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Socioeconomic status and health in the Japanese population

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ABSTRACT

There is growing interest in the influence of socioeconomic status (SES) on health. Individual SES has been shown to be closely related to mortality, morbidity, health-related behavior and access to health care services in Western countries. Whether the same set of social determinants accounts for higher rates of mortality or morbidity in Japan is questionable, because over the past decade the magnitude of the social stratification within the society has increased due to economic and social circumstances. SES must be interpreted within the economic, social, demographic and cultural contexts of a specific country. In this report we discuss the impact of individuals' socioeconomic position on health in Japan with regard to educational attainment, occupational gradient/class, income level, and unemployment.

This review is based mainly on papers indexed in Medline/PubMed between 1990 and 2007. We find that socioeconomic differences in mortality, morbidity and risk factors are not uniformly small in Japan. The majority of papers investigate the relationship between education, occupational class and health, but low income and unemployment are not examined sufficiently in Japan. The results also indicate that different socioeconomic contexts and inequality contribute to the mortality, morbidity, and biological and behavioral risk factors in Japan, although the pattern and direction of the relationships may not necessarily be the same in terms of size, pattern, distribution, magnitude and impact as in Western countries. In particular, the association between higher occupational status and lower mortality, as well as higher educational attainment and either mortality or morbidity, is not as strongly expressed among the Japanese. Japan is still one of the healthiest and most egalitarian nations in the world, and social inequalities within the population are less expressed. However, the magnitude of the social stratification has started to increase, and this is an alarming sign.

Introduction

Socioeconomic circumstances seriously affect health and well-being, making health inequalities a major public health concern around the world (Marmot, 2001). In developed countries, the health inequality issue is transforming from documentation into materialized policies aimed at reducing health inequalities. Socio-economic status (SES), defined as access to material, human and social capital, represents one of the fundamental bases of health. Education, employment and income are among the most powerful components of SES, and by employing all of these components we can create the most informative image of SES. The importance of each component may differ between and within countries and cultures (Smith, 2000). Socioeconomic disparities in health do not follow a simple explanation; pathways by which SES affects health can be expressed by differences in access to health services, exposure to occupational hazards and environmental pathogens, low levels of social support and social capital, poor social policy, the cumulative effects of stress and differences in health risk behaviors. During the past several years, unemployment has become a serious issue in the Japanese context, and we have also included unemployment as a separate chapter.

The purpose of this review is to describe and summarize the evidence about the current relationship of SES and health, to unite and discuss the existing evidence, identify the main subtopics, and to provide a vision for future research because we were unable to locate an English-language review of SES and health in Japan published within the last decade. Due to major social, economic, demographic and cultural changes, social inequalities have started to increase. This situation is not described properly in the scientific literature, although some tendencies are already visible.

Japan possesses specific characteristics, like universal medical insurance, an intense work environment (far longer working hours than the prescribed 40 h per week), relatively low exposure to

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environmental hazards, specific characteristics of socialization and social support/network, a particular distribution of health risk behavior, and unique population characteristics (increasingly aging society, ethnic homogeneity, etc.). Also, cultural capital, which is a key element in the behavioral transformation of social inequality into health inequality (Abel, 2008), is high in the Japanese population. All of these factors contribute a specific effect to the SES and health relationship, which is not homogeneous. It has been reported that individual SES, as measured by educational level, occupational class and income, is closely related to both mortality and morbidity and access to health care services (Graham, 2000; Marmot & Willkinson, 2005) in Western countries. Whether the same set of social determinants accounts for higher rates of mortality or morbidity in Japan is still questionable.

Social inequalities in health may be due to the cumulative effects of disadvantage across the life course. The life course perspective enables us to see the coevolution and interconnections of social position and health (van de Mheen, Stronks, Schrijvers, & Machenbach, 1998). The life course perspective on health and its social determinants sees a person's biological status through the structured nature of complex social processes as a marker of their past and present social position. The life course may be regarded as a combination of interacting biological and social elements. Individual biological development takes place within a social context that structures life changes so that advantages and disadvantages tend to cluster cross sectionally and accumulate longitudinally. Exposure to one environmental hazard is likely to be combined with exposure to other hazards, and these exposures are likely to accumulate over the course of life (Blane, Bartley, & Davey Smith, 1997).

Accelerated economic growth and technological advancement have enhanced health and life expectancy in Japan. It seems that Japan's health expenditure and health and welfare system organization, along with specific social and cultural particularities, translate into reduced socioeconomic differences in health outcomes for its population. However, there have been recent serious concerns relating to increasing levels of social and health disparities, which, while not strongly expressed at this moment, exhibit an increasing tendency partially caused by population aging.

Japan has entered a period of breakdown of its traditional social structure. After the collapse of the economic bubble and economic restructuring (with stagnation or recession in some areas), it seems that socioeconomic inequalities have increased, and there is also a social crisis with some negative implications in terms of human relations and for society in general. Elements such as a performance/contract based payment system (instead of lifelong employment), consumerism and materialism, a stressful and rigidly competitive education system, the decline of extended families and familial traditions, a rapidly aging society, lack of socialization, high urbanization and spatial isolation, a decrease in traditional social solidarity and reciprocity, and a high level of media/digital influence (which often excludes verbal communication) definitely contribute to social dysfunction and represent specific Japanese social characteristics (human interactions) that possess a significant impact on social gradients and inequalities (Tachibanaki, 1998). Interestingly, some new phraseologies describe the situation perfectly, e.g.: "*wa-kinngu pua*" those who have employment (temporary or less probably permanent) but remain in relative poverty due to a low salary; "*makeinu*" (loser; or literally losing dog) describes those who reject or delay marriage or couples who have no children; "*furita*" (parasite single) describes someone between a drifter and a temporary worker who does not aspire to a permanent job; "*hikikomori*" (pull inside) describes those who will rarely or never leave their home or bedroom for an extended period. Social dysfunction is significantly influenced by economic factors, and the typical Japanese worker "*sarari-mann*" who used to believe that the employment situation was secure for life is now frustrated and disoriented because, according to new rules, no one is irreplaceable and promotion is merit based. In the Japanese context, *social causation serves as the first explanation for health disparities*. Even though social inequalities between various population groups are still less expressed in comparison to Western countries, the magnitude of the social stratification seems to increase year by year (www.nri.co.jp/english/opinion/papers/2007/pdf/np2007124.pdf).

When we speak about explanatory factors for social inequalities in Japan, it is important to mention that when viewed from the outside, Japan is still a high-performing country with an egalitarian society and secure job system (in comparison with other countries, especially in the West), but when viewed from inside, we are no longer an egalitarian society and our performance (economic, social, demographic, etc.) is on the decline.

For this narrative review, we screened indexed papers in Medline/PubMed from 1990 to 2007 for representative, population based, national or large cohort (at least 1000 participants), longitudinal, case-control, cross sectional or ecological studies on the association between SES and health in Japan. Also included were reports published before 1990 only if they proved to have high influence on further research in the area. Key words in the studies were: *socioeconomic status, social gradient, education, income, occupational class, unemployment, health inequalities* and *Japan.* Papers were included if they: primarily used more than one valid socioeconomic indicator (see key words); were written in English or Japanese; were representative and published in a peer-reviewed journal. Out of approximately 738 hits, 45 references focused on the Japanese population were used (see Tables 1–4).

In this report, we present the impact of individuals' socioeconomic position on health with regard to educational attainment, occupational gradient/class, income level, and unemployment.

Educational attainment

The main advantages of using educational attainment as an indicator of socioeconomic status are that it is easily recorded and remains stable over an individual's lifetime (Zurayk, Halabi, & Deeb, 1987). Those who are more educated have higher incomes and better health, work in higher positions, possess more wealth, and have lower disability and mortality risks than their lower SES counterparts. Education shapes future occupational opportunities and earning potential and provides knowledge and skills that allow better-educated persons to gain better access to information and resources to promote health.

According to Mirowsky and Ross (2003), increasing educational attainment improves health by increasing individual agency, self-efficacy, and problem-solving capacity, all of which promote a healthy lifestyle. In addition, educational level is less likely to be affected by health impairments that develop in adulthood compared to other indicators of socioeconomic position, such as occupation or income (Berkman & Kawachi, 2000). In Japan, the average amount of schooling completed is 12.3 years per person, more than 90% of the population attends high school, and around 40% of all upper-secondary school graduates advance to tertiary education. The education level in Japan presents an increasing tendency; for example, among OECD countries, Japan is ranked in the 10th position in the 55–64-year range (those who completed their education some 40 years ago) and in 3rd position in the 25–34-year range (those who completed their education a decade ago) (www.oecd.org/dataoecd). This factor has a direct implication for SES. Specifically, for Japan, *educational attainment in the younger*