

Differences in career forming ability between practitioners and non-practitioners of school-based extracurricular sports activities

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Abstract:

Problem Statement: Recent achievements have revealed a relationship between participation in extracurricular school sports and future career, although the reason for the existence of such relationship is not well understood. To determine the relationship between sports and career, this study focuses on the career forming “basic general ability,” characteristic of career education in Japan. **Purpose:** The purpose of this study is to clarify the difference between practitioners and non-practitioners of school-based extracurricular sports activities in terms of basic general ability. **Approach:** Participants were 295 students and 26 teachers of two public junior high schools and two public high schools. The basic general ability of each student was assessed by plural teachers who knew the students well. Then, the average of each teacher’s assessment was calculated. **Results:** The results of covariance analysis (covariates were sex, school type and school grade) showed that practitioners’ basic general ability [$p < .001$] and all four subscale abilities (human network building and community forming [$p < .001$], self-understanding and self-control [$p = .001$], task handling [$p = .033$], and career planning [$p = .002$]) were significantly higher than those of non-practitioners. **Conclusions:** Basic general ability would be a factor associated with the future career of practitioners of school-based extracurricular sports activities.

Key Words: Basic general ability, Career education, Career guidance, Junior high school, High school

Introduction

School-based extracurricular sports activities (SBECSA) are widely conducted in Japanese junior high and high school as part of school education (Sasakawa Sports Foundation, 2017). Participating in organized sports activities such as SBECSA relate with future physical fitness (Ministry of Education, Culture, Sports, Science and Technology [MEXT], 2012a), amount of daily physical activity (Dohle & Wansink, 2013; Kjønnsen, Anderssen, & Word, 2009; Kjønnsen, Fjørtoft, & Word, 2010; Telama, Yang, Hirvensalo, & Raitakari, 2006; Walters, Barr-Anderson, Wall, & Neumark-Sztainer, 2009), and sports involvement (Aoyagi, Ishii, Shibata, Arai, & Oka, 2017a; Kjønnsen et al., 2009; Richards, Williams, Poulton, & Reeder, 2007). Additionally, there is an association between sports activities and future career index (e.g., educational status, occupational outcomes, and earnings) (Barber, Eccles, & Stone, 2001; Eccles, Barber, Stone, & Hunt, 2003; Lleras, 2008). It is reasonable that youth sports experiences are related to future physical fitness and sports involvement. However, the reason for the relation between participation in SBECSA and future career is unclear. Few studies (e.g., Ueno, 2014) have statistically explored the predictors of career index, although some relevant benefits of participation in SBECSA, such as autonomy, cooperativeness, and friendship, have been experientially stated (MEXT, 2013).

Career education is holistically promoted in Japanese elementary and secondary education. The MEXT (2011a) defined career education as the “education that promotes career development through the growth of the fundamental ability and attitude for social and professional independence of the individual.” The MEXT (2011b, 2011c, 2012b) also created a career education handbook for elementary school, junior high school, and high school. In the handbook, the basic general ability — whose subscales are the abilities of human network building and community forming, self-understanding and self-control, task handling, and career planning — is addressed as a targeted ability that should be developed in career education. Therefore, the present study focused on the career forming ability called “basic general ability,” characteristic of career education in Japan. According to the above considerations, SBECSA practitioners may have higher basic general ability than non-practitioners. In addition, they may differ in each of the four subscale abilities. These facts contribute to the understanding of how and why participation in SBECSA relates to future career. Concurrently, it helps to consider methods of promoting career education. Therefore, the present study aimed to clarify the difference between practitioners and non-practitioners of SBECSA in terms of basic general ability.

Material & methods

In the present study, basic general ability was assessed with an evaluation method developed by Aoyagi (2018). Teachers assessed the four subscales of basic general ability based on the assessment criteria that is described and exemplified in the career education handbook (MEXT, 2011b, 2011c, 2012b). Plural teachers evaluated the pupils or students they knew well. The evaluation method was developed through an interview with 18 teachers considering easiness of conduction in school field, validity of evaluation, and comparability among different types of school and school grades with same question items. The outlined method is “triangulation” (Flick, 2011). Triangulation (e.g., use of plural analysts or information sources) contributes to improving the credibility and validity of qualitative research. Hence, it is considered an appropriate evaluation method for the present study.

Participants and evaluators - Participants were 295 students from two public junior high schools and two public high schools. Evaluators were 26 teachers (15 males and 11 females) from these schools. The age of teachers ranged from 23 to 59 years with a mean age of 38.8 years (Standard Deviation = 11.8). Their teaching subjects were Japanese, Mathematics, English, Science, Social Studies, Health and Physical Education, Technical Course, Home Economics, and Business.

Assessment - Students. Students were asked for sociodemographic data (school age, class, individual number, and sex) and participation status in SBECSA.

Teachers. Sociodemographic data were collected from teachers (sex, age, and teaching subject). Then, they were asked to evaluate the basic general ability of their students. More than three teachers evaluated the four subscale abilities (i.e., human network building and community forming, self-understanding and self-control, task handling, and career planning) of each student. The possible responses for each subscale ability were the following five-ordinal alternatives: 1) low; 2) slightly low; 3) neutral; 4) slightly high; and 5) high.

Procedure - First, public junior high schools and public high schools in a municipality of Saitama Prefecture were randomly selected. The requests to participate in the study were sent to school principals and the answer was obtained through reply postcards. The requests provided information about the study’s background, purpose, methods, privacy policy, and reward. Second, the researcher visited the collaborating schools and provided more detailed information about the study. The number of participants to be evaluated was then confirmed. School sampling continued until more than 100 junior high school students and 100 high school students were selected. Then, questionnaires were sent to schools. Evaluators were homeroom teachers, homeroom sub-teachers, or subject teachers who knew the students well. All participants and evaluators were informed about the purpose and design of the study, voluntary basis, privacy policy, and that answering the questionnaire meant authorization to their participation in the study. This study did not require registration of participants’ names. Students’ and teachers’ answers were connected by school age, class, and individual number. The reward for participation was 10,000 yen for each school. The research proposal was approved by the Ethics Board of Waseda University (No. 2015-186). The research was conducted from November 2015 to January 2016.

Analysis - The average of each teacher’s evaluation for each of the subscale abilities was calculated. The average indicates the value of each subscale ability (i.e., human network building and community forming, self-understanding and self-control, task handling, and career planning) of the student. Then, the sum of the four subscales was calculated as the value of the basic general ability. This procedure allows different numbers from evaluators for each student or the existence of missing data. In the study, covariance analysis was conducted. Dependent variables were basic general ability, human network building and community forming ability, self-understanding and self-control ability, task handling ability, and career planning ability, respectively. Independent variable was participation in SBECSA. Covariates were sex, school type and school grade. The analysis was performed using IBM SPSS Statistics Version 21 and a *p* value of < .05 was considered significant.

Results

The characteristics of analyzed participants are shown in Table 1. Six students were excluded from the analysis due to lack of their sex information. Therefore, 289 students (142 males and 147 females; 130 from junior high school and 159 from high school) were analyzed.

	n	%
All	289	100.0
Sex		
Male	142	49.1
Female	147	50.9
School type & Grade		
Junior high, 1st grade	32	11.1
Junior high, 2nd grade	98	33.9
High, 1st grade	80	27.7
High, 2nd grade	79	27.3

The results are shown in Table 2. Practitioners of SBECSA presented significantly higher values in human network building and community forming ability (practitioners = 3.21, Standard error [SE] = 0.05: non-practitioners = 2.72, SE = 0.08, $p < .001$), self-understanding and self-control ability (practitioners = 3.19, SE = 0.05: non-practitioners = 2.90, SE = 0.07, $p = .001$), task handling ability (practitioners = 3.11, SE = 0.05: non-practitioners = 2.90, SE = 0.08, $p = .033$), and career planning ability (practitioners = 2.99, SE = 0.05: non-practitioners = 2.73, SE = 0.07, $p = .002$) than those of non-practitioners. Additionally, practitioners of SBECSA also presented significantly higher values in basic general ability, which summed the value of four subscale abilities (practitioners = 12.50, SE = 0.18: non-practitioners = 11.25, SE = 0.26, $p < .001$), than those of non-practitioners.

Table 2. Differences of basic general ability according to participation in SBECSA

	Practitioners (n = 196)		Non-practitioners (n = 93)		<i>p</i>
	Mean	SE	Mean	SE	
Human network building and community forming ability	3.21	(0.05)	2.72	(0.08)	< .001
Self-understanding and self-control ability	3.19	(0.05)	2.90	(0.07)	.001
Task handling ability	3.11	(0.05)	2.90	(0.08)	.033
Career planning ability	2.99	(0.05)	2.73	(0.07)	.002
Basic general ability (sum of above 4 abilities)	12.50	(0.18)	11.25	(0.26)	< .001

SE = Standard Error, Covariates: Sex, School type and Grade

Discussion

The present study conducted a survey with students and teachers of public junior high and high schools to clarify the differences between practitioners and non-practitioners of SBECSA in terms of basic general ability. As a result, practitioners of SBECSA demonstrated more basic general ability than non-practitioners. Regarding subscale abilities, all of the four abilities of practitioners were higher than those of non-practitioners. There were no distinctions between practitioners and non-practitioners in any of the subscale abilities.

The human network building and community forming subscale contains the following abilities: understand diverse thinking and points of view, listen to other's opinions and accurately convey one's own thinking, accept one's own situation and play one's own role, participate in society in cooperation with others, and form the future society actively (MEXT, 2011c, 2012b). Some examples are understanding of others' characters, encouragement, communication skill, teamwork, and leadership (MEXT, 2011c, 2012b). Participating in SBECSA has a positive influence in making friendships (Schaefer, Simpkins, Vest, & Price, 2011). Ueno (2014) also reported that the participation of high school students in SBECSA has an effect in their interpersonal skills, which influences career maturity (i.e., readiness to address career development). Multi-age groups comprising first to third graders are one of the characteristics of SBECSA. There are also opportunities to communicate with several people, such as supervisors, coaches, parents, and other club members. These experiences of communicating with diverse people and making teams in SBECSA may relate to the human network building and community forming ability. The self-understanding and self-control subscale contains the following abilities: act voluntarily for "one can," "one feels significance," and "one wants" based on positive understanding, including future own potential to maintain interaction with society; to control one's own thinking and emotion, and learn for future growth (MEXT, 2011c, 2012b). Some examples are understanding of one's own role, positive thinking, self-motivation, endurance, stress management, and voluntary behavior (MEXT, 2011c, 2012b). Fauth, Roth, and Brooks-Gunn (2007) indicated that practitioners of SBECSA mark low anger scores than non-practitioners. The results of the present study reveal that practitioners are able to control emotions, which describes the results of the previous study. Furthermore, participation in SBECSA would relate to students' intrinsic motivation because of the voluntary basis of participation and choice of some SBECSA.

The task handling subscale contains the following abilities: find and analyze several problems in working and handle and solve problems by making appropriate plans (MEXT, 2011c, 2012b). Some examples are understanding/choosing/processing information, understanding essence, seeking causes, finding problems,

planning, energy, and assessment/improvement (MEXT, 2011c, 2012b). These abilities are developed in SBECSA daily, since abilities such as information processing and search causes of failures are necessary to improve performance in each play. The career planning subscale contains the following abilities: understand the significance of “working,” position the “working” based on the relation with one’s own various statuses and roles, make choices and appropriately use varied information on diverse lifestyles, and form career with one’s own voluntary judgment (MEXT, 2011c, 2012b). Some examples are understanding of significance and role in learning/working, and understanding diversity, future planning, selection, and action (MEXT, 2011c, 2012b). As mentioned above, SBECSA comprise multi-age groups. Practitioners must have the opportunity to see and hear about the career choice of older members. The career choices of predecessors would influence youngsters’ career planning as role models or future practical problems. In addition, concern about continuity (e.g., continue or quit, where, how) of sports after graduation is one of potential reasons why SBECSA practitioners scored high in career planning ability. In addition to the reasons discussed, the commitment of SBECSA teachers should also influence the basic general ability of SBECSA practitioners. Indeed, SBECSA teachers conduct daily life guidance and counseling for SBECSA practitioners (Aoyagi, Ishii, Shibata, Arai, & Oka, 2017b). It was already clarified that there is a positive relationship between participation in SBECSA and students’ status/ability in physical, mental, and social aspects (Farb & Matjasko, 2012; MEXT, 2012a; Ueno, 2006, 2014). The present study has also revealed the association between participation in SBECSA and career forming ability.

One limitation of the present study is its cross-sectional design. Therefore, it could not deny that persons who have basic general ability tend to participate in SBECSA. In the future study, the cause-and-effect relationship of participation in SBECSA and career forming ability should be verified. The other limitation was that the present study could not distinguish people who do not participate in any activities from those who participate in school-based extracurricular cultural activities or out-of-school sports activities. A more detailed characterization of participants in future studies is needed.

Conclusions

SBECSA practitioners presented higher career forming ability than non-practitioners. Interaction with others, SBECSA teachers’ educational commitment, and features of sports are considered possible reasons for the difference according to participation in SBECSA. Basic general ability would be a factor associated with high career index of school sports participants in the future.

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Conflicts of interest

The authors have no conflicts of interest to declare.

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