

Clinical Study

Back problems, comorbidities, and their association with wealth

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Abstract

BACKGROUND CONTEXT: Studies assessing the economic burden of back problems have given little consideration to the presence of comorbidities.

PURPOSE: To assess the difference in the value of wealth held by Australians who have back problems and varying numbers of chronic comorbidities.

STUDY DESIGN: A cross-sectional study.

PATIENT SAMPLE: Individuals aged 45 to 64 years in 2009: 4,388 with no chronic health conditions, 1,405 with back problems, and 3,018 with other health conditions.

OUTCOME MEASURE: Total wealth (cash, shares, superannuation, investment property, and owner occupied home).

METHODS: Using a microsimulation model (Health&WealthMOD), logistic regression models were used to assess the odds of having any wealth. Linear regression models were used to assess the difference in the value of this wealth.

RESULTS: Those with back problems and two comorbidities had 0.16 (95% confidence interval [CI]: 0.06–0.42) times the odds and those with back problems and three or more comorbidities had 0.20 (95% CI: 0.11–0.38) times the odds of having accumulated some wealth than those with no chronic health conditions. Those with back problems and three or more comorbidities had a median value of total wealth of around \$150,000, whereas those with back problems only and back problems and one comorbidity had a median value of total wealth of around \$250,500. There was no significant difference in the amount of wealth accumulated by those with back problems and at least one comorbidity and those with other health conditions and the same number of comorbidities. However, those with only one health condition (excluding back problems) had 65% more wealth than those with back problems only (95% CI: 5.1–161.2).

CONCLUSIONS: This study highlights the importance of considering multiple morbidities when discussing the relationship between back problems and economic circumstances. © 2015 Elsevier Inc. All rights reserved.

Keywords:

Back problems; Comorbidity; Wealth; Economic resources; Cost of illness; Australia

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Introduction

Many people with a health condition suffer from multiple conditions simultaneously. This is especially the case among older age groups, who make up a large and increasing proportion of the population [1,2]. Multimorbidity is common among people with back problems, with only 35% of Australians aged 45 to 64 years reporting that they had no other chronic health conditions [3].

Numerous studies have assessed the economic burden of back problems [4–10]. These have reported that, internationally, back problems are the most expensive of any musculoskeletal condition [4,9,10] and that while the direct medical costs are large, the indirect costs are often found to be greater [4,10]. Most of the studies undertaken have attributed a large proportion of these indirect costs to the work absenteeism caused by back problems [5,9–16]. However, in addition to the impact of back problems on personal income [17], it has also been found that those aged 45 to 64 years and out of the labor force because of back problems have less wealth by the time they reach the traditional retirement age [7].

Of the very limited amount of research that does explore the relationship between health status and wealth, it has been documented that those who are out of the labor force because of mental health, diabetes, cardiovascular disease, or back problems have lower amounts of wealth than those with no health conditions, employed full-time or part-time [8,18–20]. These studies also reveal that the amount of wealth held by individuals who are out of the labor force because of ill health varies with the type of health condition. Those with mental health disorders had a median amount of wealth of \$112,000 [20]; those with cardiovascular disease had \$158,000 [18]; those with diabetes had \$189,000 [19]; and those with back problems had \$138,000 [8]. The varying impact of these health conditions on wealth may be attributed to the different impacts on labor force participation [12] and hence, on the ability to accumulate wealth, the need to draw down wealth to replace lost income, and also the costs of living associated with the conditions. However, to date, most studies that have assessed the economic burden of back problems have taken a limited view of health, aggregating all people who have stated they have back problems without taking into consideration the differences in comorbidities. Such assessments of the health status do not take into consideration the complexity of a person's health circumstances and the impact this may have on their economic circumstances.

This article assessed the difference in the value of wealth held by people with back problems, who also have comorbid chronic health conditions. This article focuses on people within the 45 to 64 years age group, as it is during this stage of the life cycle that most of an individual's lifetime wealth accumulation occurs [21]. Given that 41% of people aged 45 to 64 years with back problems are not in the labor force (not employed and not looking for work), we propose to assess the extent to which those

EVIDENCE & METHODS

Context

A variety of socio-demographic factors are known to adversely influence the development of medical conditions as well as outcomes following surgical intervention. The etiology behind this phenomenon is probably multifactorial and remains poorly understood. In this context, the authors performed a cross-sectional analysis among a sample of Australians to investigate the role that back problems and multiple comorbidities have on financial wealth.

Contribution

Individuals with back problems and medical comorbidities demonstrated reduced odds of having accumulated wealth. Back-related issues appeared to have some of the most profound effects on accumulated wealth.

Implications

This study makes an important contribution to the ongoing study of the influence of medical conditions, including spinal disorders, on socio-demographic status. As a cross-sectional analysis, this work can only speak to a single point in time and is unable to evaluate longitudinal trends. Furthermore, given that this investigation was conducted among a population of Australians, socio-cultural characteristics unique to that society could mean that similar findings are not appreciated in other countries or within populations from different backgrounds.

—The Editors

with back problems have less wealth than their healthy counterparts.

Methods

For this study, the output data set of the microsimulation model Health&WealthMOD was analysed. Health&WealthMOD is Australia's first microsimulation model of health and its associated impacts on labor force participation, personal income and wealth, and government revenue. It was specifically designed to measure the economic impacts of ill health on Australian workers aged 45 to 64 years. Health&WealthMOD was built on the unit record data of the 2003 Survey of Disability, Ageing and Carers (SDAC) conducted by the Australian Bureau of Statistics (ABS) [22] and the output data of a microsimulation model of income and wealth, STINMOD [23]. STINMOD is Australia's leading model of income tax and government benefits [24]. It is routinely used by the government departments for assessing the distributional and revenue implications of tax and cash transfer reforms.

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