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Socioeconomic inequalities in health after age 50: Are health risk behaviors to blame?

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ABSTRACT

Recent studies indicate that socioeconomic inequalities in health extend into the elderly population, even within the most highly developed welfare states. One potential explanation for socioeconomic inequalities in health focuses on the role of health behaviors, but little is known about the degree to which health behaviors account for health inequalities among older adults, in particular. Using data from the Health and Retirement Study ($N = 19{,}245$), this study examined the degree to which four behavioral risk factors – smoking, obesity, physical inactivity, and heavy drinking – are associated with socioeconomic position among adults aged 51 and older, and whether these behaviors mediate socioeconomic differences in mortality, and the onset of disability among those who were disability-free at baseline, over a 10-year period from 1998 to 2008. Results indicate that the odds of both smoking and physical inactivity are higher among persons with lower wealth, with similar stratification in obesity, but primarily among women. The odds of heavy drinking decrease at lower levels of wealth. Significant socioeconomic inequalities in mortality and disability onset are apparent among older men and women; however, the role that health behaviors play in accounting for these inequalities differs by age and gender. For example, these health behaviors account for between 23 and 45% of the mortality disparities among men and middle aged women, but only about 5% of the disparities found among women over 65 years. Meanwhile, these health behaviors appear to account for about 33% of the disparities in disability onset found among women survivors, and about 9–14% among men survivors. These findings suggest that within the U.S. elderly population, behavioral risks such as smoking and physical inactivity contribute moderately to maintaining socioeconomic inequalities in health. As such, promoting healthier lifestyles among the socioeconomically disadvantaged older adults should help to reduce later life health inequalities.

Introduction

Population-based research conducted in a variety of industrialized countries suggests that socioeconomic inequalities in health persist into late life (Huisman, Read, Towriss, Deeg, & Grundy, 2013). Although some evidence indicates that the magnitude of these inequalities diminishes among the oldest old (von dem Knesebeck, Lüschen, Cockerham, & Siegrist, 2003), it has now become clear that socioeconomic position plays an important role, not only in determining who reaches old age, but also in shaping risk for poor health and mortality during old age (Fors, Lennartsson, & Lundberg, 2008).

That socioeconomic inequalities in health outcomes persist during late life, despite efforts to equalize access to health care (Card, Dobkin, & Meastas, 2008) and income (Crystal, Shea, & Krishnaswami, 1992) among older adults, is troubling. Some have suggested that programs for older adults, like Medicare, are ineffective at diminishing health inequalities because they do not provide equal access to the highest quality of care (Hoffmann, 2011). Others have argued that socioeconomic inequalities in old age health and mortality are largely a function of inequalities that were established much earlier in life, with the negative effects accumulating over time (Ferraro, Shippeee, & Schafer, 2009).

The persistence of socioeconomic inequalities in health into late life may also be an indication that the individual lifestyles of older adults in different socioeconomic positions play a large role in maintaining health inequalities. Several studies have shown that health behaviors partially mediate socioeconomic inequalities in

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health among middle-aged adults (Lantz et al., 2001; Stringhini et al., 2011), and others have examined age differences in the health risks associated with socioeconomic and behavioral factors (Lantz, Golberstein, House, & Morenoff, 2010); however, few studies have examined the role of behaviors in maintaining socioeconomic inequalities in health among older adults (Fors, Agahi, & Shaw, 2012). Thus, it is currently not clear how much focus should be placed on reducing hazardous lifestyles among older adults as a means towards eliminating socioeconomic inequalities in late life health.

With the aim of gauging the role that health behaviors play in producing or maintaining socioeconomic inequalities in late life health, this study examines: a) how the prevalence of key health risk behaviors – including smoking, alcohol misuse, physical inactivity, and unhealthy body mass index (BMI) – differs across socioeconomic status among older adults; b) the extent to which these key health risk behaviors impact mortality and the initial onset of disability among older adults, and account for socioeconomic differences in these health indicators; and c) whether there are age and gender differences in the contribution of these health risk behaviors to socioeconomic inequalities in health among adults in later life. To follow is a brief review of our current knowledge pertaining to each of these areas.

Socioeconomic inequalities in health risk behaviors among older adults

Health behaviors are suspected mediators of socioeconomic inequalities in health, in part due to their socioeconomic stratification. The socioeconomic stratification of health behaviors is thought to be either due to indirect selection (Mackenbach, 2012), or the result of socioeconomic circumstances shaping the motivations and means of individuals to maintain a healthy lifestyle (Pampel, Krueger, & Denney, 2010). Indirect selection refers to a process whereby both socioeconomic achievement and health behaviors are determined by individual characteristics, like intelligence and personality. Alternatively, the influence of socioeconomic circumstances may be more direct; for example, psychological stress resulting from financial deprivation may motivate socioeconomically disadvantaged individuals to engage in unhealthy behaviors, such as smoking and alcohol abuse, as a way of providing immediate relief from feelings of distress (Shaw, Agahi, & Krause, 2011). Similarly, socioeconomically disadvantaged individuals may be less motivated than advantaged individuals to invest the time and money necessary for engaging in healthy behaviors, such as physical activity or consuming a balanced diet, as these behaviors may be recognized as offering limited short-term, and inadequate long-term, payoff (e.g., in terms of longevity) (Blaxter, 1990). Furthermore, socioeconomic position can determine one's access to psychological, social, and environmental resources that facilitate the adoption and maintenance of healthy lifestyles (Ross & Mirowsky, 2011). Still, while the socioeconomic stratification of health behaviors in the general population has been well studied, the extent to which hazardous lifestyles are also more prevalent among socioeconomically disadvantaged groups of older adults is not well known.

Health risk behaviors and socioeconomic inequalities in health among older adults

The role of health behaviors in mediating socioeconomic inequalities in health among older adults is also a function of the degree to which health risk behaviors are associated with health outcomes during later life, and the nature by which the socioeconomic stratification of health outcomes and health risk behaviors may change with advancing age. The powerful health effects of certain health risk behaviors, such as smoking, alcohol misuse, physical inactivity, and weight management, are well known (Mokdad, Marks, Stroup, & Gerberding, 2004). However, their effects on health during older ages are less clear, perhaps in part due to the selective survival into old age of only the most resilient individuals. This could result in a population of older adults who are relatively resistant to the negative health effects of traditional behavioral risks. Such a "survivor effect" has been cited as one possible explanation for the "reverse epidemiology" of obesity among older adults, whereby the relative mortality risks of overweight and obesity decline with age (Oreopoulos, Kalantar-Zadeh, Sharma, & Fonarow, 2009).

Regarding the question of how socioeconomic differences in health and health risk behaviors may change across the adult life course, two opposing theoretical perspectives inform our understanding. On the one hand, cumulative inequality theory (Ferraro et al., 2009) proposes that experiencing social disadvantages at one point in time increases one's future likelihood of exposure to health risks, while experiencing social advantages increases future chances for exposure to opportunities for health promotion. When applied to health behaviors, this suggests that with advancing age, the personal and environmental resources necessary for maintaining a healthy lifestyle are likely to be increasingly accessible to the socioeconomically advantaged, and increasingly inaccessible to the disadvantaged. Some support for the idea that socioeconomic inequalities in the prevalence of healthy behaviors accumulate with age has been reported, particularly with respect to physical activity (Shaw & Spokane, 2008).

On the other hand, the age-as-leveler perspective suggests that during later life, normative physical and social changes become stronger determinants of health than socioeconomic circumstances (Wray, Alwin, & McCammon, 2005). As a result, at advanced ages, the prevalence of risk behaviors, like smoking, may be expected to be universally low, as rates of cessation increase with age across the entire socioeconomic spectrum (Husten et al., 1997). In addition, the age-as-leveler perspective suggests that the role of health risk behaviors in mediating socioeconomic inequalities in health may diminish with advancing age, as the relative risk of some behaviors wanes in later life. This could occur because an adult's remaining life span is not sufficiently long to experience the negative consequences of unhealthy behaviors. For instance, prior research has shown that quitting smoking during midlife can increase life expectancy by as much as 8 years, but the benefits of quitting decline progressively with increasing age (Taylor, Hasselblad, Henley, Thun, & Sloan, 2002). Similarly, Janssen and Bacon (2008) found that becoming obese during late life is not associated with elevated mortality risk. Still, the health impacts of other behaviors, like physical activity, may continue to be strong during late life (Petersen et al., 2012).

Age and gender differences

In order to assess these competing hypotheses regarding the role of health behaviors in accounting for socioeconomic inequalities in health during later life, the current study uses data from a nationally representative sample of U.S. adults over the age of 50 to examine the potentially differential role that health risk behaviors may play across four subgroups: late middle aged and older adults, as well as among men and women. If health risk behaviors play a role in accounting for socioeconomic inequalities in health in adults over age 50, and if this role is greater among the older segments of this population, then cumulative inequality theory would be supported. If, however, health risk behaviors play a minimal role, and less of a role in the older segments of the population, then the age-as-leveler perspective would be supported.

Additionally, recognizing that health behaviors may play a different role in explaining socioeconomic inequalities in health for