint effect of household headship and district educational context, it is still influenced independently by each factor. Girls benefit disproportionately from being in high-MYS districts, while the positive impact of female-headed households is more substantial in low-MYS areas, where institutional support is weaker. These patterns underscore the importance of situating household-level strategies within their broader structural context. Educational outcomes are shaped not only by family dynamics but also by the institutional and normative environments that vary across regions.

3.4. Discussions

From the perspective of the sociology of education, the findings contribute to a deeper understanding of how household structures—particularly household headship—interact with broader educational environments to shape children's school participation. This field emphasizes that educational outcomes are not shaped solely by individual characteristics but are embedded within family dynamics, cultural expectations, and structural inequalities (Ballantine et al., 2022).

The analysis shows that children in female-headed households (FHHs) are more likely to attend school than those in male-headed households, particularly at the junior secondary level. This association remains significant even after controlling for individual, household, and district-level factors. These findings challenge assumptions of disadvantage in FHHs and suggest that such households may act as adaptive environments that prioritize education. Evidence from rural Pakistan supports this interpretation: when women participate in schooling decisions and possess a strong awareness of gender equality, households allocate more resources to girls' education (Saleemi & Kofol, 2022).

These results also highlight the role of household agency—the capacity to make strategic choices under constraints, mobilizing time and resources toward long-term goals such as education (Kabeer, 1999). Despite systemic barriers, female heads may prioritize schooling more consistently, especially where education is viewed as a pathway to social mobility. Similar patterns have been documented in rural India, where children, especially girls, in female-headed households perform as well or better than those in male-headed households under similar socioeconomic conditions (Chudgar, 2011). Evidence from Vietnam further suggests that educated female heads are more likely to enhance household wealth, illustrating how agency is exercised through human capital investment (Vo et al., 2023).

The particularly strong effect at the junior secondary level aligns with Bourdieu's (1986) theory of cultural capital, which emphasizes how families transmit values and dispositions that support academic success. Female-headed households, despite their limited financial resources, may instill an educationally oriented habitus, promoting discipline, goal-setting, and persistence. These intangible assets become crucial during transitional phases when dropout risks are elevated. Evidence from Nicaragua suggests that when cash transfers are directed to women, household resources are more likely to be allocated to children's health and education, thereby reinforcing the connection between women's control over resources and child-focused investments (Gitter & Barham, 2008).

At the district level, structural opportunity is captured by mean years of schooling (MYS). The study finds that while girls benefit more from higher-MYS districts, the positive effect of female headship diminishes in such settings. This suggests that household influence is more critical in contexts where public educational systems are weaker—echoing Gamoran's (2001) assertion that educational inequality reflects both household strategies and institutional opportunity structures. Recent evidence from China finds that school consolidation improves quality but disproportionately benefits better-off households, exacerbating household-level disparities (Guo et al., 2024).

Overall, the findings encourage a more differentiated understanding of FHHs—not as structurally deficient but as active, education-oriented units. Their positive impact is most evident in lower-resource districts, where institutional support is limited. These insights underscore the need for inclusive education policies that acknowledge household diversity and bolster household-level efforts to retain children—especially at-risk adolescents—in school.

4. Conclusion

4.1 Summary of Findings

This study examines the relationship between household headship and children’s school participation in Indonesia, with a focus on gender disparities and district-level educational context. Using six waves of nationally representative SUSENAS data (2019–2024), this analysis examines how household structure interacts with child gender and district-level average years of schooling to influence attendance across primary, junior secondary, and senior secondary levels. Three research questions guide the analysis, each offering distinct insights.

First (RQ1), the study investigates whether children in female-headed households (FHHs) differ in school participation compared to those in male-headed households (MHHs). The results show that children in FHHs are significantly more likely to attend school, with the strongest effect at the junior secondary level—when dropout

risks typically increase. This association remains robust after controlling for individual, household, and contextual factors, challenging the assumption that FHHs are inherently disadvantaged.

Second (RQ2), the study explores whether the gender gap in school participation varies by household headship. It finds that both child gender and headship independently affect participation—girls attend school more than boys, and children in FHHs participate more than those in MHHs. However, their interaction is not statistically significant overall: girls in FHHs do not gain added advantage beyond the separate effects. A modest benefit appears at the junior secondary level, but this is not consistent across all stages.

Third (RQ3), the study assesses whether the effects of gender and headship vary across different district educational contexts. The three-way interaction is not significant, indicating that the advantage of being a girl in an FHH does not systematically depend on district-level education. Nevertheless, two-way interactions reveal that girls benefit more in districts with higher levels of education. At the same time, the positive effect of FHHs is stronger in districts with lower average schooling—suggesting that household-level support is critical in areas with weaker institutional capacity.

4.2 Policy Implications

This study challenges the common assumption that female-headed households (FHHs) are uniformly disadvantaged in supporting children's education. Children in FHHs exhibit significantly higher school participation, particularly at the junior secondary level, when dropout risks are higher. This suggests that, when supported, FHHs can serve as strong advocates for educational continuity. Policymakers should move beyond deficit-based narratives and recognize the potential of FHHs in promoting education. Targeted interventions—such as conditional cash transfers, school fee waivers, or parenting programs—could be especially valuable in rural and low-income districts where service delivery is limited.

The study also finds that the effects of child gender and household headship vary by district-level educational context. In districts with lower average years of schooling, the advantages of living in an FHH are more evident. This underscores the importance of local institutional capacity in shaping outcomes. While better-educated districts provide systemic support that benefits all children, those in less developed areas rely more on household-level efforts. District governments should prioritize investments in teacher quality, school access, and community education initiatives in underserved areas—particularly at the junior secondary level, where household support is most critical.

Although girls generally attend school at higher rates than boys, the study finds no significant added benefit for girls living in FHHs. This suggests that gender-sensitive policies should not rely on household structure as a proxy for advantage. Rather than narrowly targeting intersecting identities (e.g., girls in FHHs), policies should address broader systemic barriers—such as early marriage, unsafe school environments, and gender-insensitive pedagogy—that affect all vulnerable groups. A gender-equity lens should be integrated throughout the education policy cycle to ensure interventions are responsive to individual, household, and contextual disparities. Together, these findings underscore the need for inclusive, context-aware education policies that account for the interplay between gender, family structure, and local capacity.

4.3 Study Limitations and Future Extension

This study offers valuable insights into the relationship between household headship and children’s school participation in Indonesia; however, several limitations remain. First, the definition of household headship, based on self-reported SUSENAS data, may not fully reflect who holds decision-making power or controls household resources. It also masks variation among female-headed households (FHHs). Distinctions between widows, married women, or single mothers are not captured despite evidence that these subgroups differ significantly in socioeconomic capacity and child support (Cheung & Park, 2016; Saad et al., 2022). Second, the school participation measure used—current attendance—offers only a partial view of educational engagement. Attendance does not necessarily indicate whether a child is in the appropriate grade for their age, is progressing

adequately, or is learning effectively. Children may experience delayed entry, repetition, or irregular attendance, all of which point to deeper vulnerabilities (Singh et al., 2013; Williams et al., 2024). Future studies should incorporate indicators such as age-grade alignment and academic performance to capture the multidimensional nature of educational inequality better.

A third limitation is the use of repeated cross-sectional data from SUSENAS (2019–2024), which prevents tracking changes within the same households over time. As such, transitions in household headship (e.g., due to widowhood or migration) and their effects on school participation cannot be assessed. Longitudinal or panel data would enable more rigorous causal inference and dynamic analysis of intra-household changes (Hossain, 2025). Finally, this study relies solely on quantitative data. While offering generalizable results, it may overlook cultural norms, community influences, or gendered expectations that shape education-related decisions. Mixed-methods research could enrich understanding by linking lived experiences with statistical trends, thereby improving the policy relevance of future work (Shi et al., 2015).

Author Contributions: The sole author designed, analyzed, interpreted and prepared the manuscript.

Funding: The author received no financial support for the research, authorship, and/or publication of this article.

Conflicts of Interest: The author declares no competing interests.

Informed Consent Statement/Ethics approval: Informed consent/ethical approval was not required as the study did not involve human participants performed by the author.

Data Availability Statement: Access to the 2019-2024 National Socioeconomic Survey (SUSENAS) dataset is restricted due to contractual agreements with Badan Pusat Statistik (BPS). Interested researchers may obtain the dataset directly from BPS via https://www.bps.go.id.

Declaration of Generative AI and AI-assisted Technologies: During the preparation of this work, the author utilized ChatGPT (OpenAI) and Grammarly to enhance language clarity, readability, grammatical accuracy, and consistency through proofreading. After using this tool/service, the author reviewed and edited the content as needed and took full responsibility for the content of the publication.

References

AlAzzawi, S., Dang, H.-A., Hlasny, V., Abanokova, K., & Behrman, J. (2024). *Female headship and poverty in the Arab region: Analysis of trends and dynamics based on a new typology* (Policy Research Working Paper No. 10672). World Bank Group, Development Economics, Development Data Group.Angrist, J. D., & Pischke, J.-S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton University Press.

Asiedu, E., Karimu, A., & Iddrisu, A. G. (2024). Structural changes in African households: Female-headed households and Children's educational investments in an imperfect credit market in Africa. *Structural Change and Economic Dynamics*, *68*, 30–42. https://doi.org/10.1016/j.strueco.2023.09.008

BPS. (2024). *Statistik Indonesia 2024 [Statistical Yearbook of Indonesia 2024]*. Badan Pusat Statistik.

Ballantine, J. H. (2021). *The sociology of education: A systematic analysis* (9th ed.). Routledge Books. https://doi.org/10.4324/9781003023715

Bammeke, F. (2010). Gender, household headship and children's educational performance in Nigeria: debunking the myth of poor performance in female-headed households. *Etude de La Population Africaine [African Population Studies]*, *24*(1–2). https://doi.org/10.11564/24-1-2-304

Bourdieu, P. (1986). *The forms of capital*. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood.

Chant, S. (2004). Dangerous equations? How female-headed households became the poorest of the poor: Causes, consequences and cautions. *IDS Bulletin (University of Sussex. Institute of Development Studies : 1985)*, *35*(4), 19–26. https://doi.org/10.1111/j.1759-5436.2004.tb00151.x

Cheung, A. K.-L., & Park, H. (2016). Single parenthood, parental involvement and students' educational outcomes in Hong Kong. *Marriage & Family Review*, *52*(1–2), 15–40. https://doi.org/10.1080/01494929.2015.1073650

Chudgar, A. (2011). Female headship and schooling outcomes in rural India. *World Development*, *39*(4), 550–560. https://doi.org/10.1016/j.worlddev.2010.08.021

Espinoza-Delgado, J., & Klasen, S. (2018). Gender and multidimensional poverty in Nicaragua: An individual based approach. *World Development*, *110*, 466–491. https://doi.org/10.1016/j.worlddev.2018.06.016

Gamoran, A. (2001). American schooling and educational inequality: A forecast for the 21st century. *Sociology of Education*, *74*, 135. https://doi.org/10.2307/2673258

Gitter, S. R., & Barham, B. L. (2008). Women's power, conditional cash transfers, and schooling in Nicaragua. *The World Bank Economic Review*, *22*(2), 271–290. https://doi.org/10.1093/wber/lhn006

Guo, N., Kang, L., Wang, S., & Zhang, P. (2024). *Unveiling educational inequality: The divergent effects of school consolidation in rural China* (HKU Jockey Club Enterprise Sustainability Global Research Institute Paper No. 2025/014). https://ssrn.com/abstract=5076090

Hossain, M. (2025). The link between contextual poverty and academic achievement: Evidence using panel data from a lower-middle-income country. *The British Journal of Sociology*. https://doi.org/10.1111/1468-4446.13208

Joshi, S. (2004). *Female household-headship in rural Bangladesh: Incidence, determinants and impact on children's schooling* (Center Discussion Paper No. 894). Yale University, Economic Growth Center. https://doi.org/10.22004/ag.econ.28424

Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, *30*(3), 435–464. https://doi.org/10.1111/1467-7660.00125

Kutner, M. H., Nachtsheim, C. J., & Neter, J. (2004). *Applied linear regression models-revised edition with student CD* (4th ed.). McGraw-Hill Professional.

Manhisse, N., & Ogawa, K. (2024). Smallholder households and children's schooling in primary education in Mozambique. *International Journal of Educational Development*, *105*(102980), 102980. https://doi.org/10.1016/j.ijedudev.2024.102980

Nugraha, P., & Widyasthika, H. F. (2018). *Women left behind? Findings from female-headed household in Indonesia*. In K. H. Dewi, A. Situmorang, & W. M. Santoso (Eds.), *Proceeding International Conference and Workshop on Gender: Women's leadership and democratisation in the 21st century Asia* (pp. 397–410). Center for Political Studies, Indonesian Institute of Sciences – P2P LIPI.

PEKKA, & SMERU. (2014). *Menguak Keberadaan dan Kehidupan Perempuan Kepala Keluarga: Laporan Hasil Sistem Pemantauan Kesejahteraan Berbasis Komunitas (SPKBK-PEKKA) [Revealing the Existence and Lives of Female Heads of Households: Report on the Results of the Community-Based Welfare Monitoring System (SPKBK-PEKKA)]*. Lembaga Penelitian SMERU.

Pujiwati, L. A., Fatoni, Z., Alabshar, N., Harfina, D., Munawaroh, T., & Widaryoko, N. (2025). Determinants of household extreme poverty among female-headed households in Indonesia: Does disability matter? *Journal of Poverty*, *29*(4), 308–330. https://doi.org/10.1080/10875549.2024.2338156

Quisumbing, A. R., Haddad, L., & Peña, C. (2001). Are women overrepresented among the poor? An analysis of poverty in 10 developing countries. *Journal of Development Economics*, *66*(1), 225–269. https://doi.org/10.1016/s0304-3878(01)00152-3

Quisumbing, A. R. (Ed.). (2004). *Household decisions, gender and development: A synthesis of recent research*. International Food Policy Research Institute.

Rabe-Hesketh, Sophia, & Skrondal, A. (2021). *Multilevel and longitudinal modeling using Stata, volumes I and II* (4th ed.). Stata Press.

Saad, G. E., Ghattas, H., Wendt, A., Hellwig, F., DeJong, J., Boerma, T., Victora, C., & Barros, A. J. (2022). Paving the way to understanding female-headed households: Variation in household composition across 103 low- and middle-income countries. *Journal of Global Health*, *12*(04038), 04038. https://doi.org/10.7189/jogh.12.04038

Salam, T. D. O., Majid, M. S. A., Dawood, T. C., & Suriani, S. (2021). The effect of gender and household education expenditure in Indonesia. *International Journal of Quantitative Research and Modeling*, *2*(4), 184–192. https://doi.org/10.46336/ijqrm.v2i4.192

Saleemi, S., & Kofol, C. (2022). Women's participation in household decisions and gender equality in children's education: Evidence from rural households in Pakistan. *World Development Perspectives*, *25*(100395), 100395. https://doi.org/10.1016/j.wdp.2022.100395

Shi, Y., Zhang, L., Ma, Y., Yi, H., Liu, C., Johnson, N., Chu, J., Loyalka, P., & Rozelle, S. (2015). Dropping out of rural China's secondary schools: A mixed-methods analysis. *The China Quarterly*, *224*, 1048–1069. https://doi.org/10.1017/s0305741015001277

Singh, A., Gaurav, S., & Das, U. (2013). Household headship and academic skills of Indian children: A special focus on gender disparities. *Revue Europeenne de Demographie [European Journal of Population]*, *29*(4), 445–466. https://doi.org/10.1007/s10680-013-9288-3

Soseco, T., Hidayah, I., & Dwidyah Rini, A. (2022). Gender determinant on multidimensional poverty index: Evidence from Indonesia. *Jurnal Ilmu Sosial Dan Ilmu Politik*, *26*(2), 137. https://doi.org/10.22146/jsp.69320

UNESCO. (2020). *Global Education Monitoring Report 2020: Inclusion and education: All means all.* Paris: UNESCO. https://doi.org/10.54676/jjnk6989

UNESCO. (2022). *Global Education Monitoring Report – Gender Report: Deepening the debate on those still left behind*. UNESCO. https://doi.org/10.54676/rczb6329

UN Women. (2018). *Turning promises into action: Gender equality in the 2030 Agenda for Sustainable Development*. UN Women.

Vo, D. H., Vo, A. T., & Ho, C. M. (2023). Does gender and education of the households' heads matter for wealth accumulation in Vietnam? Evidence from a recent decade. *Heliyon*, *9*(12), e22836. https://doi.org/10.1016/j.heliyon.2023.e22836

Wang, G.-Z., Buffalo, M. D., Bakr, S., & Spataro, L. P. (2004). The effect of female-headed households on educational attainment: A comparative analysis of White and Black respondents. *Journal of Applied Sociology*, *os-21*(2), 135–150. https://doi.org/10.1177/19367244042100207

Williams, E. M., Padmadas, S. S., & Väisänen, H. (2024). Falling behind in school: Mother's economic empowerment and its association with children's grade progression in Malawi. *International Journal of Educational Development*, *106*(103022), 103022. https://doi.org/10.1016/j.ijedudev.2024.103022

World Bank. (2020). *The promise of education in Indonesia*. World Bank.

Zhang, M., You, S., Yi, S., Zhang, S., & Xiao, Y. (2024). Vulnerability of poverty between male and female-headed households in China. *Journal of Family and Economic Issues*. https://doi.org/10.1007/s10834-024-09969-5