A study regarding the association between sport / exercise participation and socio-economic characteristics in Sapporo, Japan

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Aim of abstract/paper - research question
The purpose of this study is to consider the association between sport / exercise categories and socio-economic characteristics among Sapporo. citizens.

　　* Sapporo is the fourth-largest city in Japan by population, and is known outside Japan for hosting the 1972 Winter Olympics, the first ever held in Asia. With an average snowfall of 630 cm (248 inches), it is one of the few metropolises in the world with such heavy snowfall.

Theoretical background or literature review*
Tsukahara et al. (2011b) clarified that on the premise that all sport and exercise participation status were recognized as a) non-participation (having not participated in any exercises and sports during last year) and participation (having participated in exercise or sports at least once a year), this seemed to be related with the one's socio-economic characteristic variables such as sex, age group, family structure, employment status, income, as well as one's sport experiences in high school or college extra-curricular activities. Also, 2) as a result of binary logistic regression analysis, it was revealed that sport / exercise participation in Sapporo is affected by age, occupation, annual income, and most importantly by sport experiences in educational institutions.

　　On the other hand, according to Tsukahara et al. (2011a), which analyzes the determinants of snow sport participation from the viewpoint of socio-economic characteristics in Sapporo with the same data, it becomes evident that snow sport participation is controled by different factors from the ones of all sport / exercise participation. In other words, it is expected that the socio-economic determinants for sport / exercise participation differ from one activity to another.

Methodology, research design and data analysis
Therefore, this study categorizes sports and exercises, and to evaluate the possible association between those categories and Sapporo citizens' socio-economic characteristics with binary logistic regression analysis.

　　In order to carry out these tasks, this study analyzes the 'Questionnaire regarding Sapporo Citizen's Sport Participation and Environment,' which was commissioned for the authors by the local government of Sapporo and carried out between December 2009 to January 2010 to investigate local sport participation trends.

Results, discussion and implications/conclusions**
The findings in this study can be summarized as follows:
1) Exercise and Sports investigated in this survey are classified into 10 categories (Pool EXERCISE, Indoor EXERCISE, Road EXERCISE, Space Free EXERCISE, Indoor SPORT, Field SPORT, Outdoor LEISURE (summer), Snow LEISURE (winter), Golf, Park-golf), depending on factors mainly facility and human resource (can be played individually / collectively) repuirements.

　　As a result of binary logistic regression analysis on each EXERCISE category, 2) it is clarified that there is little association between EXERCISE participation, especially in activities which can be performed without any specific facility requirements such as Road EXERCISE and Space Free EXERCISE, and socio-economic characteristics.

　　In contrast, 3) according to the results of our second analysis on SPORT and LEISURE categories, it becomes evident that both SPORT and LEISURE participations (except Park-golf) are strongly associated with Sapporo citizens' socio-economic characteristics.

　　Moreover, 4) it is shown that even though the participation of two SPORT categories seems to be tied to a moderate annual income, the categories of Snow LEISURE and Golf are more strongly connected to the higher income and prior experiences in high school / college sports and athletics.

　　In conclusion, our research indicates that there is a wide variation in the association between sports participation and socio-economic standing. Also, most of them could be explained by the combination of several determinants such as characteristics of the activities (facility requirement factor and human resource one) and one's socio-economic characteristics (sex, age group, occupation, income, prior sport experiences in high school or college extra-curricular activities, etc.).

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