

Education and Health : Association Mechanisms, Perspectives and resulting Disparity

Puja Kumari*
Kundan Kumar**

Abstract: Interplay between education and health has remained central theme for researchers of Sociology of education and public health. Education plays dual role of creating and eradicating health disparities. There exist myriad of studies detailing separately on causal association, underlying mechanisms, and theoretical perspectives within purview of education and health. This paper seeks to fill the void of an integrated study subsuming multiple dimensions of education-health interface. Based on literature review, this study adopts social perspective to illustrate the association between education and health and merge the concomitant causation governed by underlying mechanisms and theoretical perspectives to present a holistic scenario of resulting health disparity.

Keywords: Education and health, sociology of education, public health, theoretical perspectives, health disparity

Introduction

Sociological view of education is not only confined to increasing human capital but, it is considered as a "sieve" rather than a ladder (Armstrong, Arum & Stevens, 2008), an institution that is responsible for reproducing inequalities through generations (Nash, 1990). Engendering and compelling social opportunities has been identified as dual role of education since the establishment of the discipline (Gerth & Mills, 2014) "and, has been the dominant and central perspective in sociology of education". Research in health disparities has largely discarded this perspective as "specious" (Mirwosky & Ross, 2003) might get benefitted by being associated around this intricate sociological paradigm.

Education, treated as a personal aspect, not only is defined in terms of subjectmatter knowledge, problem-solving skill and reasoning but, also deals with awareness and control of one's emotion, and associated abilities of effective interaction (Hahn & Truman, 2015). Education is a process as well as productand, this process begins at home, in community and in school. As product of this process, education is a wide array of knowledge, capacities (physical, socio-emotional, intellectual, interactive and productive) and skills achieved by a learner with the help of formal and experiential learning (ibid).

"Basic education is an importantdeterminant forbeing healthy. An unhealthy person is one, who lacks basic education knowledge, capacities of emotional regulation and self-awareness, the ability to reason and skills of social interaction. These mental capabilities are the sole"products of formal education and other learning experiences. Within this premise, Ross & Wu (1995) narrated "Education teaches a person to use his or her mind: Learning, thinking, reasoning, solving problems, and so on are mental exercises that may keep the central nervous system in shape the same way that physical exercise keeps the body in shape."

"Public health practitioners in their domain are dedicated to promote educational programs realising the causality factor of education on health. Practitioners and researchers haveanalysed three fundamental relationships between health and education. Health, firstly, being a pre-requisite for education: children who are hungry or suffering from health-related"problem such as toothache face problem in their learning process (Basch, 2011). Secondly, health education that takes place within public health interventions and schools is a fundamental tool of public health (Bujis, Kok, Peters, Paulussen & Ten Dam, 2009). Thirdly, "physical education in schools, combining education with the importance of physical activity in order to maintain good health, thus perpetuating such activity (Rasberry et al, 2011)."

Ross and Wu, 1996 explicitly mentioned the importance of education for maintaining health. There exists resolute and undenied association between health and education. Inequalities in social determinants of health give rise to health disparity. For decades, researches have underlined the strong association between lower level of educational qualification and poor health outcomes. This association is followed by the fact that as quality of primary and secondary education improves inequalities in academic performance and so as health disparity could

*Assistant Professor, Department of Commerce, Patna Women's College (Autonomous), Patna University

**Research Scholar, Department of Humanities and Social Sciences, Indian Institute of Technology (IIT) Patna

be reduced (Paasche-orlow&Wolf, 2010).

Health inequalities are the product of health gradients, which is being observed in by countries to remove disparities in the area by working particularly on education or factors associated with education is the common target of the countries. Thus, this paper on education and health disparity reviews over the relationship between health and education, particular investigating causal association between the two and seeks to examine underlying mechanism behind health and education leading to disparity. The study further seeks to analyse validation of relevant theories associated with these underlying mechanisms.

Theoretical perspectives

Relationship between education and health is primarily hypothesized on the basis of three theoretical perspectives. Most of the research over interplay between education and health in the last two decades has been conducted within the purview of fundamental cause theory (FCT) (Link & Phelan, 1995). "The FCT persuades that social factors such as education are primary causes of health since they regulate access to a wide range of resources such as safe neighbourhoods, income or healthier lifestyles. Drawn from econometrics, Human Capital Theory (HCT) conceptualizes education as a form of investment that provides return by increasing the productivity" (Becker, 2009). "Education is responsible for improving individual's skills, knowledge, effectiveness, reasoning and a few other abilities which could be exploited to produce good health. The third perspective is the credentialing approach" (Collins, 1979). "This approach identifies earned credentials as a significant signal of individual's abilities and skills and asserts the social and economic returns associated with such signals. Thus, all the three approaches propose causal relationship between education and health and suggest several mechanisms which govern the influence of education on health". The FCT illustrates the flexibility and dynamism of mechanisms, HCT details the mechanisms as abilities and embodied skills, and credentialism emphasizes responses of social factors to educational attainment. However," all the three perspectives evaluate the schooling process completely in terms of attainment and differences prevalent in educational quality, type, or several institutional causes that could influence health are overlooked".

Causal association between health and education

The association of education-health has changed over time. In recent decades, this association has been growing stronger with

broadening disparities in health outcomes (Goesling, 2007). Two perspectives follow on this ground: Increasing disparities are not unavoidable, and changing education-health relationships might be highly linked to social policies. Though, slight growth in educational disparities may be linked to changing educational composition of the population. The link between education and health to the wider social contexts makes evident the ways an individual and society collectively contribute in maintain health disparities

Health is a holistic term with WHO defining health as a complete state of physical, social, emotional and spiritual well-being and not just absence of disease or infirmity. While tracing the association between health and education, its different dimension needs to be accessed separately since general correlation is unable to explain the nuance association with all health dimensions and educational attainment or academic achievement.

Detailing in broader sense three basic possibilities of linkage between health and education could be observed. First possibility could be that poor health leads to low level of schooling. Second possibility is that education is responsible for good health. Lastly, there might be another factor that increases both health and schooling. It is vital for policy makers to have an understanding of the correlation between education and health, for instance subsidies on schooling would be fruitful in improving health if in fact education causes good health.

Causal relationship from health to education may arise from childhood experiences; if a child is having poor health since birth and obtains less schooling has more chances of being an unhealthy adult". "Older children those are malnourished or sick during childhood have more chances to miss school, learn relatively less in school, and finally obtaining fewer years of schooling" (Case, Fertig&Paxson, 2005), consequently sick children have greater probability of turning into sick adults (Case, Lubotsky&Paxson, 2002).

Mechanisms governing education and health relationship

Answer of the question why education effects health can be provided by the mechanisms underlying the relationship between education and health. "The dominant mediating mechanisms can be divided into four categories: Social, economic, psychological, health behavioural, and access to health care. Apart from these four categories of mechanisms highly stressed by investigators, several others have been analysed, such as

cognitive skills, stress, environmental exposures or social networks, a few of these are underlined below".

- a) **Income and health care access** - Economic factors form a vital link between health and schooling (Cutler & Lleras-Muney, 2010). The most obvious and basic economic explanation regarding education "and health could be that education results in more resources, including easy access to health care. However, income and health care are not enough to entirely account for the significant association between education and health". Sometimes before the emergence of health care system differences in health among education groups are observed (Cutler & Lleras-Muney, 2006). Access to health care plays a significant role in describing health disparities by education, besides important to individual health (Ross & Wu, 1995).
- b) **Occupation** - Mirowsky & Ross (2003) claimed "Education leads to better, more stable jobs that pay higher income and allow families to accumulate wealth that can be used to improve health". Individuals with higher academic attainment is more likely to have jobs that would provide health insurance, safe and clean working environments besides, higher salary.
- c) **Cognitive skills** - Education facilitates individuals to obtain better access to knowledge, enhanced critical thinking skills, and education. Individuals with higher educational attainment appear to be well-informed, and simultaneously capable of making use of latest information on health at earliest. Decision making abilities which is improved by education is too a determinant for good health practices. It is thus perceived that, cognitive skills associated with education too contribute in the gradient between education and health (though causal evidence is lacking).
- d) **Social networks** - More educated possess large social networks which is responsible for physical, emotional and financial support, and that might in turn lead to a causal association on health (Berkman, 1995). Among this wide social network, peer groups could have a significant influence in form of undesirable behaviours, such as smoking and drinking. Past literatures portray that individual having friends who are indulge in negative activities like smoking, drinking or committing suicide, tends to engage in similar type of activities.

Conclusion

Linking education with health has been an old tradition and is still contemporarily operational. M. K. Gandhi in his proposed curriculum for the education allotted a significant portion to physical activity for maintaining good health. His philosophy advocates overall development of personality as the main aim of education that facilitates maintaining of sound mental health. Gandhi's book "Constructive Programme-Its meaning and place" too deals with association between health and education with a chapter on "Education in Health and Hygiene".

As discussed in the paper, "large part of the association between education and health is causal in nature". Although, attainment of education has affected overall health positively, the bigger questions still lie in front of the practitioners before they have an appropriate policy response. Conditions in communities and neighbourhood setting that paralyzes the health of young children and generates unhealthy lifestyles, refrain the success of students. Studies in "public health domain have asserted that adults with higher educational qualification live relatively longer and healthier lives compared with their less educated peers. There also exists substantial evidence which suggests the effects of mother's education on child's health. But still there is need to know that what degree of association is justified and required for balanced economic and social development.

"Education is a powerful means to break the cycle of poverty and promote health equity. Initiatives need to be taken to bridge gaps between minority and low-income population and majority or high-income population. Effective educational policies will not only affect its own sphere but will provide interventions to reduce disparities. Education and health "are central to individual and population well-being. They are also inextricably embedded in the social context and structure. Future research needs to expand beyond the individual-focused analyses, taking a contextual approach to understanding education and health. Such an approach will require interdisciplinary collaborations, innovations in conceptual models, and rich data sources."

Talking in context to gender, educational outcome has been observed to be different for both the genders. Resource substitution theory provides explanation for the same. This theory argues that "education improves well-being more for women, because socio-economic disadvantage makes them depend more on education to achieve well-being" (Mirowsky & Ross, 2006).

This study was an attempt to consolidate the existing theoretical frameworks, mechanisms and causal association under an umbrella that would facilitate policy makers to judge the underlying factors along with the outcomes of the interplay between education and health for effective policy formulation. Within this premise it is evident that effective education policies would ultimately pay health benefits by creating productive individuals as Coleman (1986) advocates that social capital leads to formation of human capital and he also narrated that social capital is based on social networks, which is one of fundamental mechanism of education-health relationship.

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