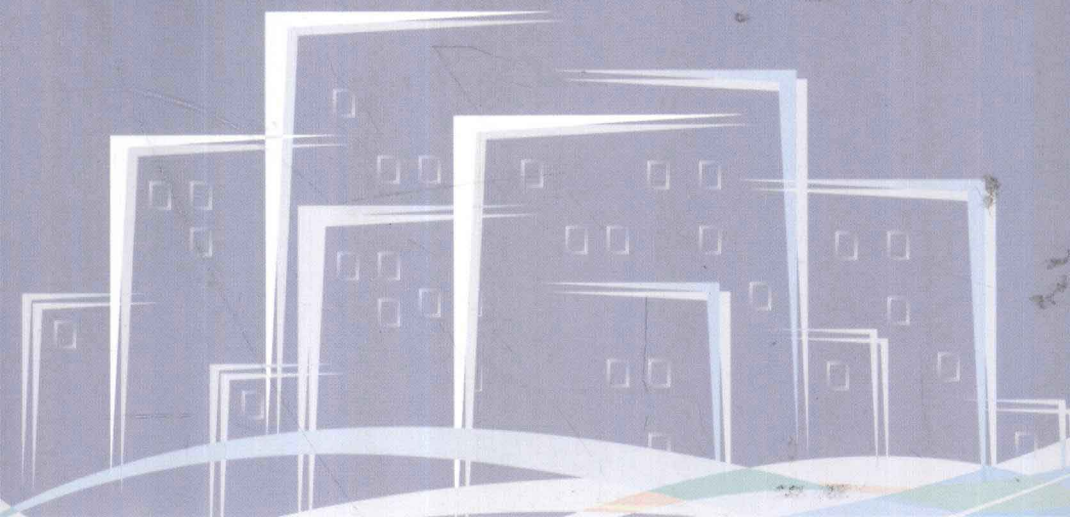


Social Determinants of
Health of Chinese Adults
at both Individual and Community Levels:
A Multilevel Approach



中国成年人健康的 分层研究

基于个体因素和社区因素的分析

毕秋灵 著



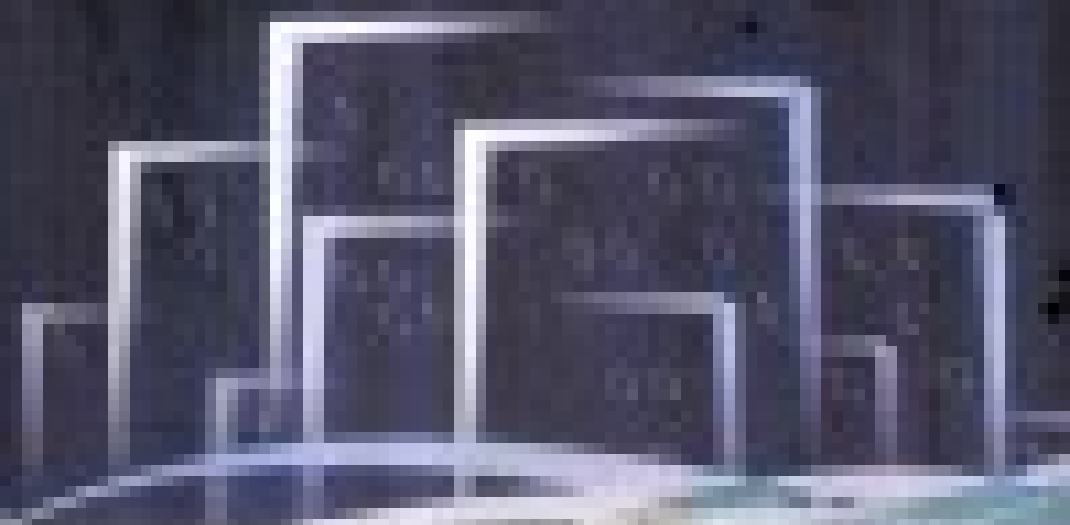
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中國成年人體態的分區研究

——以不同年齡、性別、地區為例

李俊賢 著

中國人民大學出版社

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摘 要

良好的国民健康素质是国民经济和社会发展的基本条件之一，同时也是我国社会经济发展的目标。国民健康素质从微观上讲是个人体力、智力和心理的社会适应能力，从宏观上讲是一个国家或地区综合实力的反映。新中国成立以后，我国人口的健康状况得到了极大改善，平均预期寿命从成立前的不到 40 岁上升到 2000 年的 71.4 岁，婴儿死亡率从 200‰ 下降到 2000 年的 32.2‰（冯立天，1996；庄亚儿、张丽萍，2003）。但是，我国人口健康的发展过程越来越表现出复杂性，这种复杂性要求我们需要进一步认识产生健康差异的原因，并能采取各种有效的措施提高全民的健康素质，实现健康公平。人口的健康水平受到多个因素的相互影响，其中社会因素已成为影响我国人口健康的重要因素。为了全面提高人口健康素质，实现全面建设小康社会和建设社会主义和谐社会的目标，迫切需要清楚地认识影响人口健康的社会因素。基于以上考虑，本研究运用中国健康与营养调查（CHNS）纵向跟踪数据，采用定量分析方法对影响我国成年人口健康的社会因素进行深入探讨。

本研究的主要内容包括：中国成年人健康水平的个体影响因素分析，中国成年人健康动态变化的影响因素和中国成年人健康影响因素的分层分析三个部分。

首先通过定量分析方法分析个体因素对成年人健康水平及其变化的影响，主要得出以下结论：

1. 个体因素对各个年龄段成年人健康的影响并不完全一致，

这体现在性别、收入和体质指数的影响上。

2. 受教育程度是影响成年人健康的重要因素，它对青年、中年和中老年三个年龄段的自评健康的影响表现出了很高的稳定性。受教育程度越高，成年人的自评健康和自理能力越好，但大专以上成年人的健康状况比高中文化程度的成年人更低一些。受教育程度高的成年人在工作环境、社会心理资源（包括自我调控能力和社会支持）方面都具有更多的优势，同时，他们也能获得更好的医疗服务，以保持良好的健康状态。

3. 收入作为反映个人社会经济地位的主要指标，虽然它与受教育程度具有较强的相关性，但它主要反映的是个人的消费能力，因此在控制了受教育程度后，较高的收入仍然能够对健康起到积极的作用。对于中青年而言，不同收入层的人群的健康差异非常显著，但对于 55 岁以上的中老年人而言，收入与健康的关系并不是线性的关系。只有收入达到了一个较高的水平后，才能促进中老年人的自评健康和自理能力的改善。

4. 收入的增加有利于延缓健康状况的下降。收入的增幅越大，健康状况下降的概率越低，收入降低或收入增加幅度较小都会促使健康状况下降的概率增大。

5. 男性和女性之间的健康差异不仅体现在健康的水平上，也体现在健康变化的速度上。

6. 生活方式（吸烟时间、喝酒频率）并不能解释不同受教育程度群体之间的健康差异。吸烟时间对健康的动态变化具有显著的影响。烟龄越长，健康状况下降的概率越大。适量喝酒对健康的状态和动态变化都有积极的影响。

7. 对膳食活动知识的了解有助于健康的身体状态。尽管对膳食活动知识的了解在一定程度上受到受教育程度的影响，但在同样的受教育水平下，掌握科学的营养知识仍然有利于保持健康的状态。

8. 体质状况是影响我国成年人健康的最主要因素之一。我国居民营养不良的发生率正在降低,但营养不良对我国居民健康的影响危害仍然很大。尤其是对于青年人和老年人而言,营养不良对健康的影响非常大,而肥胖是中年人面临的主要健康问题。

个人的健康状况不仅存在明显的个体差异,而且还存在着显著的地区差异。环境健康医学模式将环境因素,特别是社会环境因素作为影响健康的最重要因素。本研究结合 CHNS 调查中的个人数据和社区数据,运用分层模型分析了个体因素和社区因素对成年人健康的共同影响。结论如下:

1. 不同社区的成年人健康状况之间存在差异。居住在县城居委会的成年人自评健康状况差于城市社区成年人,其日常生活自理能力和工具性日常活动能力也比城市社区的成年人差。居住在郊区村的成年人日常生活自理能力比居住在城市社区的成年人好。居住在农村的成年人自评健康状况比城市社区成年人差,工具性日常活动能力也更差。

在不同类型的社区,个人的受教育程度对健康的影响程度不同。总体来看,不同受教育程度人群之间的健康差异很大程度上受到居住地的影响。因此,减少和消除城乡之间的受教育程度差异是提高我国人口健康状况的重要途径。

2. 社区的人均收入水平对个人的 ADL 和 IADL 都有显著的直接影响,但影响程度很小。与此同时,社区的人均收入水平与个人的受教育程度之间形成交互作用。社区的人均收入越高,社区居民个人受教育程度对健康的影响越大。

3. 社区的文化水平对社区所有居民健康水平产生促进作用。社区的文化水平造就社区特有的文化背景、行为方式和风俗习惯,它可以渗透到社区居民生活的各个方面,人们在相互接触和交流中形成共同的健康价值观念和健康意识。居民对疾病和健康的认知水平和认识程度在相同的文化环境下得以提高,从而促进

社区居民的总体健康水平。

4. 社区内收入差距对不同的健康指标具有不同的影响。自评健康是一个评价健康的综合指标,它能够在一定程度上体现个人的心理健康状况,而收入差距过大给社区居民带来了不稳定和消极的情绪,减小了受教育程度对健康的影响程度。从收入差距对日常生活自理能力的影响来看,由于 ADL 是一个评价健康的更为客观的指标,收入差距的扩大有利于高收入者享有更好的医疗服务和居住环境,从而保持良好的日常生活自理能力。

5. 东部的社区和西部的社区在 ADL 和 IADL 上的差异明显。尽管东部地区的经济发展水平明显高于西部地区的,但东部地区(辽宁、山东)的社区居民 ADL 和 IADL 比西部地区(贵州、广西)差。

6. 社区医疗卫生服务条件对健康的影响主要体现在社区与医疗机构的平均距离对健康的影响上。社区每万人拥有的医生数量对三个健康变量的影响都不显著。与医疗机构的平均距离对老年人的生活自理能力具有显著的影响。离医疗机构越远,IADL 不能完全自理的概率越大。

本研究的主要创新之处在于:

1. 本研究运用跟踪数据分析了中国成年人健康动态变化以及个体因素变化对健康的影响。由于以往的数据一般是横向数据,很难分析我国成年人健康的动态变化过程。本研究运用了纵向数据,且跟踪间隔时间较长,因此可以分析社会因素对健康的动态变化的影响。此部分研究有利于我国成年人的疾病预防和健康促进。

2. 本研究利用分层模型探讨了个人特征和社区环境特征对成年人健康的共同影响以及两种因素的交互作用,突破了以往仅从个人因素研究个人健康或用总体健康指标研究群体健康状况的局限,充分证明了社区环境差异对个体健康的作用,为我国人口健

康影响因素的研究增加了新的内容。

3. 本研究对不同年龄段成年人健康的影响因素进行了分析和比较。以往社会科学领域的健康研究大多数是对老年人进行的研究。本研究不仅扩大了年龄的研究范围,而且将不同年龄段成年人健康的影响因素进行分析和比较。研究表明,尽管许多因素对健康的影响在不同年龄段表现得并不一致,但社会经济地位对健康的影响在各个年龄段保持稳定,充分体现了社会经济地位是影响健康的重要因素。

4. 本研究充分证明了社区的社会经济特征对中国成年人健康的影响,这种影响并不是个体社会经济特征对健康产生影响的总和效应,而是一种独立于个人因素之外的外部因素。另外,研究也表明不同受教育程度之间的自评健康差异实际上体现的是受教育程度与社区社会经济特征之间的交互影响。理解这一点对于改善我国居民健康水平具有重要的现实意义。

Abstract

Well health quality of population of a country is one of the essential conditions of the national economy and the social development and it is the goal of socio – economic development in China. Microscopically, health quality of population is the physical strength, intelligence and social adaptability of a person. But macroscopically, it is a reflection of comprehensive strength of a nation or a region. After the foundation of the People's Republic of China, health of the Chinese population was greatly ameliorated: life expectancy rose from less than 40 before foundation to 71.4 in 2000; Infant Mortality Rate dropped from 200‰ to 32.2‰ in 2000 (Feng Litian, 1996; Zhuang Yaer, Zhang Liping, 2003). However, the development of population health of China has displayed complexity which requests us to find reasons of the health diversity and to take all effective measures to improve the health quality of all people to realize health equity. The health condition of population is influenced by a lot of factors in which social determinants have become significant in our country. In order to improve the healthy quality of population comprehensively and to realize the goal of construction of a fully well – off society and harmonious socialism society, it is urgent to clearly understand the social determinants affecting population health. Based on above considerations, this research investigates the social determinants of adults' health by using quantitative method by utilizing longitudinal data of

China Health Nutrition Survey (CHNS).

This research includes three main parts: analysis of individual factors of health of Chinese adults, analysis of dynamic change factors of Chinese adult health and multilevel analysis of determinants of health of Chinese adults.

In the first two parts which contain the health level and change and their individual factors, the following conclusions are drawn:

1. Individual factors, such as gender, income and BMI, play different roles in different ages.

2. Education is an important factor of adult's health and its role displays high stability in young, middle and old ages. The higher education, the better self-rated health (SRH) and activities of daily living. But health of adults with college education is somewhat worse than adult with high school education. Adult with higher education have more advantages in work condition, social-psychological resources (including sense of control and social support) and better medical service to keep healthy.

3. Income, as an index of a person's social-economic status, though high related to one's education, reflects personal consumption capabilities. After controlling the effect of education, higher income is beneficial to health. For young and middle-aged people, the difference of health between different groups of income is extremely significant. For middle-aged and old people more than 55 years old, the relationship between income and health is not linear. Only the income is high enough, the self-rated health and activities of daily living of them can be improved.

4. The increase of income is beneficial to the postponement of health decline. The income increases more, the probability of health

decline is lower. Reduce or low increase of income would increase the probability of health decline.

5. Male and female are different not only in their health states, but also in the speed of the health change.

6. Life style (smoke duration, drink frequency) cannot explain the health difference between groups with different education level. The smoke duration has the significant influence on the dynamic change of individual health. The smoke duration is longer, the probability that health declines is bigger. Sometimes drinking is advantageous to the level and dynamic change of health.

7. Diet and activities knowledge is helpful to keep healthy. Although the knowledge is affected by individual education level to some extent, it still has independent influence on health after education level is controlled.

8. Body Mass Index (BMI) is one of the most important factors which influence health of Chinese adults. The underweight prevalence is decreasing, but its bad impacts are still great, in particular to young people and old adults over 55 years old. For middle – aged people, obesity is their main health problem.

Not only there are obvious individual differences in health, but also there is remarkable health disparity in different areas. The environment – health medical pattern regards environmental factors, especially factors of social environment as primary factor of health. Based on individual and community data of CHNS, this research uses Hierarchical Linear Model (HLM) to analysis social determinants of health of Chinese adults at both individual and community levels. The conclusion is as follows:

1. There is a difference of adult's health between communities.

Adults in county town neighborhoods have worse SRH, ADL and IADL than in urban neighborhoods. Adults in suburban villages have better ADL than in urban neighborhoods. Adults in villages have worse SRH and IADL than in urban neighborhoods.

In different types of communities, the extent of influence of the individual education level to health differs. Generally speaking, the health difference between different education levels is due to the different education levels in communities. Therefore, reduce and elimination of the education discrepancy is a fundamental approach to improving the population health in China.

2. The average income of a community has the significantly direct influence on ADL and IADL, but the influence is very small. Also, there are interactions between the average income of a community and individual education level. The average income of a community is higher, the influence of the individual education level on health is wider.

3. The high average education year is advantageous to all residents of a community. The high education produces their own culture, life styles, manners and customs, which may permeate through the lives of residents in the community. The common value of health and health consciousness are formed in mutual contacts and communications. The cognitive ability of disease and health is improved under this circumstance, so that health of all residents in the community can be increased.

4. The income inequality in a community has different kinds of effects on health. SRH is an integrated index of health, in which personal psychological condition can be embodied to a certain extent. Unsteady and passive spirit due to the high income inequality in the

community diminishes the active influence of education to health. For ADL, which is a more objective index of health, the great income inequality is beneficial for those people with high income because they can get better medical service and living condition to keep well ADL.

5. There are remarkable distinctions in ADL and IADL between eastern and western communities. Although the economic development in the east is higher than the west, ADL and IADL of eastern (Liaoning Province, Shandong Province) residents are worse than those of western (Guizhou Province, Guangxi Province) residents.

6. The influence of the condition of medical service in community on health is embodied in the effects of the average distance from health facilities. The number of doctors every ten thousand people has no significant effect on the three health variables. The average distance of health facilities have significant influence on IADL. The distance is farther, the probability of disability is higher.

The innovation of this research lies in:

First, based on the longitudinal data, the paper analyzes social determinants of the dynamic change of Chinese adults' health. Since previous data are mostly panel data, the dynamic change of health and its determinants can little be known. The longitudinal data and the long interval between waves can be beneficial to analyze the dynamic change of health. These parts are advantageous to disease prevention and health promotion.

Second, hierarchical non – linear models are used to analyze the influences of individual and community characteristics and their interactions to individual health, which breaks through the restriction of previous researches which study individual health or population health

separately This research evidently indicates that the characteristics of community play a role in individual health, which increased the new content for the health research in sociology.

Third, social determinants of health are analyzed by cutting age to three periods. It proves that although many determinants of health are not consistent, the effect of socio – economic status is identical for all ages. Its fundamental effect on health is fully testified.

Fourth, the effects of community on individual are fully proved. The effects of socio – economic characteristics of community testified in the paper are not the aggregate of individual socio – economic status, but the external effects independent of the individual. The influence of education on self – rated health reflects the mutual effects of education and socio – economic characteristics of community.

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