



The effect of multimorbidity on the gap between global and age-comparative self-rated health scores among the Korean elderly

Namsu Kim^{a,1}, Hyun-Jun Nam^{a,1}, Juhwan Noh^{b,*}, Eun-Cheol Park^{b,c}

^a Medical Courses, Yonsei University College of Medicine, Seoul, Republic of Korea

^b Department of Preventive Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea

^c Institute of Health Services Research, Yonsei University College of Medicine, Seoul, Republic of Korea



ARTICLE INFO

Keywords:

Self perception
Health status
Chronic disease
Comorbidity
Aging
Elderly
Korea

ABSTRACT

Most of the behavior change models regard perceived health status as a motivation for healthy behaviors or chronic disease self-management. The aim of this study was to examine the association between the number of chronic diseases and the difference between global and age-comparative self-rated health scores (GSRH and ASRH). We used national representative survey data pertaining to the elderly in 2011 from the Korea Institute for Health and Social Affairs. In total, 10,003 participants (≥ 60 years old) were selected from those who had completed the survey in 2008. Multinomial logistic regression was used to estimate relative risk ratios (RRR) with 95% confidence intervals. Demographic factors, socioeconomic status, social connection, and healthy life style were adjusted. Individuals with many chronic diseases were more likely to have a positive gap, resulting in a better ASRH score relative to GSRH (p for trend < 0.001): 1–2 diseases (RRR = 1.30, 95% CI = 1.07–1.57), 3–4 diseases (RRR = 1.90, 95% CI = 1.55–2.32), and ≥ 5 diseases (RRR = 1.75, 95% CI = 1.39–2.20). In addition, the association between the number of chronic diseases and a positive gap varied by sex and living area. Our results suggest that a positive gap between GSRH and ASRH that indicates an overestimated age-comparative health, was associated with the number of chronic diseases. Female or urban-living people had stronger associations. Further research is needed to understand how the gap between GSRH and ASRH could be an alternative measure of SRH and a predictor of major health outcomes.

1. Introduction

For health system planners and policy makers, self-rated health (SRH) has long been used as a feasible indicator to identify groups vulnerable to mortality (Korean Society of Preventive Medicine, 2015). SRH is a powerful predictor and provides a good reflection of health status (DeSalvo, Blosner, Reynolds, He, & Muntner, 2006; Idler & Angel, 1990; Kaplan & Camacho, 1983; Tareque, Saito, & Kawahara, 2015). SRH may be measured as global self-rated health (GSRH), age-comparative self-rated health (ASRH), or time-comparative SRH. The question for GSRH is, “In general, what do you think of your health?” and that for ASRH is, “Comparing to other people of the same age, what do you think of your health?”

Each measure of SRH is extensively used in health surveys as an indicator of older adults’ major health outcomes, though comparisons are not consistent (Sargent-Cox, Anstey, & Luszcz, 2010). For example, the association between SRH and mortality has been well established but is still poorly understood. Recently, Shen et al. (Shen et al., 2014)

reported that the association between ASRH and mortality in non-Western settings was relatively lower than in Western settings. Global and comparative SRH predict mortality differently by age group while GSRH is a more objective measurement (Eriksson, Undén, & Elofsson, 2001; Vuorisalmi, Lintonen, & Jylha, 2006).

Many factors have been documented to affect SRH. Jylha et al. (Jylha, Guralnik, Balfour, & Fried, 2001) indicated that GSRH does not decrease with aging, during which chronic conditions and disability increase. Older people also tend to overestimate their health compared with others; specifically, they report more positive ASRH than the middle-aged (Eriksson et al., 2001). Recently, it has been documented that the association of aging with ASRH is stronger than that with GSRH (Vuorisalmi et al., 2006).

One’s perception of health is the antecedent to motivation for changing health behaviors (Griffith, Lovett, Pyle, & Miller, 2011). Exercise, smoking, social support, and vegetable consumption are also associated with self-rated health (Mood, 2013). Self-rated health increased with good cardiorespiratory fitness as well as an active lifestyle

* Corresponding author at: Department of Preventive Medicine, Yonsei University College of Medicine, 50-1 Yonsei-ro, Seodaemun-gu, Seoul, 03722, Republic of Korea.

E-mail address: njuhwan@yuhs.ac (J. Noh).

¹ N. Kim and H-J Nam contributed equally.



Fig. 1. The example of overestimated age-comparative health (ASRH > GSRH, Positive gap).

(Eriksen, Curtis, Grønbaek, Helge, & Tolstrup, 2013). More recently, in another longitudinal study, physical activity and screen time were independently associated with health perceptions (Herman, Hopman, & Sabiston, 2015).

Although the identification of the most predictive SRH measure has been the subject of controversy, and many researchers have studied factors that can affect SRH, the influence of factors vary and factors that result in differences on measures of SRH have not yet been fully elucidated. SRH measures are easy to administer, and the gap between them could be used as a target to identify misconceptions about own health. In this study, our aim was to identify characteristics of individuals with differences between GSRH and ASRH, and to evaluate the relation between the multimorbidity and the gap.

2. Materials and methods

2.1. Source of data

The current study used the survey of the elderly performed by the Korea Institute for Health and Social Affairs (KIHASA) and Ministry of Health and Welfare in 2011. Since 2008, this survey has been conducted to establish representative data of the elderly in Korea, in order to create social welfare policy. Data were collected in face-to-face interviews using structured questionnaires. These data include demographic factors (age, sex, living area, marital status, type of family), socioeconomic status (education level, household income), social connection (number of friends), and health-related determinants (chronic disease, smoking, drinking, physical exercise, sleeping hours, physical checkups, use of medical durables, and outpatient visits). Among the 11 542 participants, 10 674 elderly completed this survey in 2008. Only those who answered both questions completely were included in the analysis: 9898 (10 540.25 with sampling weight). Of these, there were 4564.62 men and 5975.63 women.

2.2. SRH measurement

GSRH is based on a global question without any frame of reference, while ASRH is based on a question with an explicit comparison with same-age peers. Two SRH measures were assessed using the following two questions that were verbally presented:

- (1) Global SRH: How would you rate your health condition in general?
- (2) Age-comparative SRH: How would you rate your health condition compared to others of your age?

The response options were negatively-coded: 1 (very good), 2 (fairly good), 3 (average), 4 (fairly poor), 5 (very poor). Subsequently, we transformed the responses such that high scores indicated relatively better SRH. For example, if an individual responded 1 (very good), then we recoded this individual's response to a 5. Thus, the reverse-scored variable had a high score (a 5 instead of a 1), which indicated a better perception of SRH.

The gap or mismatch between ASRH and GSRH scores was calculated by subtracting the GSRH score from the ASRH score (ASRH score – GSRH score). A negative gap was coded as 0, zero gap (the same GSRH and ASRH) was coded as 1, and a positive gap was coded as 2. While a negative gap resulted from relatively lower ASRH score than GSRH score, corresponding to underestimated age-comparative health, a positive gap resulted from relatively higher ASRH score than GSRH score, corresponding to overestimated age-comparative health (Fig. 1).

- (1) Negative gap: ASRH score < GSRH score (underestimated age-comparative health)
- (2) ASRH score = GSRH score (same score without a gap, reference group)
- (3) Positive gap: ASRH score > GSRH score (overestimated age-comparative health).

2.3. Independent variables

Demographic factors included age, sex, living area, marital status, and type of family (solo, live with spouse, or live with offspring). Socioeconomic status (SES) included education level (illiterate, not educated but literate, elementary school, middle or high school, or college or higher), household income (quintile). Number of friends represents social connection. Health-related determinants included smoking (never smoked, ex-smoker, or current smoker), drinking frequency, physical exercise, sleeping hours, physical checkup in the last two years, use of medical durables (hearing aid, dentures, or vision aid), and number of outpatient visits in the last two weeks.

Number of chronic diseases was measured as the sum of the current prevalence of 34 chronic disease categories: hypertension, stroke, diabetes, hyperlipidemia, angina or myocardial ischemia (MI), thyroid disease, osteoarthritis or rheumatoid arthritis, osteoporosis, back pain or iliosacral pain, chronic bronchitis or emphysema, asthma, tuberculosis, cataracts, glaucoma, chronic otitis, gastric cancer, liver cancer, colon cancer, lung cancer, breast cancer, cervical cancer, other cancers, gastro-duodenal ulcer or gastritis, hepatitis, liver cirrhosis, chronic kidney disease, prostatic hyperplasia, urinary incontinence, sexual transmitted diseases, anemia, dermal disease, depression, fracture or bone dislocation, or others.

Download English Version:

<https://daneshyari.com/en/article/8257411>

Download Persian Version:

<https://daneshyari.com/article/8257411>

[Daneshyari.com](https://daneshyari.com)