


Chapter 7

Education, Health, and Life Expectancy Across Ethnic Groups: Implications for Population Health Management, Pharmacogenomics, and Patient–Centered Care

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ABSTRACT

Life expectancy varies by socioeconomic status (SES), ethnicity and religion. Although education positively or negatively influences life expectancy, mechanisms underlying the education-life expectancy link across ethnic groups are not clearly understood. Drawing from human capital theory of learned effectiveness, this chapter systematically reviews relevant literature to understand SES, lifestyle and health as mechanisms by which education transmits different effects on life expectancy between majority and minority ethnic groups, focusing on Bangladesh. The systematic review suggests that lower SES, poor lifestyle and health mediate the association between lower-education and lower life expectancy in the minority groups compared

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to the majority group. This chapter also discusses future directions for longitudinal research and implications to improve life expectancy in the minority ethnic groups.

INTRODUCTION

Research over the past several decades suggests that education influences socioeconomic status (SES) attainment and health and social well-being, including life expectancy (Cutler & Lleras-Muney, 2006; Luy et al., 2019; Mirowsky & Ross, 2003; Murtin et al., 2021). By education, we mean years of formal schooling that help persons to attain valued social positions (e.g., occupation, income, power) and healthy lifestyles that foster health and life expectancy in their life cycle (Braveman & Egerter, 2009; Chung et al., 2022; Dudel & Raalte, 2023; Ross & Mirowsky, 1999; Winkleby et al., 1992; Zajacova & Lawrence, 2018). How does education foster health and life expectancy? Theories and research suggest that education influences health and life expectancy in several pathways: Physiological process, SES, sociodemographic status, lifestyle, and psychosocial processes (sense of personal control, social stress, and social support). Cross-ethnic studies reveal that lower educational attainment of minority ethnic groups compared to the whites in the US is significantly associated with poor health, mediating through lower SES, unhealthy lifestyle, and inadequate psychosocial resources (Gutin & Hummer, 2021; Mossakowski, 2008; Puka et al., 2022; Roy et al., 2020).

In Bangladesh, although cross-ethnic studies have focused on the linking of sociocultural status to social stress (Uddin, 2011a, 2011b, 2023b) and mental health or sociodemographic status to arrack drinking behavior between majority and minority groups (Uddin, 2008a, 2024a), there is no particular study on SES and lifestyle underlying the relationships between education and health linking to life expectancy across ethnic groups (Nandi et al., 2023; Uddin, 2024a). In developed countries, although the relationships between lower education with poor health and life expectancy in the general population are remarkable, mechanisms underlying the interdependency are not comprehensively studied between majority and minority ethnic groups (Chung et al., 2022; Dwyer-Lindgren et al., 2022; Luy et al., 2019; Murtin et al., 2021; Zazueta-Borboa et al., 2023). Drawing from the human capital theory of learned effectiveness (Mirowsky et al., 2003) and research (Gutin & Hummer, 2021; Ross et al., 1999), this chapter develops a theoretical framework to explain the relationships between formal education and life expectancy via SES, lifestyle and health between majority and minority ethnic groups, focusing on Bangladesh.

In this chapter, drawing insight from the theory and literature, we first develop a theoretical framework that delineates the mechanisms by which low education, rather than high education, is more likely to negatively influence life expectancy in

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