

Article 9: Human Development and Lack of Education

Education is widely considered a fundamental driver of positive human development, encompassing a wide range of individual and societal well-being aspects. Consequently, **lack of education** can have a negative impact on several domains of **human development**, including **cognitive development** (Peng & Kievit, 2020; Rutgers Health, 2024; Walsemann & Ailshire, 2020) and **health / well-being** (Choi et al., 2011; Sylte et al., 2025; Wizemann, 2019).

Lack of Education and Cognitive Development

The relationship between lack of education and cognitive development is complex and multidimensional, with profound negative outcomes throughout the lifespan. Research has consistently shown that limited or poor-quality education can hinder cognitive growth, affecting cognitive abilities and increasing the risk of cognitive decline later in life (Peng & Kievit, 2020; Rutgers Health, 2024; Walsemann & Ailshire, 2020).

For instance, an academic review assessed how education influences various aspects of children's development, including cognitive, social-emotional, and academic outcomes. Thus, researchers integrated findings from developmental psychology and education research to provide an informed evaluation on this relationship. They also examined multiple studies covering diverse populations (primarily from the U.S.) to highlight consistent patterns and areas needing further research. (Peng & Kievit, 2020).

The following trends were identified:

- Education positively impacted cognitive skills such as language, executive function, and memory, especially during early childhood.
- Educational settings promoted social-emotional development, including self-regulation, social skills, and emotional understanding.
- Quality of education, including teacher-child interactions and curriculum, played a crucial role in developmental outcomes.

Researchers concluded that education provides a critical frame for shaping child development, supporting not just academic learning but also broader cognitive and social-emotional skills. Moreover, effective educational environments can promote positive developmental trajectories and reduce disparities linked to socioeconomic status. Thus, they emphasized the importance of early and sustained educational support to maximize developmental gains (Peng & Kievit, 2020).

On that same note, a study explored whether early educational experiences, educational content, and academic ability were associated with later-life cognitive functioning and its decline. Furthermore, the study tested whether all these associations could be explained by overall educational attainment. Hence, researchers used cognitive data from the Health and Retirement Study (HRS)—a nationally representative longitudinal survey of U.S. adults aged 50 and older, collected from 1998 to 2014. Early educational experience data were also obtained via the Life History Mail Survey (LHMS) in 2015 and 2017, which gathered retrospective information on school context, curriculum, and self-assessed academic ability. Overall, the sample included

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9,565 respondents who attended primary school or higher and had cognitive data available (Walsemann & Ailshire, 2020).

Results showed the following:

- Significant associations were found between poorer early educational experiences and lower cognitive functioning at age 65.
- Learning problems in elementary school, worse self-rated reading/math ability, attendance at majority-minority or rural schools, and a vocational/high-school–focused curriculum were all linked to lower cognitive performance.
- Educational attainment (e.g., degree level) constituted 9–55% of the impact of early educational experiences—but all associations remained statistically significant even after accounting for it.

Researchers concluded that early educational experiences and overall years of schooling have enduring effects on cognitive functioning later in life, suggesting they help build cognitive reserve (the brain’s ability to cope with age-related changes or damage) (Walsemann & Ailshire, 2020).

Lack of Education and Health / Well-being

Education is a powerful predictor of long-term health and quality of life. Therefore, lack of education has been associated with risks of poor health, functional limitations, and lower life expectancy. (Choi et al., 2011; Sylte et al., 2025; Wizemann, 2019).

For instance, a study looked at the relationship between educational attainment and the prevalence of chronic diseases (specifically kidney disease, diabetes, hypertension, and cardiovascular disease), as well as educational attainment associations with mortality risk in adults suffering from kidney disease. Particularly, researchers aimed to understand how education level influenced health outcomes and survival in high-risk populations. Following that lead, they examined cross-sectional associations of education with chronic disease prevalence and long-term associations with mortality (Choi et al., 2011).

Data were pulled from the Kidney Early Evaluation Program (KEEP)—a nationwide U.S. screening program targeting adults at risk for kidney disease. Participants were recruited through community screenings across the U.S. between 2000 and 2009. Hence, data collection comprised self-reported demographic information (including educational attainment), medical history, laboratory measures (kidney function, blood pressure, and glucose levels), and mortality tracking through national death registries.

Results showed the following:

- Lower educational attainment was significantly associated with higher rates of chronic diseases, including chronic kidney disease, diabetes, hypertension, and cardiovascular disease.
- Participants with less education had increased all-cause mortality compared to those with higher education.

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- These associations remained significant after adjustment for age, sex, race/ethnicity, and other relevant factors.

Researchers concluded that educational attainment is a strong social determinant of health that independently predicts the burden of chronic diseases and mortality risk linked to kidney disease in U.S. adults. Thus, interventions targeting low-education populations may help reduce health inequalities (Choi et al., 2011).

Similarly, a report from the National Library of Medicine assessed the role of educational attainment as a social determinant of health in the United States. Particularly, it examined how education influences various health outcomes, including life expectancy, chronic disease prevalence, and overall well-being. For that purpose, the researcher utilized data from national health surveys, demographic studies, and longitudinal research to assess the impact of education on health outcomes. The data sources examined included the National Health Interview Survey (NHIS), National Health and Nutrition Examination Survey (NHANES), and U.S. Census Bureau data. The datasets offered insight into the educational levels of individuals and correlations with various health indicators (Wizemann, 2019).

Key findings from the report showed the following:

- There was a strong negative association between educational attainment and mortality rates. Thus, individuals with higher education levels tended to live longer and experience fewer chronic diseases.
- Educational disparities contributed significantly to health inequalities. Those with lower educational attainment often had less access to healthcare, engaged in more health-risk behaviors, and had poorer health outcomes.
- Education influenced health through various pathways, including employment opportunities, income levels, and access to health insurance.

The researcher concluded that enhancing educational opportunities can lead to improved public health outcomes and reduce health disparities. Moreover, policies aimed at increasing educational attainment, especially among disadvantaged groups, are essential for improving population health. Ultimately, they argued that addressing educational inequities should be a central component of public health strategies to promote health equity (Wizemann, 2019).

References

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