

# Structure of attitudes toward health promotion behaviors in elder

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## Abstract

The purpose of this study was to clarify the structure of attitudes toward daily health promotion behaviors in Japanese elder people. The health-promotion-oriented Japanese 180 males and 191 females, total 371 elder people, aged  $66.4 \pm 5.51$  years old answered the questionnaires on the behaviors, reasons for and awareness of daily health promotion. The items on the health promotion attitude questionnaires were consisted of daily health promotion behaviors, health anxiety, aims of daily sports activity, reasons of daily sports inactivity, styles of daily sports activity. Factor analysis with principal component solution and varimax rotation was utilized to determine the structure of attitudes toward daily health promotion behaviors and construct and factorial validity of the question items.

Two factors of anxiety toward declination of health and physical fitness, and anxiety toward obesity and lack of exercise were extracted from 8 items on health anxiety. In the attitudes toward daily health promotion behaviors, 4 factors of exercise and sports, preventing lifestyle disease, having

regular lifestyle, and having health check were obtained from 11 items. From 12 items on the aims of daily sports activity, 4 factors of sports and training oriented attitude, prevent disease and health promotion oriented attitude, pleasure and friendship oriented attitude, and no reason were extracted. The factors of daily sports inactivity were constructed of lack of social condition, lack of subjective condition, and aging and sports dislike. From 9 items on styles of daily sports activity, 2 factors of club activity type attitude, and individual activity type attitude were obtained.

These results indicated that the selective factors and traits of the attitudes affecting daily health promotion behaviors were existed in elder people.

## Keywords

Attitude for health promotion, elder people, factor analysis.

## Introduction

Our research team conducted the research project on health lifestyle and aging connected with prefectural division of the lifelong learning program for elder people

which started from 1993 in Ibaraki prefecture, Japan.

The health promotion behaviors of elder people in daily living have big individual variation statistically in Japan. It was hypothesized that the attitude towards health promotion selectively affected daily health behaviors in healthy elder people. The purpose of this study was to clarify the factorial structure of attitudes toward daily health promotion behaviors in healthy Japanese elder people.

## **Method**

### ***Sample and items***

The health-promotion-oriented Japanese 180 males and 191 females, total 371 elder people, aged  $66.4 \pm 5.51$  years old answered the questionnaires on the behaviors, reasons and awareness of daily health promotion. The items on the health promotion attitude questionnaires were consisted of daily health promotion behaviors, health anxiety, aims of daily sports activity, reasons of daily sports inactivity, styles of daily sports activity. Figure 1 shows the statistical characteristics of the samples.

### ***Statistical analyses***

Factor analysis with principal component solution and varimax rotation was utilized to determine the structure of attitudes toward daily health promotion behaviors and construct and factorial validity of the question items. Structure equational modeling using covariance structure analysis was utilized to consider the causal-effect structure among construct sub-domains of attitudes toward health promotion behavior.

## **Results**

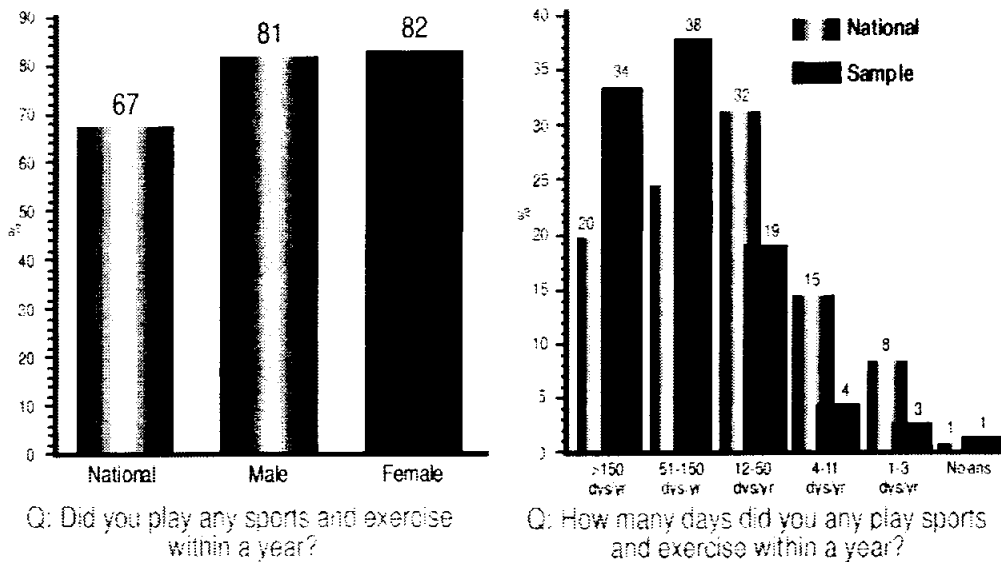
### ***Factorial structure***

Two factors of anxiety toward declining of health and physical fitness, and obesity and lack of exercise accounted for 59 % of the total variance were extracted from 8 items on health anxiety. In the attitudes toward daily health promotion behaviors, 4 factors of exercise and sports, preventing lifestyle disease, having regular lifestyle, and having health check accounted for 52 % of the total variance were obtained from 11 items. From 12 items on the aims of daily sports activity, 4 factors of sports and training, prevent disease and health promotion, pleasure and friendship, and no reason accounted for 56 % of the total variance were extracted. The daily sports inactivity were constructed from 3 factors of lack of social condition, lack of subjective condition, and aging & sports dislike that accounted for 64 % of the total variance of 9 items. From 9 items on styles of daily sports activity, 2 factors of club activity type, and individual activity type accounted for 51 % of total variance were obtained.

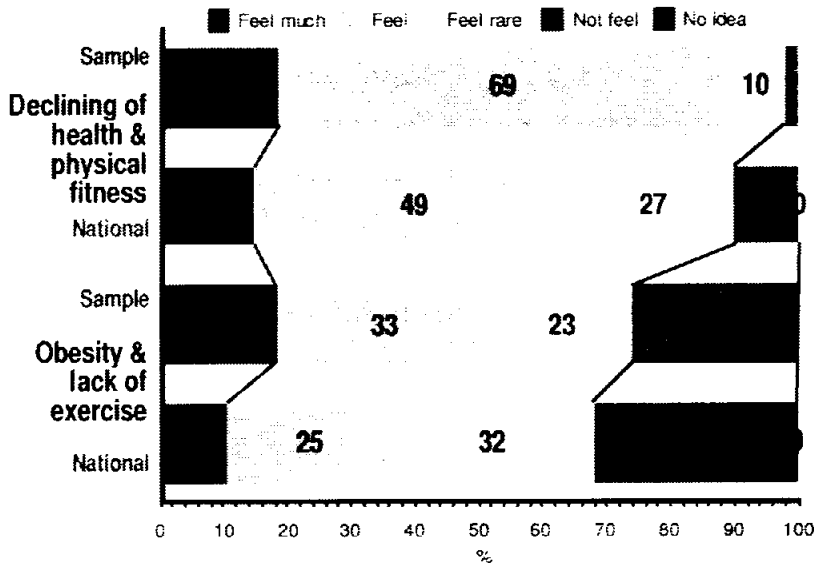
From Figure 2 to Figure 6 show proportion on the items of the health promotion behaviors representing each factors compared with the national statistics in Japan.

## **Discussion**

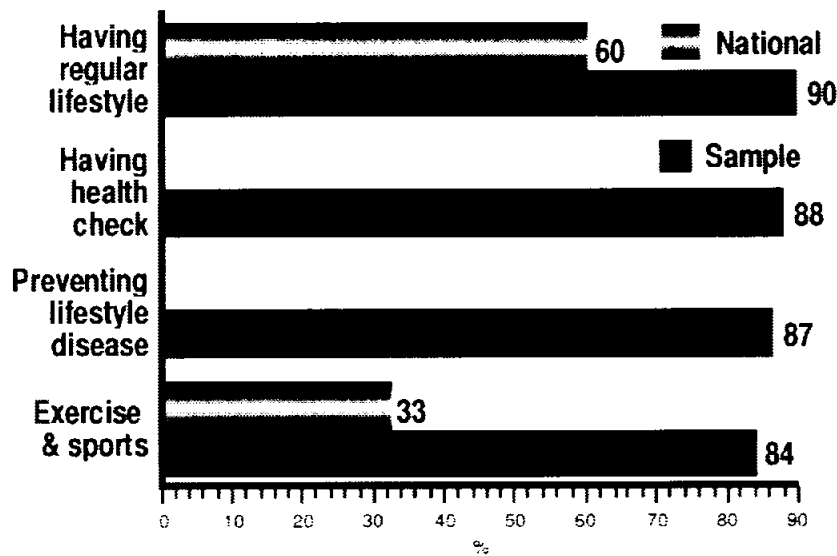
These results indicated that the selective factors and traits of the attitudes affecting daily health promotion behaviors were existed in elder people. It is very important to consider the health promotion behaviors for successful aging of elder people in the great aging society as in Japan.



**Fig. 1. Statistical characteristics of the sample.**



**Fig. 2. Anxiety on health and physical fitness.**



**Fig. 4. Attitude toward daily health promotion behaviors.**

The anxiety on health and physical fitness in elder ages was consisted from 2 sub-domains of anxiety toward declining of health and physical fitness, and anxiety toward obesity and lack of exercise. The attitude toward daily health promotion behaviors was consisted from 4 sub-domains of exercise and sports oriented attitude, preventing lifestyle disease oriented attitude, having regular lifestyle oriented attitude, and having health check oriented attitude. The aim of activity of daily exercise and sports was consisted from 4 sub-domains of sports and training oriented attitude, prevent disease and health promotion oriented attitude, pleasure and friendship oriented attitude, and no reason. The reason for inactivity of daily exercise and sports was consisted from 3 sub-domains of lack of social condition, lack of subjective condition, and aging & sports dislike. The selective way of daily exercise and sports activity was consisted from 2 sub-domains of club activity type oriented attitude, and individual activity type oriented attitude.

## **Conclusion**

It was concluded that the selective factors and traits of the attitudes affecting daily health promotion behaviors were existed and developed in aging.

### ***Academic and professional back ground of the author***

The major research fields are statistics in health and sports, and measurement and evaluation of physical fitness and motor performance. The major subjects are statistical and metrical approaches to health promotion behavior and motor development in healthy people, and strategic planning on sports development and physical training. The national sports development master plan for 10 years in Laos was worked out based upon statistics on health and sports in 1995. I assist to summarize the national physical fitness statistics in Japan annually. The HQC (health quality control) method and technique for self-health-promotion was developed and is improving for Japanese school children and elder people.

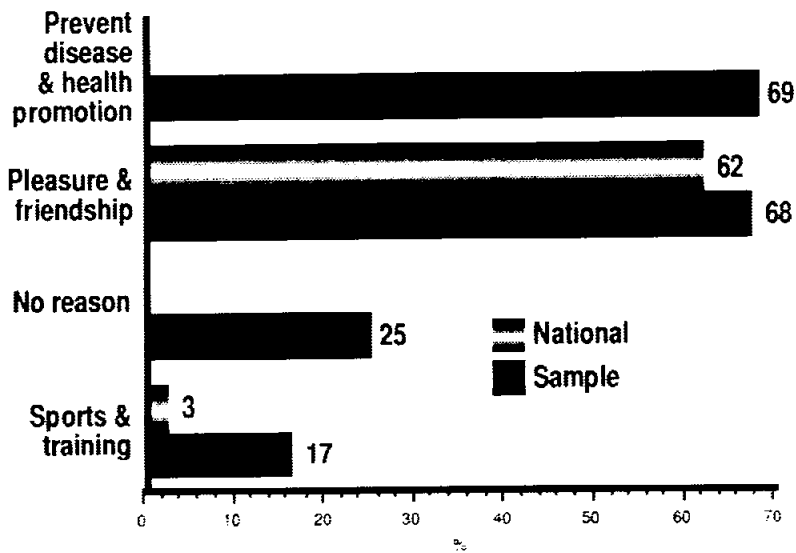


Fig. 3. Aims of daily exercise and sports activity.

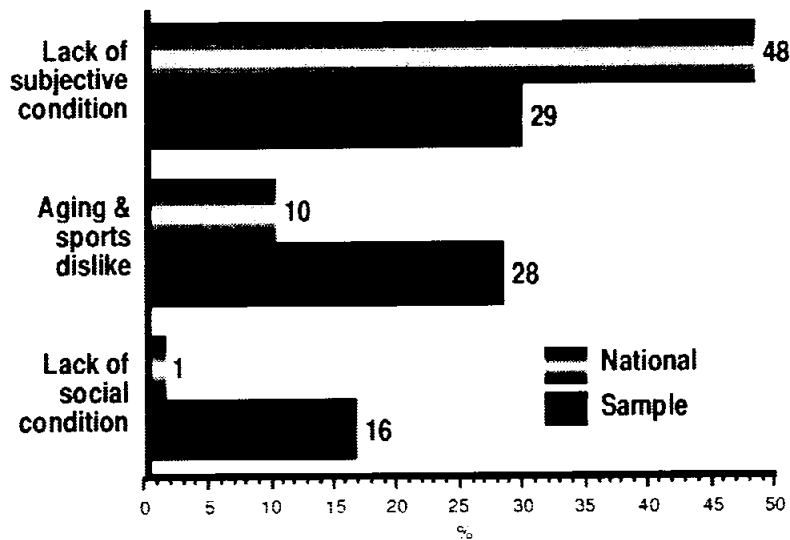


Fig. 5. reasons for daily exercise and sports inactivity.

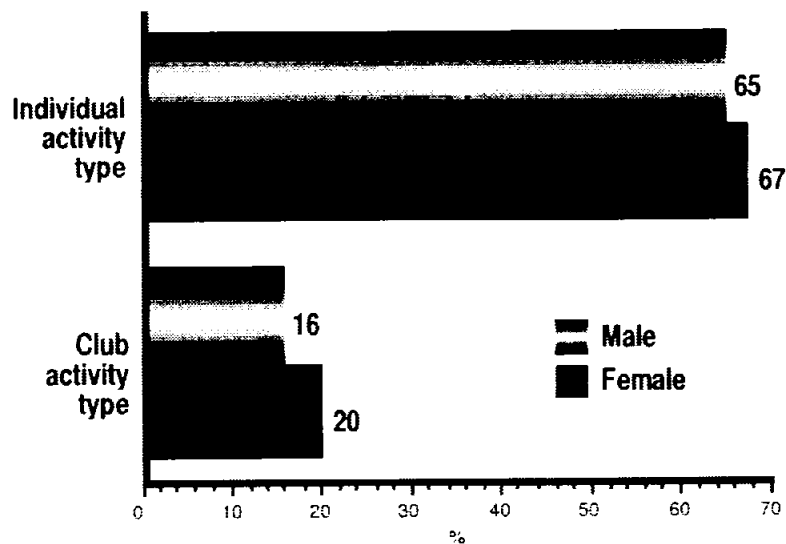


Fig. 6. Selective ways of daily exercise and sports activity.