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A Study on the Determinants of Child Mortality: A Scoping Review

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Abstract:

Introduction: In the preceding few decades, child mortality becomes a crucial topic among many researchers which revolves around children health and overall development. Hence, almost every national and international stakeholder, as well as policymakers, continually endeavour to aim for the global decline of childhood deaths. Many previous researches have observed the risk factors that contribute to increase the ratio of child mortality in countries.

Objectives Despite the fact that there are numerous factors which affects to the child mortality, but in our study, we focused on the three main factors, which are, socio-cultural, bio-demographic and economic factors.

Methods: This paper reports the systematic review on these selected risk factors of child mortality and meta-analysis on some selected previous studies which relates to maternal education and child mortality. This study synthesized and reviewed the findings of 120 previously published articles and these searches were conducted without any restriction on publication date.

Results: Using meta-analysis, we produced pooled estimates of the relationship between maternal education and child mortality. Under the fixed-effect model, finding shows that the pooled estimate of the relationship between maternal education and child mortality before adjusting for covariates was 1.45 (95% CI: 1.38–1.52) and after adjusting for covariates was 1.22 (95% CI: 1.16–1.29). For the random-effects model, results found that the crude odds ratio was 1.73 (95% CI: 1.37–2.09) and an adjusted odds ratio was 1.29 (95% CI: 1.10–1.49).

Conclusions: As deliberated in the literature review socio-cultural, bio-demographic and economic characteristics are to be the essential and contiguous determinants of child mortality at worldwide.

Keywords: Child Mortality, Socio-Cultural, Bio-Demographic, Economic Factors, Meta- analysis.

1. Introduction

Mortality and morbidity in children below five years of age continues to be an area of concern across the world as well as in India. Child mortality estimates the number of new born babies that will die before reaching their fifth birthday. It can be divided in infant mortality (probability of dying before the first birth day) and under-five mortality (probability of dying between first and fifth birth day).

The causes of deaths in infancy period are due to the endogenous (biological) and exogenous (environmental) factors. According to endogenous and exogenous factors, infant mortality is further divided in neo-natal (probability of dying in the first month of life) and post neo-natal mortality (probability of dying after the first month of life but before the first birthday). Thus, infant mortality is affected by both endogenous and exogenous factors i.e. biological and socio-economic factors, while child mortality solely depends on exogenous factors i.e. nutrition, sanitation etc. The death due to environmental cause can be reduced by improvement in public health measure and practices, death due to biological causes, such as congenital malformation, genetic disorder etc. are difficult to control for which medical research was still carried out. In 1984, Mosley and Chen proposed an analytical framework for the study of the determinants of child survival in developing countries. His framework was based on the premise that all social and economic determinants of child mortality necessarily operate through a common set of biological mechanism or proximate determinants to exert an impact on mortality. The adjacent determinants should be assessable in population-based research. They comprise maternal factors (age at birth, parity, birth interval); environmental contamination (intensity of household crowding, water contamination, household food contamination or potential faucal contamination); nutrient deficiency (nutrient availability to the infant or to be mother during pregnancy and lactation); injury (recent injuries or injury related disabilities); personal illness control (use of preventive service as immunization, malaria, prophylactics or antenatal care and use of curative measures for specific condition). The socio-economic determinants which are operating through these adjacent determinants are gathered into three broad categories: Individual level factors: individual level productivity (skills, health and time usually measured by mother's educational level, whilst father's educational level correlates strongly with occupation and household income); tradition/ norms/ attitudes (power relationship within the household, value of children, beliefs about diseases causation, food preference). Household level factors: income and wealth effects (food availability, quality of water supply, clothing/ bedding, housing condition, fuel/ energy availability, transportation means to purchase what is necessary for daily practise of hygiene/ preventive care, aces to information). Community level factors: ecological setting (climate, temperature, altitude, season rainfall) political economy (organization of food production, physical infrastructure like rail, road electricity, water sewage, political institution), health system variability.

The purpose of this review paper is to synthesize and critically examine the existing literature on the determinants of child mortality, with a particular focus on socio-cultural, bio-demographic, and economic factors. This review explores how variables such as maternal education, cultural norms, gender dynamics, maternal age at first birth, birth order, household wealth, and living conditions etc. contribute to child mortality outcomes. In addition to the narrative synthesis, the paper includes a meta-analysis specifically examining the association between maternal education and child mortality. By quantifying the impact of maternal education through pooled estimates from multiple studies, the meta-analysis aims to strengthen the evidence base and highlight its critical role as a social determinant of child health. Through this integrated approach, the paper seeks to inform the development of more comprehensive, equity-focused policies and interventions aimed at reducing preventable child deaths and advancing progress toward global child health goals.

2. Methods

Information Sources and search techniques: To accumulate an inclusive overview of the previous literature on factors influencing child mortality, we conducted a broad search for scholarly articles, including Springer, Asian Population Studies, Journal of Population Sciences, Taylor & Francis, Science Direct, Research gate etc. These searches were conducted without any restriction on publications date. From these searches, we got some articles, peer-reviewed and full-text papers. All the free-text searches were used. Besides, we applied meta-analysis on the selected previous studies which relates to maternal education and child mortality. Forest plots were used to display 95% CI, summary measure and weight of each study for the most significant determinants and heterogeneity was assessed by enumerating values from I^2 and p values among the selected studies. We performed a random-effects model and fixed effect model for forest plot.

Selection Process: The final selection consisted of 120 articles, which underwent thorough analysis and synthesis to provide a comprehensive overview of current research. However, other factors such as environmental, geographical, climatic and seasonal variables may influence child mortality, but this review specifically focused on socio-cultural, bio-demographic, and economic factors of child mortality. Accessing a broad range of literature was slightly limited by the data sharing policies of specific journals. The selection criteria were based on the articles which were related to these risk factor. In this study, a total of 120 most relevant research papers were reviewed.

3. Results

After searching articles from different publishers, we divided these articles based on its databases. Table 1 shows the numbers of articles retrieved from different databases based on the searched keywords. Socio-cultural factors accounted for 24 studies in PubMed/Scopus and 16 in other sources, suggesting that such determinants have been more extensively explored in indexed literature. Bio-demographic factors were comparatively less explored in other sources with 6 studies but received greater attention in indexed sources with 18 studies. Economic factors were documented in 10 studies indexed in PubMed/Scopus and 6 from other sources, while studies that included all three factors were least represented in other sources 8 but had a comparatively higher share in indexed sources 32. This distribution, as depicted in the table 1, emphasizes that while socio-cultural determinants dominate research attention, integrated approaches encompassing all three categories are increasingly acknowledged as essential for understanding and addressing child mortality.

Table 1: Distribution of the articles on the basis of their databases

Variables	Pubmed/ Scopus	Others
Socio- Cultural factor	24	16
Bio-Demographic factor	18	6
Economic factor	10	6
Included all these three Factors	32	8
Total	84	36

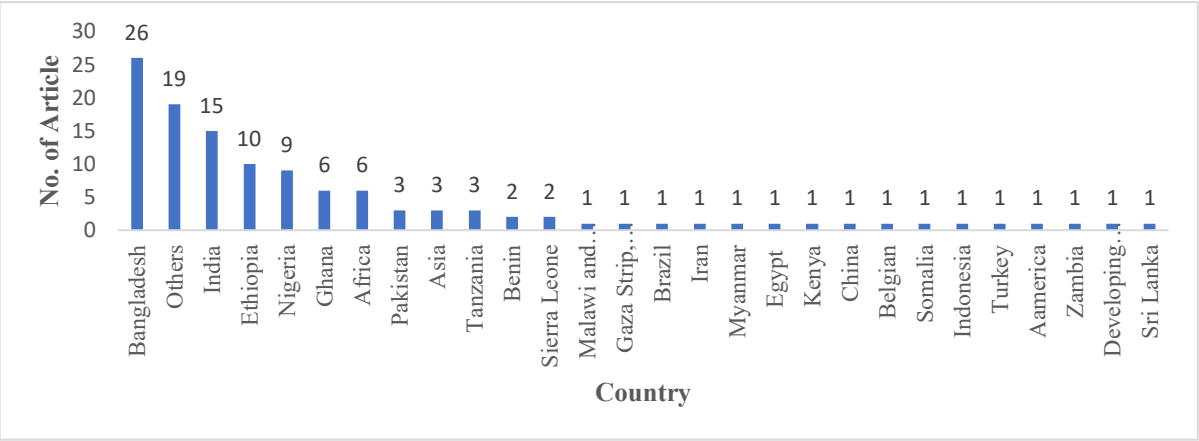

Fig. 1 The number of articles found in different countries

Figure 1 presents the distribution of studies conducted in several countries. Bangladesh had the highest number of studies (n = 26), followed by India (n = 15), Ethiopia (n = 10) and Nigeria (n = 9). The review encompassed 6 Ghana, 6 Africa, 3 each from Pakistan, Asia and Tanzania, 2 each from Benin and Serria Leone. Additionally, 1 study each from Malawi, Palestine, Brazil, Iran, Myanmar, Egypt, Kenya, China, Belgian, Somalia, Indonesia, Turkey, America, Zambia, Sri-Lanka and Developing Countries were included. The "Others" category (n = 19) included two or more countries in the studies.

Table 2: Data analysis techniques applied in the selected articles

S. No.	Model Applied	Outcome Measure	No. of Articles
1.	Logistic Regression Model	Odds Ratio	58
2.	Poisson Regression Model	Incidence Risk Ratio	5
3.	Linear Regression Model	Multiple linear regression	3
4.	Hazard Model	Hazard Ratio	15
5.	Others	Correlation analysis / Panel regression model/ etc.	39

Table 2 shows the data analysis techniques which were applied by the previous selected studies. Regression analyses were mostly used in the studies reviewed. Logistic regression was the most frequently applied technique, although other regression models, including Cox proportional hazards regression, Poisson regression, Linear Regression Model were also common. Some additional statistical methods included the Chi-square test, Hosmer–Lemeshow test, two-stage residual inclusion, Kaplan–Meier model, two-tailed t-test, Correlation analysis, Panel regression model, Negative Binomial regression, etc. also used in the previous studies which included in the "Others" category.

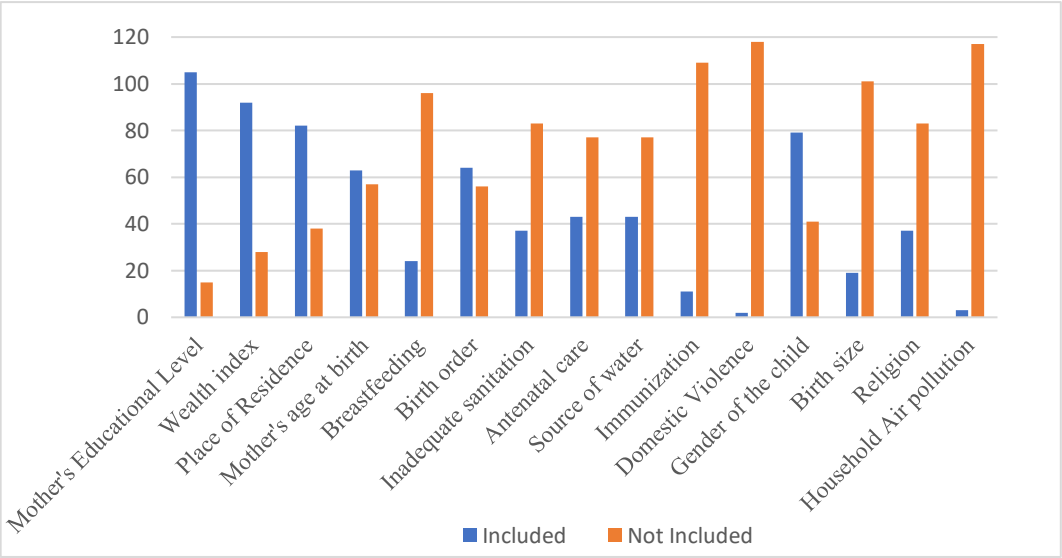

Fig. 2 Frequency distribution of the variables consider in the refers studies.

This study reviewed 120 articles to investigate the influence of various factors on child mortality. The selected literature showed that 15 main variables: mother's educational level, wealth index, place of residence, religion, mother's age at first birth, breastfeeding, birth order, size of child at birth, gender of the child, inadequate sanitation, antenatal care visits, source of drinking water, immunization, domestic violence and household air pollution. Moreover, a few articles addressed some less significant variables, such as the number of children ever born, father education level, father age, father occupation, contraceptive use, family type, family size, marital status for mothers, vaccination, parental migration status, the mother uses tobacco, nutrition status, etc. A list of these selected variables that influenced child mortality which included in different articles is presented in Fig. 2.

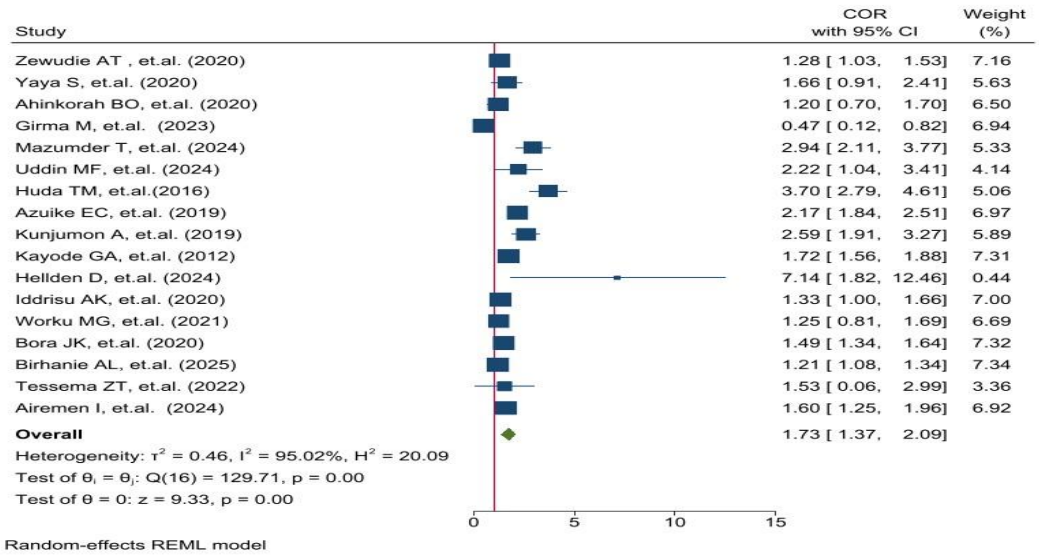

Fig.3. Forest plot using random effect model for crude odds ratio with 95% CI

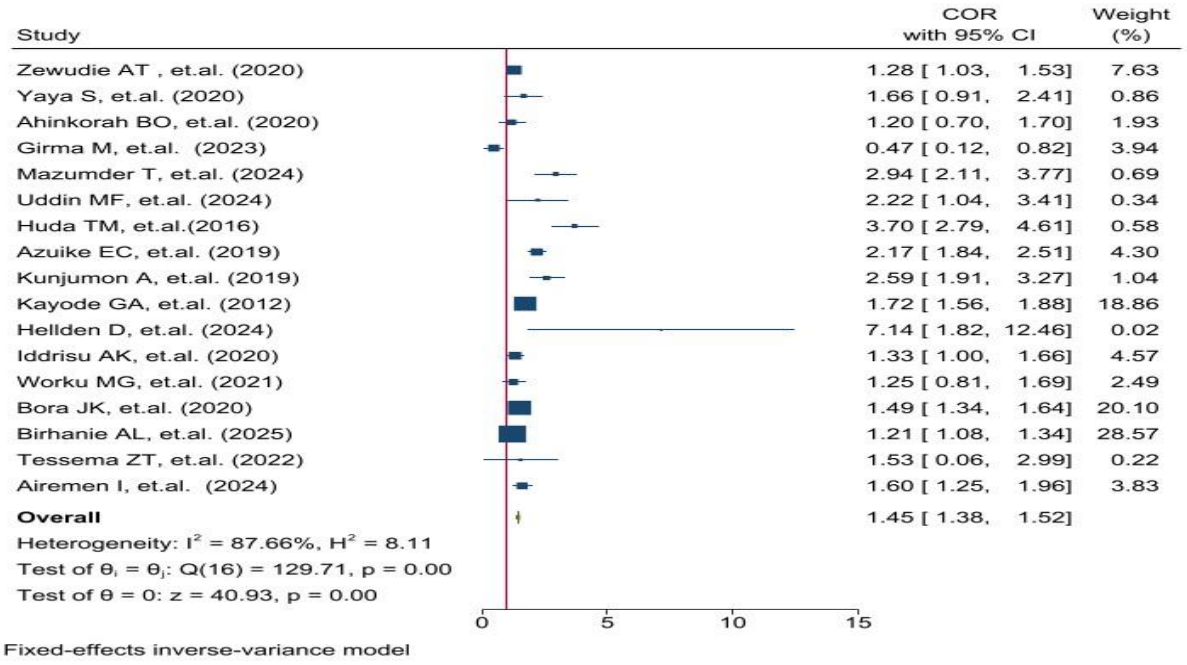

Fig.4. Forest plot using fixed effect model for crude odds ratio with 95% CI

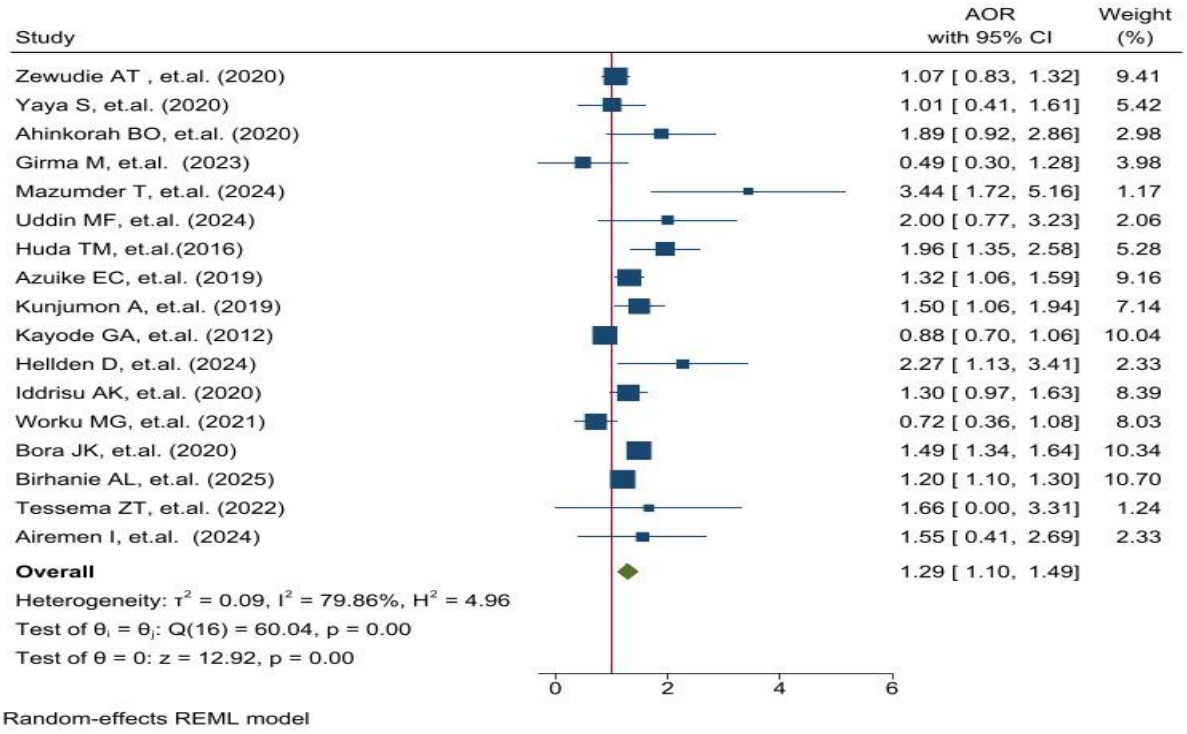

Fig.5. Forest plot using random effect model for adjusted odds ratio with 95% CI

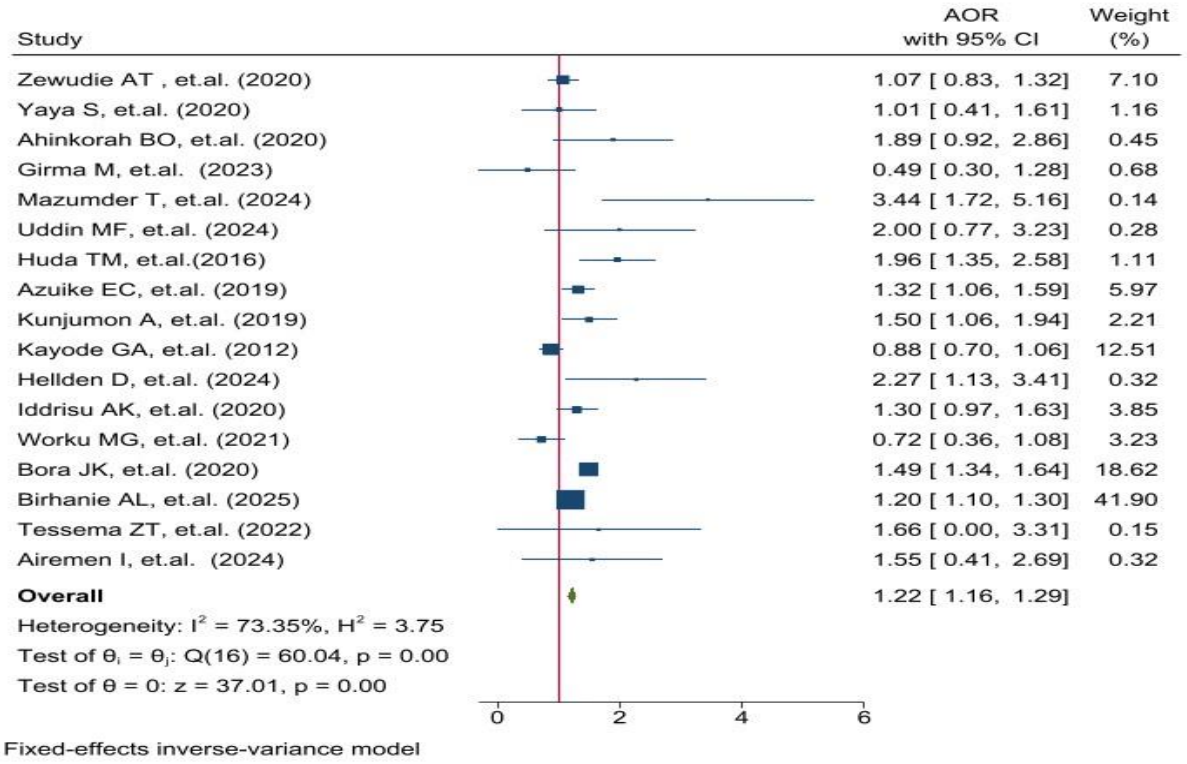

Fig.6. Forest plot using fixed effect model for adjusted odds ratio with 95% CI

The forest plot summarises the association between maternal education and child mortality across 18 previous studies (Fig. 3 to 6). Each horizontal line represents an individual study's effect estimate with its 95 % confidence interval. In almost all cases, the point estimates lie to the left of the vertical line of no effect, indicating that children of mothers with higher education levels have a lower risk of dying before age five than those of mothers with little or no schooling. At the bottom of the plot, the diamond symbolises the pooled effect estimate. The estimate calculated under the fixed-effect model (which assumes that all studies are estimating the same underlying effect) also lies entirely to the left of the line of no effect. Because the included studies show some variability in effect sizes, the random-effects model (which accounts for between-study heterogeneity) was also applied. Under this model, the pooled effect remains protective and statistically significant, although the confidence interval is slightly wider, reflecting the additional uncertainty due to heterogeneity. The relatively narrow width of the pooled-effect diamond suggests low to moderate heterogeneity across studies, the accompanying I^2 and p-value quantify this formally. Figures 3 and 4 shows the crude effect estimates under random-effect and fixed-effect models, while Figures 5 and 6 display the adjusted odds ratios, respectively. In all plots, most individual studies show odds ratios above one, and the pooled estimates consistently fall to the right of the null line, highlighting an elevated risk of child mortality associated with low maternal education. Taken together, both the fixed-effect and random-effects pooled estimates confirm that higher maternal education consistently reduces the risk of child mortality, underscoring the robustness of the association and highlighting female education as a key public-health intervention.

Table 3: Classification for fixed effect model and random effect model

Model		Odds Ratio [C.I.]	H^2	I^2(%)
Fixed Effect Model	Crude	1.45 [1.38, 1.52]	8.11	87.66
	Adjusted	1.22 [1.16, 1.29]	3.75	73.35
Random Effect Model	Crude	1.73 [1.37, 2.09]	20.09	95.02
	Adjusted	1.29 [1.10, 1.49]	4.96	79.86

The meta-analysis demonstrated a consistent association between maternal education level and child mortality across the included studies. Table 3, highlights the classification of OR (crude and adjusted) for fixed effect and random effect model. Under the fixed-effect model, children born to mothers with lower educational attainment had significantly higher odds of child mortality compared with those of more educated mothers (COR = 1.45; 95% CI: 1.38–1.52), which remained elevated after adjustment of covariates (AOR = 1.22; 95% CI: 1.16–1.29). The random-effects model yielded slightly higher estimates, with a crude odds ratio of 1.73 (95% CI: 1.37–2.09) and an adjusted odds ratio of 1.29 (95% CI: 1.10–1.49), indicating a robust association even when accounting for between-study variability. The heterogeneity statistics show substantial variability across studies. In the fixed-effect model, heterogeneity was high (H^2 = 8.11; I^2 = 87.66% for COR) and although adjustment slightly reduced heterogeneity (H^2 = 3.75; I^2 = 73.35% for AOR), it remained considerable. In the random-effect model, heterogeneity was even greater (H^2 = 20.09; I^2 = 95.02% for COR and H^2 = 4.96; I^2 = 79.86% for AOR). High heterogeneity was observed across studies (I^2 ranging from 73% to 95%), suggesting that differences in study design, population characteristics, or measurement of maternal education may have contributed to variability in effect sizes.

4. Discussion

Child mortality remains a critical indicator of a country's health and development, and understanding its determinants is essential for effective interventions. This review has synthesized evidence across multiple studies to highlight the key socio-cultural, bio-demographic, and economic factors associated with child mortality. Socio-cultural influences, particularly maternal education, have consistently demonstrated a strong protective effect on child survival. Educated mothers are more likely to adopt healthy practices, seek timely medical care, and utilize maternal and child health services. The findings from the previous study showed the significant impact of education, unemployment, and health expenditure, access to improved water and sanitation facilities, and income inequality on child mortality [Kousar S, et.al. (2020)]. The risk of childhood mortality was 26.7%, 39.7 and 45.9% lower among the mothers having primary, secondary and tertiary education respectively, than those with no formal education [Yaya S, et.al. (2017)]. Similarly, the risk of child mortality was higher for illiterate mother in comparison to those mothers who had been educated above the primary level [Singh GP, et.al. (2015)]. This effect may be attributed to the fact that educated mothers typically have higher incomes, better health literacy, greater awareness of child illnesses, and a more informed approach to making decisions regarding their children's health and well-being [Uddin MF, et.al. (2024)]. Some other previous studies also support that association [Tessema ZT, et.al. (2022); Birhanie AL, et.al. (2025); Bora JK (2020)]. Place of residence also plays a significant role. Rural children are generally at higher risk due to limited access to healthcare

facilities, poor transportation infrastructure, and lower maternal education levels. There was increased risk of under-five mortality in rural residence, when compared with the urban residence (HR = 1.07; CI 1.01, 1.12) [Ekholuenetal M, et.al. (2020)]. However, the urban advantages not uniform, urban slums often replicate rural vulnerabilities, compounded by overcrowding and inadequate sanitation [Mohamoud YA, et.al. (2019)]. The previous result showed that the Mean proportion would be 47 deaths/1000 children for urban poor and 21 deaths/1000 children for urban non-poor, resulting in 26 deaths/1000 children change in urban poor when applied the urban non-poor coefficient and characteristics to urban poor behaviour [Negussie ST, et.al. (2021); Wenlock RW, et.al. (1979)]. Sanitation and water source are environmental determinants that directly affect child health. Poor sanitation and use of unsafe water sources increase exposure to pathogens, particularly those causing diarrheal diseases, a leading cause of child death. Access to improved sanitation and clean water significantly reduces the burden of these preventable illnesses. The findings from the previous study also found that association [Hellden D, et.al. (2024); Kunjumon A, et.al. (2024); Girma M, et.al. (2023); Zewudie AT, et.al. (2020)]. Use of polluting cooking fuel and unimproved sanitation facility increase death risk on under-five mortality 1.13 times and 1.09 times, respectively [Panda S, et.al. (2023)]. Safe source of drinking water and improved sanitation system which are key contributors of healthy living are commonly lacking in rural areas [Ekholuenetale M, et.al. (2020)]. Domestic violence, often underreported, has been increasingly recognized as a risk factor. Women exposed to violence may have poorer physical and mental health, reduced autonomy in child-rearing decisions, and limited access to healthcare, which can negatively impact child survival. Ara F, et.al. (2023), found that the prevalence of child mortality was higher among those who thought that IPV is acceptable than among those who considered such violence to be unjustified and their results show that women's intolerable attitudes toward partner violence not only improve their status but also increase the survival chances of their young children. Religion, while not a direct determinant, influences child mortality through cultural practices, dietary norms, healthcare-seeking behaviours, and attitudes toward contraception and immunization. Differences across religious groups often reflect underlying socio-economic and educational disparities. Cultural norms, practices, and beliefs are strongly associated with high neonatal mortality, contributing to the sluggish decline of overall child survival rate [Ghosh R, (2012)]. Lastly, household air pollution, primarily from biomass fuel use, significantly increases the risk of respiratory infections in young children. The burden is highest in rural and low-income households, where clean cooking alternatives remain inaccessible. Interventions targeting clean fuel access have shown promise in reducing child morbidity and mortality. Household air pollution has a positive relationship with child mortality as they decrease air quality and increase the percentage of respiratory diseases among mothers and children [Akter S, et.al. (2025)]. Socio-cultural reasons of child deaths are inherent in our society, psychology and practices in a way that cannot be removed fast and easily and every socio-cultural reason of child death is somehow related to some structural issues. It's very tough to work on a certain social or psychological pattern, but in order to reduce the damages, it's very important to work on it as soon as probable. The research has identified that multiple socio-cultural, structural, and behavioural conditions along with medical conditions associated with the child mortality [Fariha NS, et.al. (2024)]. The socio-cultural perception of disease, illness and death of children by parents in the study areas often run counter to the biomedical definitions [Ugwueze EA

(2012)]. Information regarding modifiable social factors may be useful in planning intervention programs to promote child survival in Nigeria and other low-income countries in sub-Saharan Africa [Koffi AK, et.al. (2017)].

Bio-demographic factors also play a pivotal role in child mortality. Mother's age at first birth has a complex relationship with child mortality. Younger mothers, especially adolescents, face higher risks due to biological immaturity, limited knowledge, and social vulnerabilities. Early childbearing is associated with low birth weight, preterm delivery, and reduced caregiving capacity, all of which increase the risk of child death. Previous studies' findings similarly observe that young mothers have higher chances of infant mortality than older mothers. This might be due to an early age of marriage, and as such, mothers are not physically or mentally ready to produce a healthy child, namely due to a lack of health care awareness [Susuman AS, et.al. (2016)]. Older mothers have a lot of experience in terms of infant and child health care. The child mortality rate was higher among the children whose mothers were uneducated and gave birth before age 20 [Rahman A, et.al. (2025)]. Maternal age 18 years or younger during childbirth was associated with the highest risk of under-five mortality compared to all other age groups [Mazumder T, et.al. (2024)]. Child mortality was observed to increase with increasing age at first birth [Zahangir MS, et.al. (2025)]. Breastfeeding plays a critical role in child survival. Exclusive breastfeeding during the first six months of life significantly reduces the risk of infectious diseases. However, breastfeeding practices vary across regions and are influenced by maternal education, cultural beliefs, and support from healthcare providers. [Yemane GD, et.al. (2022); Kayode GA, et.al. (2012)]. Birth order also correlates with child mortality. This risk is particularly pronounced when short birth intervals are involved. First order children also had a high percentage of child mortality (3.87%) [Uddin MF, et.al. (2024)]. Some other previous studies also founds that type of findings [Islam MA, et.al. (2021); Ranjan M, et.al. (2016)]. Antenatal care (ANC) is a critical touchpoint for early detection and management of complications during pregnancy. Adequate ANC improves maternal and neonatal outcomes. It also provides opportunities for education, nutritional support, and early referral. Inadequate or no ANC is a common risk factor in settings with high child mortality. The probability of death to be higher in children whose mothers had no ANC visits [Worku MG, et.al. (2021)]. Immunization remains one of the most effective interventions for reducing child mortality. Vaccines protect against multiple deadly diseases such as measles, diphtheria, pertussis, and pneumonia. However, immunization coverage varies widely by geography, wealth, and maternal education. Rajapakse V, et.al. (2025), found a significant role of healthcare expenditure, immunization coverage, and nutrition in shaping U5MR trends in Sri Lanka and emphasized the need for targeted policy interventions to enhance child health outcomes and ensure sustainable progress in reducing child mortality. The gender of the child also relates with the child mortality. socio-cultural preferences for sons in some regions result in female children receiving less care and support, ultimately increasing their mortality risk, although, male neonates may face higher biological risks in early infancy. The mortality rate of boys appears to be more sensitive than the mortality rate of girls [Zewudie AT, et.al. (2016)]. Infant mortality risk found the worst in Bere-Mouraye [OR = 5.073 (1.047–24.57)] for males [Boutrin MC, et.al. (2025)]. Birth size strongly associated with neonatal mortality. Small-sized babies face greater risks due to immature organs, difficulty feeding, and susceptibility to infections. These risks are compounded when coupled with inadequate neonatal care. Small birth size (HR = 1.72; CI = 1.39-2.14) was significantly

associated with neonatal deaths [Iddrisu AK, et.al. (2020); Yaya S, et.al. (2020); Akinyemi JO, et.al. (2015)]. The newborns with small birth size were at a greater risk of child mortality compared to those children with large birth size [Adewuyi EO, et.al. (2016)].

Economic status reinforces many of these determinants, influencing access to essential services and overall living conditions. Children from wealthier households benefit from better nutrition, improved sanitation, access to clean water, and quality healthcare, all of which contribute to improved survival. In contrast, children from poorer households face compounded risks, including food insecurity, exposure to unsanitary environments, and barriers to accessing preventive and curative health services. These disparities are further widened in rural areas, where infrastructure is often lacking, and public services are under-resourced. At a broader level, national and regional economic inequalities also contribute to uneven child health outcomes, as countries with limited public investment in health, education, and social protection struggle to deliver comprehensive maternal and child health services. Moreover, economic shocks such as those caused by pandemics, inflation, or conflict can reverse progress by reducing household income and overwhelming fragile health systems. However, disparities within and between countries suggest that poverty is not only a lack of income but also a manifestation of systemic inequities in access to essential services. Previous studies also support that Income is an important determinant of child survival [O'Hare B, et.al. (2013)]. The economic growth and foreign direct investment both contribute towards reducing IMR and U5MR and thus help improve child health outcomes [Salahuddin M, et.al. (2020)]. The economic expansion and the use of renewable energy contribute to the reduction of under-5 mortality rates in the countries, whereas fossil fuels, industrialization, education, and unemployment contribute to the increase in child mortality rates [Akter S, et.al. (2023)]. The correlation of mortality rate of under-five (per 1000 live births) with current health expenditure per capita, domestic general government health expenditure per capita, and domestic private health expenditure per capita was found to be statistically significant [Chinnaiyan S, et.al. (2021)]. Tejada CAO, et.al. (2019), found that worse economic indicators (lower GDP per capita, higher inflation, unemployment rates and misery index) are associated with higher child mortality rates and a higher percentage in public health expenditures alleviates the effects of economic indicators on child mortality rates, which indicates that, the more attention needs to be paid to the harmful effects of the macroeconomic crises to ensure improvements in child health. Rajapakse V, et.al. (2025), found a strong inverse relationship between per capita Gross Domestic Product and U5MR, highlighting the role of economic growth in improving child survival.

Apart from that, the meta-analysis demonstrated a consistent association between maternal education level and child mortality across the included studies. Under the fixed-effect model and random-effects model, the results found that the children born to mothers with lower educational attainment had significantly higher odds of child mortality compared with those of more educated mothers in both the COR and AOR. However, it becomes lower after the adjustment of covariates but it’s still remained significant. The findings of the meta-analysis reaffirm that maternal education plays a critical protective role in reducing child mortality. Educated mothers are more likely to possess better knowledge of child health practices, nutrition, immunization schedules, and hygiene, which collectively lower the risk of preventable childhood illnesses. Higher education levels also enhance

women's autonomy and decision-making power, enabling timely utilization of maternal and child healthcare services. Moreover, educated mothers tend to have smaller family sizes, longer birth intervals, and improved economic stability, all of which contribute to better child survival outcomes. The persistence of a significant association between lower maternal education and higher child mortality, even after adjustment for covariates, underscores that education is not merely a proxy for socio-economic status but an independent determinant of child health. These findings highlight the importance of policies and interventions aimed at improving female education as a long-term strategy to reduce child mortality.

The interaction of these socio-cultural, bio-demographic, and economic factors underscores the need for a multidimensional and multisectoral approach to reducing child mortality. Isolated interventions may have limited impact if broader structural determinants are not addressed. Programs and policies must therefore focus not only on strengthening health systems but also on promoting girls' education, reducing poverty, empowering women, and addressing cultural norms that limit child well-being. While significant progress has been made globally, the persistence of preventable child deaths highlights the importance of integrated strategies that address both direct and underlying causes. To achieve meaningful and equitable reductions in child mortality, efforts must be sustained, targeted, and informed by evidence that reflects the diverse realities of children and families across different contexts. Many social, environmental and behavioural factors exist in the literature which were found to affect child mortality [Adedeji GA, (2015)]. Socio-economic variables (e.g., place of residence, religion, marital status, education, occupation, family income, etc.) reflect the socio-economic status of a community that have a high influence on morbidity and mortality level [Chowdhury QH, et.al. (2010)]. The scope beyond the dominant medical framework, illuminating the interplay between various social determinants and child health outcomes [Fariha NS, et.al. (2024)]. Besides poverty, other socio-economic and demographic factors have been found to be associated with infant and childhood mortality in the developing countries [Das U, (2022)]. Previous studies suggested that long-term public policies to reduce U5MR should focus on reducing poverty, illiteracy, and socioeconomic inequalities [Chivardi C, et.al. (2023)]. To address these issues, targeted interventions such as improving healthcare access, strengthening the health system, and reducing poverty are essential [Olawade DB, et.al. (2025); Samuel MM, et.al. (2024); Begum A, et.al. (2024)]. Effective socio-economic policy priority with due consideration of globalization should be emphasized to reduce infant and child mortality rates in countries [Rahman MM, et.al. (2022); Ranjan M, et al. (2016); Zewudie AT, et.al. (2020); Girma M, et.al. (2023)].

5. Conclusion

Child mortality is one of the most extensively used measures for the well-being and vigour of children. Globally, deaths of millions of under-five children occur and this death rate could be vetoed with timely immunization intrusion. Although there has been a major decline in the global deaths of under-five children, still it remains an alarming public health concern for the developing countries. The variables considered in this study taken based on previous studies at the global level. As discussed in the literature review socio-cultural, bio demographic and economic characteristics are to be the necessary and adjacent determinants of child mortality at worldwide. So, it was concluded that many social, environmental and behavioural factors exist in the literature which were found to affect

child mortality. The knowledge of these factors should be utilized by both governmental and non-governmental organizations in the world to swing into action of arresting and preventing the risk of increasing child mortality especially in the underdeveloped and developing countries. Future research should consider traditional and additional variables in the study within a structured framework, can adopt measures that precisely reveal the total physical and economic barriers to child well-being care and include indicators culturally pertinent to the research setting. If one delves deep down into the impact of infant and child mortality one finds that this has been closely examined by demographers because of the net effect of mortality and fertility on the rate of population again and again which needs reassessment at interval. Hence researches based on the aforesaid factors are of great importance as Government always need estimates of child mortality at micro and macro level. The patterns of mortality may be different in rural and remote areas. It is also variant among different group of society.

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