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Healthy lifestyles for male masters athletes from frailty and lifestyle points of view

Abstract

Authors and collaborators have investigated the subjective health and life satisfaction of elderly male Masters' athletes. Subjects were 97 cases with 63.9 years in average, who participated in Masters track and field competition event, and they are asked to answer the questionnaire concerning healthy lifestyle habits. It had the inquiries about subjective health, satisfaction of daily life, spending leisure time and others. Two groups were categorized as non-elderly and elderly people (n=46/51), and compared for the detail such as frailty. As a result, no significant difference was found between two age groups for several aspects including daily lifestyle situation.

Keywords: elderly male, masters' athlete, healthy lifestyle habits. Frailty, international masters athletics federation (IMAF)

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Abbreviations: QOL, quality of life; IMAF, international masters athletics federation

Introduction

Recently, a super-aging society has been in focus, especially in Japan.[1] Everyone has come to make a life plan while predicting the actual life during the elderly period. Along with this phenomenon, people have stronger desire to "live a long and healthy life". For this reason, important medical issue would be how to support society as a whole toward its realization.[2]

From middle to elder age, the aging process has gradually developed. For the elderly period, a large influence is recognized from general regressive function of aging. In other words, it would be a period in which various factors are lost physically, psychologically, and socially, and then a harsh reality is experienced.[3] These losses may trigger an increased risk of becoming bedridden and developing dementia. Therefore, the importance of taking measures has been recently emphasized before falling into frailty state.[4] As a matter of fact, a variety of managements have been actively conducted for preventing from frailty as possible, as the slogan of frailty prevention. Concerning basic factors for preventive measure for frailty, exercise, diet and social participation are important.[5]

Lots of preventive care and health promotion projects have been conducted in various places as frailty matter until now. Many of these projects, however, have been made by the government or local official center.[6] Then elderly men in particular show lower participation rate in those projects. Furthermore, it is rather difficult for participants to continue to practice after the end of the project.

In what situations are these frailty prevention measures actually taken?[7] People usually continue some exercise unconsciously and unintentionally in their daily leisure activities. Firstly, leisure activities are to promote opportunities to moderately move the body and interact with people. Secondly, this continuation can increase appetite and contributes to a healthier life.[8] Most of previous studies have focused on frailty prevention lectures and workshops, such as for participants in government-sponsored exercise classes. On the other hand, various activities and projects not involving local governments have not received much attention.

Consequently, we decided to examine the prevention of frailty in the domain of masters' sports.[9] Masters Sports has long history worldwide and it is defined as the following. It is a second life of sports in which middle to elderly individuals can try to mature their sports motivation, skills and ways of enjoying sports. It is not influenced by previous results or current sports standards.[10] For the participants, masters' sports are an opportunity to improve their quality of life (QOL) by increasing their own motivation and achivement in sports, enjoying the competition and having a purpose in their lives.[11] In addition, it contributes to improving their health by maintaining physical function, physical strength, and mental health.[12] From these, these benefits become highly relevant to actual frailty prevention.

Therefore, authors selected masters track and field athletes as subjects of our current research. When they participated in a masters' competition, we asked participants about their subjective feelings of health, life satisfaction, and how they spent their leisure time by using questionnaire. For analysis of the data, the subjects were divided into two groups which are non-elderly and elderly, and compared the difference between them.

Subjects and methods

The subjects were 97 male participants for Master's competition, who were 63.9±11.5 years in average. They attended the International Gold Masters track and field competition held in Kyoto in Oct 2013. The method included the following process, which was i) distribute questionnaires to the participants of the competition, ii) fill them out at the stadium during the attending day, iii) collect them, and iv) analyze the data by the computer.

The contents of the survey showed several factors, such as basic attributes, health-conscious eating habits, subjective feelings of health, and actual ways of spending leisure time. Regarding healthy eating habits, respondents were asked to answer the question, "Are you trying to eat with attention for maintaining the health?" For the question on how they spend their leisure time, respondents were asked to choose their main ways of spending time period in six categories. They are hobbies, exercise/training, family and colleagues, social activities, education/knowledge, and others. When selecting others, they are asked to describe the detail of the activity.

Statistical and ethical considerations

For the investigation of statistics, the following process was conducted. The age difference is an important factor, and then each item was examined for the influence from their age. In other words,

participants were divided into two groups: one is a non-elderly group aged 64 years or younger, and another is an elderly group aged 65 years or older. For the statistical method, cross-tabulation analysis was conducted for each age group.

This research was reviewed and implemented by an ethics committee based on the Declaration of Helsinki and the Personal Information Protection Act. In particular, we showed the subjects the characteristic goal of the survey. The responses from the participants were voluntary, and obtained results would be statistically processed in a way that could not identify individuals. For this management, both verbal and written explanations were given to them, and informed consent was obtained by answering the questionnaire.

Results

1) Subject attributes

There were 46 non-elderly cases under the age of 64 (47%), and 51 cases over the age of 65 (53%). The average years of continuing athletics were 12.0±9.9 years in the non-elderly group and 18.0±11.3 years in the elderly group.

2) Eating habits

Regarding healthy eating habits, higher percentage of cases answered that they always or mostly pay attention to daily eating habits. The prevalence was 65.2% vs 70.6%, in non-elder vs elderly group, respectively (Figure 1). On the other hand, non-elder group showed higher replies for the answer of rarely or not at all. The prevalence difference was 14.2% vs 7.8%, in non-elder vs elderly group, respectively.

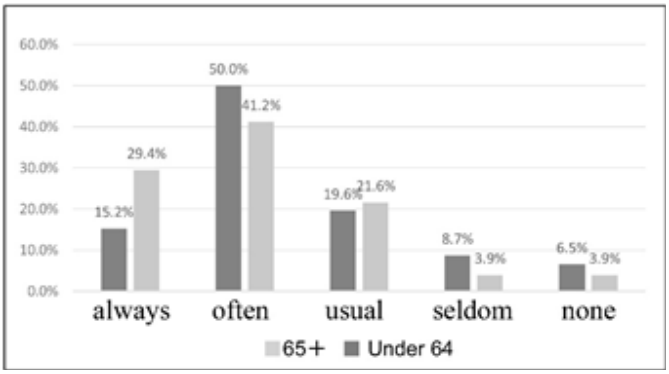

Figure 1 Usual situation for paying attention to daily eating habits for 2 age groups.

3) Subjective health feeling

Regarding subjective health feeling, the prevalence of good and fair was 65.2% vs 74.5% in non-elderly group vs elderly group, respectively. It showed higher value of good/fair ratio in the elderly group (Figure 2). On the other hand, the prevalence of average and worse was 34.8%vs 23.5%, respectively. It showed higher value of average/worse ratio in the non-elderly group.

4) Leisure time period

We examined how to spend leisure time period in two groups. As a result, the most common response was to spend time for exercise/training in both groups. Especially, elderly group showed high prevalence of 60.8% (Figure 3). The second answer was for hobby in both groups. Combining exercise and hobby categories, it showed 82.4% vs 73.9% in the elderly vs non-elderly, respectively. A characteristic point was the involvement activity with family members, which was 0% vs 15.2% in the elderly vs non-elderly, respectively. For social activity/education, the ratio was 17.6% vs 6.5%, respectively. The reply for others showed 0% vs 4.3% in elderly vs non-elderly. Among non-elderly group, the main reply was just keeping rest, which was not found in elderly group.

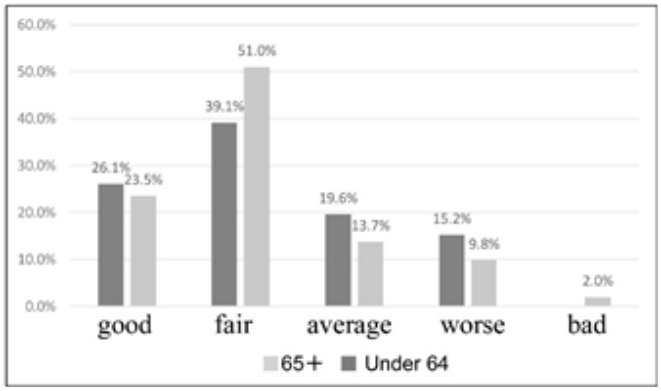

Figure 2 Usual situation for subjective health feeling for 2 age groups.

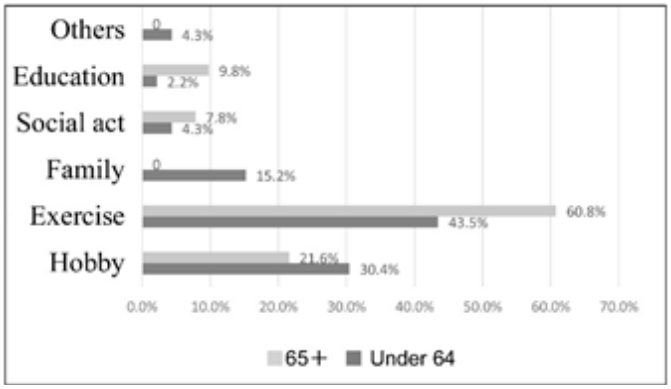

Figure 3 Usual main activity during leisure time period for 2 age groups.

Discussion

The authors et al. have conducted research in a wide range of fields.[13,14] These include sports medicine, rehabilitation, medicine, music, psychosomatic medicine, and so on.[15,16] The Masters Athletics research encompasses three aspects, which are physical, psychological and social axes.[17] Current investigation was successfully conducted. Several obtained data for this study are discussed below.

Many athletes responded that they "always pay attention" to their eating habits (Figure 1) Among them, the non-elderly group had a higher percentage of respondents who answered that they were not trying to do so compared to the elderly group.[18] This may be due to the fact that many people are in the working generation. Compared to the elderly generation, the non-elderly generation has less motivation and interest in eating habits. According to a survey conducted during the same period, more than 80% of people aged 65 years and over pay attention to their eating habits for their health, but only 67% of those aged 40-64 years. The results also suggest that health promotion requires financial leeway to invest in other things than diet.[10]

Regarding subjective health, participants in Masters sports have generally evaluated themselves as healthy (Figure 2). These results suggest that the continuation of daily sports may lead to a healthy state. These perspectives have been previously reported.[19] A strong desire to participate in competitions and to enjoy themselves would be the basic mind of masters' participants. These results were found in

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masters' who are engaged in ski or skate.[20,21] Furthermore, such lifelong continuation will bring beneficial maintenance and promotion of mental health.

It is important to consider how to spend leisure time period.[22] Such manner can provide a glimpse of social frailty prevention behavior (Figure 3). Elderly athletes, in particular, spend their leisure time mainly on exercise and training. Masters' athletes aim to improve their competitive abilities and continue to work out daily to get closer to their goals. Therefore, they are not confined to their homes and prevent immobility and hypoactivity. Furthermore, it is recognized that they participate in social activities other than exercise and training.[23] From the above, it is their interest for social activity that can bring physical, mental and social health.[24]

Conclusion

In this study, we conducted research on healthy lifestyle habits for elderly men who participated in the Masters track and field competition. Subjective health, life satisfaction, and leisure time spending were compared between non-elderly and elderly group. As a result, subjective health was generally high in satisfaction with life, and leisure time was moderately involved in exercise and training. Significant differences were not found between age groups.

Masters' sports continue a certain competition for long and have a positive effect on the minds and bodies. Furthermore, elder participants in the Senior Olympic Games are known to be positively correlated with activity concentration, life satisfaction, and health maintenance. As mentioned above, the benefits of masters' sports to the health are enormous. Further research development will be expected concerning Masters' athletics and Master's various sports.

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Conflicts of interest

Author declares there are no conflicts of interest.

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References

1. Abusalehi A, Vahedian–Shahroodi M, Esmaily H, et al. Mental health promotion of the elderly in nursing homes: a social–cognitive intervention. *International Journal of Gerontology.* 2021;15(3):221–227.
2. Azadbakht M, Garmaroodi G, Tanjani PT, et al. Health Promoting Self–Care Behaviors and Its Related Factors in Elderly: Application of Health Belief Model. *Journal of Education And Community Health.* 2022;1(2):20–29.
3. Taherian Z, Motamedi N. Effect of a 12–week Community–based Intervention to Improve Social Capital, Quality of Life, Self–care, and Health Literacy among Older People: A Quasi–experimental Trial. *Adv Biomed Res*. 2022;11:23.
4. Satake S, Arai H. The revised Japanese version of the Cardiovascular Health Study criteria (revised J–CHS criteria). *Geriatr Gerontol Int.* 2020;20(10):992–993.
5. Yamaoka T, Araki A, Tamura Y, et al. Association between Low Protein Intake and Mortality in Patients with Type 2 Diabetes. *Nutrients*. 2020;12(6):1629.
6. https://www.mhlw.go.jp/english/
7. Omura T, Tamura Y, Sakurai T, et al. Japanese Elderly Diabetes Intervention Trial Research Group. Functional categories based on cognition and activities of daily living predict all–cause mortality in older adults with diabetes mellitus: The Japanese Elderly Diabetes Intervention Trial. *Geriatr Gerontol Int*. 2021;21(6):512–518.
8. Javadzade H, Mahmoodi M, Sharifirad G, et al. Investigation of psychological factors based on health belief model and health literacy on adult Self–Medication in Bushehr province. *Journal of Health Literacy*. 2020;5(1):39–49.
9. Xie Y, An W, Zheng C, et al. Multidimensional health literacy profiles and health–related behaviors in the elderly: A cross–sectional survey. *Int J Nurs Sci*. 2022;3;9(2):203–210.
10. Gries KJ, Trappe SW. The Aging Athlete: Paradigm of Healthy Aging. *Int J Sports Med. 2022*;43(08):661–678.
11. Cohen S, Panebianco C. The role of personality and self–efficacy in music students' health–promoting behaviors. *Music. Sci*. 2020;26(2):1–24.
12. Tøien T, Unhjem R, Berg OK, et al. Strength versus endurance trained master athletes: Contrasting neurophysiological adaptations. Exp Gerontol. 2023;171:112038.
13. Bando H, Takenaka Y, Nakamura T, et al. Investigation for Quality of Life (QOL) and self–esteem for health in masters' athletes. *Glycative Stress Research*. 2015;2(4)174–181.
14. Takenaka Y, Bando H, Konoike S. Significant Health Literacy as Zest for Living in the Aging Society. *J Health Care and Research*. 2022;30;3(3):88–91.
15. Konoike S, Bando H and Takenaka M. Development of Health Literacy from Activities of Culture, Leisure, and Sports. *Res J Sport Health Psychol*. 2022;4(4):131.
16. Murakami M, Bando H, Moriyasu A. Daily recommended effective and safer walking and running from integrative medicine. *Int J Complement Alt Med*. 2022;15(1):1–3.
17. Veronesi F, Borsari V, Cherubini A, et al. Association of Klotho with physical performance and frailty in middle–aged and older adults: A systematic review. *Exp Gerontol.* 2021;154:111518.
18. Moore DR. Protein Requirements for Master Athletes: Just Older Versions of Their Younger Selves. *Sports Med*. 2021;51 (Suppl 1):13–30.
19. Yamane M, Takeda F. Mental and Physical Health of Participants in the Masters Ski Tournament: Correlation between Status of Activities and Psychosocial Factors. *Bulletin of Physical Education, University of Tsukuba*. 2016;39:81–88.
20. Bando H, Nakamura T, Yonei Y, et al. Lipid profile of masters athletes in ice–skating, a model of anti–aging research. *Glycat stress res*. 2015;2(2):52–57.
21. Yamane M, Takeda F. Mental health and related factors of Masters Skier among Elderly adults. *J Ski Sci.* 2018;15(1):69–76.
22. Spencer L, Lu K. Infusing Culture into the Long–Term Care Environment to Improve Public Health and Quality–of–Life Experience. *Eur J Environm Pub Health.* 2022;6(1):em0091.
23. Atanasova S, Kamin T. From Dimensions, Levels and Domains to Context–specific Conceptualizations of Health Literacy. *Zdr Varst.* 2022;28;61(3):133–136.
24. Geard D, Rebar AL, Dionigi RA, et al. Testing a Model of Successful Aging on Masters Athletes and Non–Sporting Adults. *Res Q Exerc Sport*. 2021;92(1):11–20.