

The Associations Between Blood Pressure and Quality of Life in Elderly Patients with Hypertension in China

Lingling Cui

First Affiliated Hospital of Soochow University

Wenya Wu

Changshu First People's Hospital: First People's Hospital of Changshu City

Jindan Qi

Soochow University

Omorogieva Ojo

University of Greenwich

Xiaohong Jin

Changshu First People's Hospital: First People's Hospital of Changshu City

Yuanyuan Liu

Soochow University

Xiaohua Wang (✉ sxwang2001@163.com)

First Affiliated Hospital of Soochow University <https://orcid.org/0000-0003-3328-8496>

Research

Keywords: Elderly, Aging, Quality of life, Hypertension, SBP, DBP, Chines

Posted Date: December 4th, 2020

DOI: <https://doi.org/10.21203/rs.3.rs-117454/v1>

License:   This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Abstract

Objective: To investigate the status of quality of life (QOL) and examine the changes in quality of life with increasing age in elderly patients with hypertension; to determine the associations between blood pressure and quality of life in hypertensive elderly at different age groups; to determine the relationships between ranges of blood pressure and quality of life.

Method: This was a cross-sectional study design. The study recruited 752 elderly patients with hypertension from one general hospital, thirty urban community clinics and rural clinics in Suzhou from October 2016 to October 2017. The quality of life was assessed by The Short Form Health Survey (SF-36), which is categorized into two aggregate summaries, including physical component summary (PCS) and mental component summary (MCS). Furthermore, PCS included four dimensions, namely; physical functioning (PF), role limitation because of physical health (RP), bodily pain (BP) and general health perceptions (GH); MCS included another four dimensions, namely; vitality (VT), social functioning (SF), role limitation because of emotional health problems (RE) and mental health (MH).

Result: The result showed that scores of physical component summary (PCS) gradually decreased and scores of mental component summary (MCS) was stable with increasing age. In PCS, the scores of the bodily pain and physical functioning dimensions and in MCS the social functioning dimension score dropped in participants with age ≥ 85 years. Following analysis, the results showed that diastolic blood pressure (DBP) was positively associated with PCS ($r=0.112$, $P=0.003$). We further analyzed the relationship between DBP and PCS (including 4 dimensions) of quality of life at different age groups. We found that DBP had a positive relationship with PCS ($r=0.114$, $P=0.003$) and the bodily pain dimension ($r=0.205$, $P < 0.001$) in the elderly with an age < 85 years, while there was no relationship between DBP and PCS in the elderly with an age ≥ 85 years. After adjusting for the effects of socio-demographic and clinical factors, there was no association between DBP and PCS ($B=0.026$, $P=0.633$), while DBP still had a positive effect on the bodily pain dimension ($B=0.234$, $P=0.026$).

Conclusions: We found that DBP had a positive relationship with physical quality of life in the elderly with age < 85 years. Therefore, medical personnel should maintain the DBP within normal range but may allow higher level, when managing hypertensive elderly patients aged < 85 years, so as to relieve their pain, which can help improve their quality of life.

Full Text

This preprint is available for [download as a PDF](#).

Figures

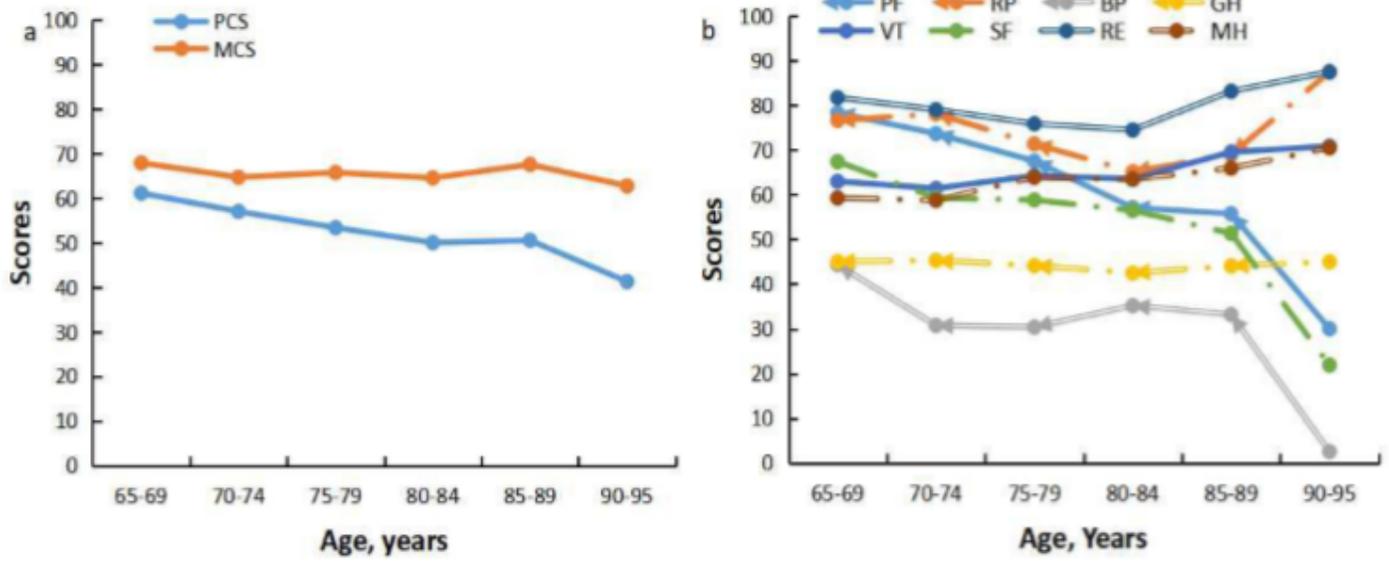


Figure 1

The curves of scores of the QOL with an increase of age Note. QOL, quality of life; MCS, mental component summary; PCS, physical component summary; PF, physical function; RP, role limitations due to physical problems; BP, bodily pain; GH, general health; VT, vitality; SF, social function; RE, role limitations due te motional problems; MH, mental health