

The effect of Olympic values on sport involvement and prosocial behaviour: An empirical study of South Korean youth

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Abstract

The aim of the study is to investigate the relationships between Olympic values, sport involvement, and prosocial behaviour in South Korean youth. This study utilised a quantitative research method employing a self-administrated questionnaire and purposive sampling with 264 students (143 boys and 121 girls with ages between 9 and 13), and 142 of the students participated in the South Korean Olympic values education programme (K-OVEP). The results indicated that there were significantly higher mean values for only secondary sport involvement by the K-OVEP participants than non-participants. In addition, multiple regression analyses revealed that Olympic values positively impacted sport involvement and prosocial behaviour in South Korean youth. Sport involvement also was a predictor of prosocial behaviour.

Key words: Olympic values, Olympic education, Sport involvement, Prosocial behaviour, South Korean youth

Introduction

The concept of Olympism is described in the fundamental principle of the Olympic charter as ‘a philosophy of life, exalting and combining in a balanced whole the qualities of body, will and mind’ (IOC, 2015):

Fundamental #1: Blending sport with culture and education, Olympism seeks to create a way of life based on the joy of effort, the educational value of good example and respect for universal fundamental ethical principles.

Fundamental #2: The goal of Olympism is to place

sport at the service of the harmonious development of humankind, with a view to promoting a peaceful society concerned with the preservation of human dignity.

Fundamental #4: Every individual must have the possibility of practicing sport in the Olympic spirit, which requires mutual understanding with a spirit of friendship, solidarity and fair play.

Some of the specific positive values, so called Olympic values referred to in these principles include (1) a respect for balance in the human character between aspects of mind, body and spirit, (2) an understanding of the joy found in effort, (3) an emphasis on peaceful behaviour, and 4) preservation of human dignity (Binder, 2005).

Based on Olympism, various Olympic education programmes, integrated into physical activities have been

implemented across the world since 1970s when Olympic education originally appeared (Müller, 1994). The IOC sees Olympism that is important in the education through sport process (Culpan & Wigmore, 2010). Early in the twenty-first century the focus of Olympic education began to shift from ‘teaching about the Olympics itself’ to ‘teaching Olympic values’ (Binder, 2012), which are the core components of what makes the Olympic Games unique (Flatau, 2014). This value-based education incorporates two educational principles of Coubertin: (1) the striving of individuals for self-perfection in the harmonious culture of body and mind and (2) the development of social and moral behaviours (Naul, 2008). In this regard, the Olympic values education project was launched in 2007 by the IOC. This project was intended to: (1) develop youth understanding of Olympic values and help to implement them in everyday life, (2) encourage youth to participate in sport and physical activity, (3) promote moral and social responsibility and prosocial behaviours, and (4) build healthy relationships between young people and their community (IOC, 2016a, 2016b, 2017a, 2017b).

Meanwhile, it has often been observed that the Olympic Games have functioned as a catalyst for hosting countries to take initiatives in implementing Olympic education projects. For example, in South Korea, Olympic education was initiated in 1988 Seoul Olympic Games and has been maintained ever since (Shin, 2014). The Korean Sport and Olympic Committee (KSOC) has operated a programme titled Olympic Academy over the last three decades to promote Olympic values (KSOC, 2014). Also, the Korean Olympic values education programmes (K-OVEP), initiated in 2015 by the Korea Sports Promotion Foundation (KSPO) has been implemented in primary and middle schools as a test run since 2015 (KSPO, 2015, 2016).

While various Olympic values education programmes have been being developed, and many scholars have made a concerted effort to understand the relationships between Olympic values, sport involvement, and prosocial behaviour (e.g., Binder, 2012; Müller, 2004; Naul, 2008; Naul, Binder, Rychtecký, & Culpan, 2017. Żukowska &

Żukowski, 2010), few empirical studies have been conducted to investigate the impact of Olympic values on sport involvement and positive behaviour in youth. Thus, this research (1) examines the differences on Olympic values, sport involvement, and prosocial behaviour between the K-OVEP participants and non-participants and (2) explores the relationships among Olympic values, sport involvement and prosocial behaviour in South Korean youth.

Literature review

Olympic values education: Some examples

Olympic values education by the IOC

The IOC produced ‘Teaching values: An Olympic education toolkit’ in 2007, which included background information and a variety of learning activities to help promote the educational values of Olympism (IOC, 2007). The toolkit provides various materials to help adults in teaching roles (teachers, coaches, sport club leaders, staff of NOCs and national Olympic academies) to enhance the physical and moral development of youth (IOC, 2007). Later, the OVEP version 2.0 was developed in 2016, which serves to supplement teaching delivery using the attractiveness of sport and Olympism (IOC, 2016b). This OVEP 2.0 contains five resources: (1) the fundamentals of Olympic values education - the official core resource and the primary knowledge, (2) delivering OVEP playbook – numerous teaching strategies and examples of practical way to implement the OVEP, (3) Activity sheets, (4) the OVEP workshop plan – a guidebook for gaming and physical activity, and (5) the resource library DVD (IOC, 2017b).

Based on the OVEP toolkit and OVEP 2.0, various Olympic education programs have been developed and implemented by Olympic Organizing Committees, National Olympic Committees and some organisations in various countries such as Australia, Canada, France, New Zealand, Poland, Singapore, and Turkey (IOC, 2017c).

Olympic values education in South Korea

The Korean Sport and Olympic Committee (KSOC), as

the National Olympic Committee (NOC) of Republic of Korea for the Olympic Games and Movement, contributes towards the development and harmony of the Olympic ideal. A programme titled 'Olympic Academy' has been operated over the last three decades and every year the KSOC organises a three-day workshop concerning Olympism and Olympic legacy for about eighty adults, and dispatches one of the selected participants of the programme to the International Olympic Academy's international session for young participants (KSOC, 2014). The purpose of the Olympic Academy is to promote Olympic values in South Korea through sharing basic Olympic knowledge and experience. For instance, the 28th Olympic Academy in 2016 proceeded in (1) the history of Olympics and Olympism, (2) the roles of the KSOC to promote Olympism, (3) the result report of the IOC marketing seminar, (4) the progress report of 2018 PyeongChang Olympic Games, (4) a meeting with an Olympian, and (5) related discussion, sport activities, recreation (Kim, 2016). Until 2016, approximately 3,300 participants completed this course (Ahn, 2016; Park, 2015).

The Korean Sports Promotion Foundation (KSPO), as an organisation inherited various legacies from the Seoul Olympic Organising Committee, has continued its efforts to celebrate and succeed cultural performances of the 1988 Seoul Olympic Games and therefore contribute to the promotion of the Olympic values (KSPO, 2017). 'The Hope Factory in Seoul' is the international collaborative project that was introduced at the Seoul Olympic Museum, a founding member of the Olympic Museums Network under the umbrella of the KSPO, to commemorate the 25th anniversary of the 1988 Seoul Olympics in September 2013 (KSPO, 2013). As the interactive exhibition-workshop which looks at the subject from a different but complementary angle, a series of modules and multi-sensory activities invite visitors to think about their own mental representations, attitudes and behaviors and to evaluate their own propensity to promote peace and hope by integrating the three Olympic values of 'striving for excellence', 'demonstrating respect' and 'celebrating

friendship' into their daily lives (IOC, 2011; KSPO, 2013).

In the meantime, the KSPO have been conducted the Korean Olympic Values Education Programmes (K-OVEP) since 2015 in collaboration with the IOC and the KSOC and consultation with the Institute of Museum Education. The programme has been implemented in primary and middle schools as a pilot test (KSPO, 2015). Based on the Olympic Education Toolkit of the IOC, a multidisciplinary approach in contents creation of the programme has been taken (KSPO, 2015). Three regular programmes, which are composed of 8 different modules respectively, have been developed; and 338 pupils from 7 public schools participated until 2016 (KSPO, 2016). For instance, one of the K-OVEP called 'Olympic Board Game' is composed of 8 modules: (1) the introduction to the programme (2) the hosting cities (3) the events of the Games (4) sportsmanship (5) Olympic athletes (6) the Paralympic Games and volunteerism (7) Olympic symbols and (8) playing their own Olympic board Games, the result of team-project throughout the programme (KSPO, 2016).

Lastly, the Taekwondo Promotion Foundation (TPF) and the World Taekwondo Federation (WTF) also co-organised the World Youth Taekwondo Camp (WYTC). Particularly, the WTF OVEP International Forum took place in August 2009 during the 1st WYTC where educational and cultural values of Taekwondo and realization of the Olympic values through Taekwondo were actively discussed (TPF, 2017a). From 2009 to 2014, 1,336 young participants aged between 16 and 20 gathered in South Korea from all over the world to engage in a special Taekwondo training, Olympic education, anti-doping education, and diverse cultural experiences. It is insisted that the WYTC is meaningful as a new experiment to combine the spirit of martial arts and Olympism harmoniously with the aim of the youth development (TPF, 2017a). The WYTC has been suspended for the last 2 years after 5 years' implementation and will revive again in November 2017, recruiting 100 participants as a 6 day-long event programme. However, the OVEP cannot be found any longer in the contents of the programme (TPF, 2017a, 2017b).

Olympic values

Values are defined as “enduring beliefs that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence” (Rokeach, 1973, p. 5). Values serve the interests of individuals or groups, motivate action by giving it direction and intensity, provide standards by which behaviour is evaluated, and are learned by individuals from the dominant values of their social groups and through their own experiences (Schwartz, 1994; Schwartz & Bardi, 2001). In addition, values are considered general principles that guide behaviour across different situations (Lee & Cockman, 1995; Lee, Whitehead, & Balchin, 2000).

From this perspective, IOC (2017) defines values in ‘the fundamentals of Olympic values education’ as “the principles and fundamental convictions that we each have, that guide each person’s behaviour” indicating that “values provide the standards by which particular actions are judged to be good or desirable” (p. 10). As mentioned earlier, Olympic values are identified in the paragraphs of the Olympic charter as following: excellence, respect, friendship, and fair play (Binder, 2012; IOC, 2017; Naul, 2008). For instance, excellence is described as “doing the best we can, on the field of play or in our life suggesting that the important thing is not winning, but taking part, making progress and enjoying the healthy combination of body, will and mind” (IOC, 2017, p. 17). And, respect means preservation of human dignity including respect for yourself, other people, rules and the environment (IOC, 2017). In addition, friendship refers to mutual understanding or harmony between individuals and between people all over the world. Fair play, originally as a sport-related concept means not just playing by rules, but being polite to other teams and officials (Brock & Hastie, 2007; IOC, 2017; Mouratidou, Chatzopoulos, & Karamavrou, 2007).

In this study, we defined Olympic values as positive and universal values based on Olympism and Olympic charter such as fairness, respect, and excellence in sport

and in everyday life (Binder, 2012; IOC, 2015; Müller, 2004; Naul, 2008).

Sport involvement

The psychological concept of sport involvement includes participation, perceived interest of an individual and personal importance of sports to an individual (Shank & Beasley, 1988). Kenyon (1966) noted that involvement comprises more than active participation. He pointed out that “in addition to its behavioural dimensions, there are cognitive and dispositional dimensions” (Kenyon, 1966, p. 78).

In general, academics and practitioners agree that sport involvement has multidimensional constructs (Kenyon, 1969; Mullin, Hardy, & Sutton, 2014; Snyder & Spreitzer, 1973). Specifically, sport involvement has three dimensions: behavioural, cognitive, and affective involvement (Kenyon, 1969; Mullin et al., 2014; Snyder & Spreitzer, 1973). Behavioural involvement includes playing at practice or in competition, which requires physical exertion and skills to improve for health and physique. Behaviour involvement also has criteria such as frequency, duration and intensity. Cognitive involvement refers to the acquisition of information and knowledge about a sport. Internet, TV, newspaper, and magazines are the key media for cognitive involvement. Lastly, affective involvement is defined as the attitudes, feelings, and emotions that someone has toward an activity. A person who has a high affective involvement to a sport is more likely to attend sport events or participated in a sport (Kenyon, 1969; Mullin et al., 2014; Snyder & Spreitzer, 1973).

These three dimensions may be mutually reinforcing; however, they can be conceptually differentiated for purposes of analysis (Snyder & Spreitzer, 1973). Kenyon (1966) proposes that there are two basic modes of sport involvement (pp. 78-79).

Primary involvement refers to actual participation in the game or sport as a player or contestant, while secondary involvement refers to all other forms of

participation, of which there are several, including participation via the consumption of sport and participation via the production of sport. One consumes at any point in time in one of two ways – directly, through attendance at the performance of others (those who are primarily involved), or indirectly, by exposure to one of the several forms of mass media which permits people to be involved secondarily. The procedure, on the other hand, is responsible for bringing the spectacle up to expectations.

In this research, borrowing from Kenyon (1966), sport involvement is confined to two dimensions: primary (behavioural) involvement and secondary (cognitive and affective) involvement.

Prosocial behaviour

Prosocial behaviour has been defined as voluntary behaviour intended to help or benefit another individual or group of individuals (Fabes & Eisenberg, 1998). Social scientists refer to the methods that people use to help others as prosocial behaviour or voluntary behaviour primarily aimed at benefitting another individual or group of individuals (Eisenberg, 1986).

One of the easiest, and most assured, methods of benefitting another involves intervening when individuals are faced with a negative experience. As a result, prosocial behaviours require three components: (1) the ability to take the perspective of another person and recognise that they are having a problem; (2) the ability to determine the cause of that problem; and (3) the motivation to help them overcome the problem (Carlo & Randall, 2002).

Broadly considered, humans appear to experience three varieties of negative states: instrumental need, where an individual has difficulty completing goal directed behaviour; unmet material desire, in which the individual does not have access to a needed resource; and emotional distress, when an individual experience a negatively arousing emotional state (Dunfield, 2014). Furthermore, each of the negative states can be alleviated by a different

prosocial behaviour, namely, helping (e.g. retrieving an out of reach object; Warneken & Tomasello, 2006), sharing (e.g. giving up a limited resource; Hay, 1979; Brownell, Svetlova, & Nichols, 2009), and comforting (e.g. offering verbal or physical support; Vaish, Carpenter, & Tomasello, 2009; Svetlova, Nichols, & Brownell, 2010) respectively. Based on the aforementioned researches, prosocial behaviour is defined as any act that benefits other people and is identified as helping, sharing, and comforting in this research.

Relationships among Olympic values, sport involvement, and prosocial behaviour

Influence of Olympic values on prosocial behaviour

While there are various factors shaping the behaviour of youth such as socio-economic conditions, different family models, interactions within peer groups or the changing structure of the school, one of the most effective means of educating the youth is sport and physical education (Glapa, Bronikowski, & Ludańska-Krzemińska, 2016). Szwedzki (2013) noted that education through sport is one of the nicest and easiest methods for developing the positive aspects of personality (as cited in Glapa et al., 2016). Consequently, several researchers treated the Olympic movement based on the Olympism philosophy as a form of education, and sport as an activity that allows children and adolescents to socialise and acquire social rules and values (Binder, 2005; Bronikowski & Bronikowska, 2009; Naul, 2008; Weiss, Smith, & Stuntz, 2008).

While numerous studies have examined the important role of Olympic education and Olympic values on youth positive behaviours (Binder, 2005, 2012; Naul, 2008), little empirical research has addressed the causal relationships between Olympic values and prosocial behaviour, as well as Olympic values and sport involvement. Šukys and Majauskiene (2014) found that athletes from schools in which Olympic education programmes were implemented had higher levels of Olympic values such as human values, social virtues, and individual pursuit of excellence than

other athletes from school where the programme was not implemented. The researchers also indicated that Olympic education was a significant predictor of prosocial behaviour through a multi regression analysis (Šukys & Majauskiene, 2014). Glapa et al. (2016) suggested that a well-designed programme of Olympic education brings statistically significant positive changes in the assessment, motives and intentions of prosocial behaviours among junior secondary school students. In addition, Šukys, Majauskiene, and Dumciene (2017) examined the effects of an integrated Olympic education programme on the development of prosocial behaviour in adolescents of Lithuania and revealed that there were significant improvements in prosocial behaviour in adolescents from schools that had implemented the Olympic education programme.

Influence of sport involvement on prosocial behaviour

The adage that ‘sport builds character’ is popular in many societies and can be traced to the ancient Olympic Games (Kavussanu & Ntoumanis, 2003) in which the term ‘character’ is referred to personality and social behaviour in many studies. This belief is based on the premise that sport provides a vehicle for learning to cooperate with teammates, develop solutions to moral conflicts, and learn virtues such as fairness, team loyalty, persistence, and teamwork (Shields & Bredemeier, 1995).

Several studies conducted primarily by Bredemeier and her colleagues (e.g., Bredemeier & Shields, 1984, 1986; Bredemeier, Weiss, Shields, & Cooper, 1986, 1987; Shields & Bredemeier, 1995) have examined the relationship between sport involvement and various aspects of morality, for which prosocial behaviour is proposed as a proxy (Kavussanu, Stamp, Slade, & Ring, 2009). Their findings demonstrate that extensive participation in sport has positive effects on morality and support that participation in sport has a positive influence on prosocial behaviour. Other studies testing the effectiveness of programmes designed to promote sociomoral behaviours through sports or physical education have provided positive results (Gibbons, Ebbeck, & Weiss, 1995; Giebink &

Mckenzie, 1985; Sharpe, Brown, & Crider, 1995). For example, Šukyss and Majauskiene (2014) found that students with more experience participating in sport scored significantly higher on prosocial behaviour.

Conceptual framework and hypotheses

Based on the aforementioned literature, the enhancement of Olympic values has been identified as independent valuable and a means for increased levels of positive behaviour and sport involvement as dependent valuable in youth. Also, sport involvement positively impacts prosocial behaviour of youth. Thus, the findings from the literature formed the basis for four hypotheses:

Hypothesis 1. There are statistically significant differences on Olympic values, sport involvement, and prosocial behaviour between the K-OVEP participants and non-participants.

Hypothesis 2. Olympic values have a positive effect on sport involvement in South Korean youth.

Hypothesis 3. Olympic values have a positive effect on prosocial behaviour in South Korean youth.

Hypothesis 4. Sport involvement has a positive effect on prosocial behaviour in South Korean youth.

Methods

Measurement

Based on a review of literature, initial item pool for the instrument was generated. After the items were examined and refined by a panel of experts who were two professors and two PhD students in statistics and Olympic studies, the scale consisted of twenty nine items: Olympic values (12 items), sport involvement (6 items), and prosocial behaviour (11 items). After the formulation of the preliminary scale, the questionnaire was translated from English into Korean. Following this initial translation process, the two experts who had a comprehensive background in English and sport, reviewed the translated questionnaire in order to find any disagreements due to the translation.

Olympic values. Olympic values are measured by

twelve items which are adapted from the Youth Sport Values Questionnaire (YSVQ; Lee et al., 2000) and the Olympic questionnaire (Telma et al., 2002) using a five-point Likert-type scale ranging from 1 (= strongly disagree) to 5 (= strongly agree) to question such as 'I am fair and don't cheat', 'I put in the best performance I can', and 'I feel really good when playing'.

Sport involvement. Six items assess sport involvement using the sports involvement scale (Shank & Beasley, 1998). The participants rated each item on a five-point Likert scale ranging from 1 (= strongly disagree) to 5 (= strongly agree) with the questions such as 'I do sport two or three times a week', 'When doing sport, I spend more than 30 minutes', 'I often read sport-related articles on the internet', and 'I attend sporting events'.

Prosocial behaviour. Eleven items adapted from the Self-Report Altruism scale (SRA; Rushton, Chrisjohn, & Fekken, 1981) and the Strengths and Difficulties Questionnaire (SDQ; Goodman, Meltzer, & Bailey, 1998) were coded on a five-point Likert-type scale, as follows: 1 (= never), 2 (= rarely), 3 (= sometimes), 4 (= often), and 5 (= very often). Prosocial behaviour was assessed with the questions such as 'I have allowed someone to go ahead of me in a line-up when s/he was in a hurry', 'I have helped a classmate with a homework assignment when my knowledge was greater than his or hers', and 'I have comforted my friend when s/he was in trouble'.

Before the beginning of the main analysis, a pilot study was performed to refine the instruments. The samples were composed of 104 primary school students in Seoul, S. Korea (male = 59, female = 45), and the ages of the participants ranged from 9 to 13 with a mean of 10.77 (SD = 1.42). The exploratory factor analysis (EFA) and Cronbach's alpha reliability coefficients were employed. The principal component extraction along with varimax rotation which provides a clearer separation of the factors in the EFA was utilised (Hair, Anderson, Babin, & Black, 2010). An appropriate number of factors was decided based on Kaiser Criterion, eigenvalues greater than 1 (Kaiser, 1960) and the scree test (Cattell, 1965; Zwick & Velicer, 1982). In addition, item with factor loading of .4

and above was selected to represent practical significance (Hair et al., 2010). Regarding the item and factor purification, two of the twelve items in Olympic values and four of the eleven items in prosocial behaviour were eliminated. Overall, the pilot study led to twenty three items including three factors and ten items for Olympic values, two factors and six items for sport involvement, and two factors and seven items for prosocial behaviour.

Sampling method and data collection

For the main study, with a purposive sampling, students were selected at the Seoul Olympic museum and several schools in Seoul, South Korea where the pilot Olympic education programme was implemented. Participants were recruited by contacting Olympic education teachers. As the target respondents are under 18, proper processing to obtain permission or consent for the survey was completed prior to data collection. Specific instructions assured all research assistants used standardised procedures.

Data were collected from a face-to-face and self-administrated questionnaire during the period between April and June 2017 at the Seoul Olympic park and three schools in Seoul. Research assistants gave an introductory statement and some help to those who had difficulty completing the questionnaire. A total of 302 questionnaires were collected, and 264 of which were completely answered and employed for data analyses. The respondents (N = 264) consisted of 143 males (54.2%) and 121 females (45.8%). The ages of respondents were between 9 and 13 (Mage = 11.17, SD = 1.29), and 142 respondents (53.8%) answered that they participated in the K-OVEP (see Table 1).

Results

Measurement model

A factor analysis with principal component extraction and varimax rotation was conducted to analyse the data set using SPSS 21.0 (Hair, et al., 2010). As shown in Table 1, the factor loading for the items is equal or greater than

Table 1. Sample demographics

Variable		K-OVEP participants (N=142)		Non-participants (N=122)	
		N	%	N	%
Gender	Male	92	64.8	51	41.8
	Female	50	35.2	71	58.2
Age	9	28	19.7	7	5.7
	10	32	22.5	22	18.0
	11	16	11.3	22	18.0
	12	49	34.5	57	46.8
	13	17	12.0	14	11.5

.624 ($p < .001$).

The reliability was assessed using the Cronbach's alpha correlation coefficient (Nunnally, 1978), the composite reliability (CR; Bagozzi & Yi, 1988), and the average variance extracted (AVE; Fornell & Larker, 1981). Table 1 indicates that all Cronbach's alpha values were higher than the criteria of .7 ranging between .752 and .858. All coefficients higher than .7 exhibited the minimum recommended value of the CR ranging from .752 to .909 (Bagozzi & Yi, 1988). The AVE values were calculated and all were above the recommended criteria of .5 ranging from .505 to .770 (Bagozzi & Yi, 1988).

Using AMOS 21.0, the confirmatory factor analysis (CFA) employing maximum likelihood estimation was conducted to test whether the data fits the model well. Kline (2005) suggests using multiple fit indices for the CFA to generate adequate information to assess the overall fit data. The following fit indices were used to assess model fit: chi-square statistic divided by degrees of freedom (χ^2/df), GFI (Jöreskog & Sörbom, 1989), RMSEA (Stieger, 1990), SRMR (Steiger & Lind, 1980), TLI (Tucker & Lewis, 1973), and CFI (Bentler, 1990). The cut-off criterion for the acceptable model fit is as follows: $\chi^2/df < 3$, GFI $>.9$, RMSEA $< .10$, SRMR $< .05$, TLI $> .9$ and CFI $> .9$ (Byrne, 1998; Hu & Bentler, 1999; Shevlin & Miles, 1998; Tabachnick & Fidell, 2007). The CFA result indicates that the fit indices for the proposed model exceed the cut-off, confirming that the data fit the model well: $\chi^2/df = 1.605$, GFI = .907, RMSEA = .048, SRMR = .043, TLI = .946, and CFI = .956.

Differences between the K-OVEP participants and non-participants

Means and standard deviations between the K-OVEP participants and non-participants are presented in Table 3. Analyses of differences between mean scores using t-test for the two different groups demonstrates significant differences only in the secondary involvement ($t = 4.214$, $p < .001$). Specifically, the mean rating for the K-OVEP participants were found to be significantly higher than the non-participation.

Relationships among Olympic values, sport involvement, and prosocial behaviour

A Pearson's correlation analysis was utilised to explore the relationships between variables. The results shows statistically significant positive relationships between Olympic values, sport involvement and prosocial behaviour ($p < .05$, $p < .01$), and Table 4 summarises the findings of the correlation among variables.

Multiple linear regression analysis

Multiple linear regression analyses was conducted to reveal the relative impact of Olympic values on sport involvement and prosocial behaviour, and to examine the impact of sport involvement on prosocial behaviour for both the K-OVEP participants and non-participants. Factor score from the EFA was utilised as the input variable, and

Table 2. Descriptive statistics and reliability

Constructs and scale items	Mean	SD	SL	α	CR	AVE
Olympic values						
1. Fair play				.792	.809	.588
I am fair and don't cheat.	4.466	.713	.863			
I am well mannered	4.473	.686	.855			
I respect my opponents.	4.110	.863	.663			
2. Social value				.760	.869	.692
I try to fit in with my team.	4.371	.784	.787			
I try to get along with the other people even if I don't like them	3.617	1.104	.764			
I am reliable and give 100%	3.989	.896	.764			
3. Pursuit of excellence				.822	.909	.770
I feel really good when playing.	4.561	.656	.839			
I enjoy myself and have fun.	4.424	.786	.795			
I put in the best performance I can.	4.542	.680	.785			
Sport involvement						
1. Primary involvement				.858	.855	.663
I do sport two or three times a week.	4.193	1.119	.879			
When doing sport, I spend more than 30 minutes.	4.420	.907	.873			
I do sport regularly.	4.068	1.073	.871			
2. Secondary involvement				.881	.799	.571
I watch sport-related programmes on TV enthusiastically	2.867	1.407	.918			
I often read sport-related articles on the internet.	2.413	1.351	.889			
I attend sporting events.	2.788	1.390	.858			
Prosocial behaviour						
1. Helping				.785	.802	.506
I have offered to help a handicapped or elderly stranger across a street.	3.023	1.264	.823			
I have helped carrying a friend's or neighbor's belongings (e.g. books, parcels).	3.477	1.290	.819			
I have offered my seat on a bus or train to an elderly who was standing.	3.602	1.324	.762			
I have helped my friend when s/he was in trouble.	2.439	1.429	.624			
2. Sharing and comportsing				.762	.752	.505
I have celebrated an achievement of my friend sincerely.	3.973	1.132	.802			
I have comforted my friend when s/he was in anger.	3.928	1.186	.799			
I have let my classmates borrow an item of some value to me (e.g., toys, school supplies).	4.280	.942	.778			

Table 3. Mean and standard deviation between the K-OVEP participants and non-participants

		1	2	3	4	5	6	7
K-OVEP participants (N = 142)	Mean	4.345	4.004	4.470	4.235	2.977	3.224	4.071
	SD	.643	.776	.592	.866	1.273	1.022	.871
Non-participants (N = 122)	Mean	4.356	3.978	4.391	4.219	2.356	3.033	4.049
	SD	.632	.766	.649	.972	1.123	1.045	.920
t		-.128	.279	1.029	.143	4.214***	1.497	.193
p		.898	.781	.304	.887	.000	.136	.847

Note: 1=Fair play, 2=Social value, 3=Pursuit of excellence, 4=Primary involvement, 5=Secondary involvement, 6=Helping, 7=Sharing and comforting

Table 4. Pearson's correlation between variables

	1	2	3	4	5	6	7
1	1						
2	.486**	1					
3	.494**	.578**	1				
4	.210**	.274**	.326**	1			
5	.185**	.291**	.278**	.301**	1		
6	.178**	.294**	.250**	.331**	.380**	1	
7	.312**	.346**	.397**	.361**	.126*	.465**	1

* $p < .05$, ** $p < .01$, *** $p < .001$

Note: 1=Fair play, 2=Social value, 3=Pursuit of excellence, 4=Primary involvement, 5=Secondary involvement, 6=Helping, 7=Sharing and comforting

the multiple correlation coefficient (R), coefficient of determination (R²), and F-ratio were explored to predict the goodness-of-fit for the regression models.

Table 5 presents the results of regression analysis to test the effects of Olympic values on sport involvement. As hypothesised (Hypotheses 2), the impact of Olympic values on sport involvement was statistically significant for both K-OVEP participants ($F = 7.863$, $p < .000$; $F = 5.150$, $p < .000$) and non-participants ($F = 4.165$, $p < .000$; $F = 4.816$, $p < .01$). The entire explanatory power for K-OVEP participant samples turned out to be 14.6% ($R^2 = .146$) in primary involvement and 10.1% ($R^2 = .101$) in secondary involvement, and for non-participant samples 9.6% ($R^2 = .096$) and 10.9% ($R^2 = .109$) respectively. According to the beta value as a relative influential power of Olympic values on primary involvement, there was a positive influence of the pursuit of excellence for both K-OVEP

participants ($\beta = .241$, $p < .05$) and non-participants ($\beta = .175$, $p < .05$). However, significant relationships between Olympic values and secondary involvement for non-participants were not found, whereas there was a positive effect of social value in K-OVEP participants ($\beta = .203$, $p < .05$).

As shown in Table 6, the regression analysis for Hypotheses 4 reveals that the influence of Olympic values on helping in prosocial behaviour was statistically significant in both the K-OVEP participants ($F = 7.793$, $p < .000$) and non-participants ($F = 3.362$, $p < .05$). In addition, the result of regression analysis between Olympic values and sharing and comforting indicates that there was statistically significant relationship for both K-OVEP participant ($F = 12.409$, $p < .000$) and non-participant ($F = 9.753$, $p < .001$). The entire explanatory power for K-OVEP participant samples turned out to be 14.5% (R^2

Table 5. Impact of Olympic values on sport involvement

		B	SE	β	t	p
Primary involvement						
K-OVEP participants (N=142)	Constant	1.626	.567		2.870	.005
	Fair play	.091	.130	.068	.700	.485
	Social Value	.160	.109	.143	1.464	.146
	Pursuit of excellence	.352	.145	.241	2.435*	.016
R ² =.146, Adj. R ² =.127, F=7.863, p=.000						
Non-participants (N=122)	Constant	2.173	.683		3.184	.002
	Fair play	.008	.158	-.005	-.053	.958
	Social Value	.112	.148	.089	.759	.449
	Pursuit of excellence	.372	.175	.249	2.127*	.036
R ² =.096, Adj. R ² =.073, F=4.165, p=.008						
Secondary involvement						
K-OVEP participants (N=142)	Constant	.057	.855		.067	.947
	Fair play	.082	.197	.041	.418	.677
	Social Value	.332	.164	.203	2.023*	.045
	Pursuit of excellence	.275	.218	.128	1.264	.208
R ² =.101, Adj. R ² =.081, F=5.150, p=.000						
Non-participants (N=122)	Constant	-.062	.783		-.079	.937
	Fair play	-.001	.181	-.001	-.007	.994
	Social Value	.294	.170	.201	1.735	.085
	Pursuit of excellence	.285	.201	.165	1.420	.158
R ² =.109, Adj. R ² =.086, F=4.816, p=.003						

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 6. Impact of Olympic values on prosocial behaviour

		B	SE	β	t	p
Helping						
K-OVEP participants (N=142)	Constant	1.200	.669		1.793	.075
	Fair play	.144	.154	.091	.936	.351
	Social Value	.482	.129	.366	3.741***	.000
	Pursuit of excellence	.161	.171	.093	.945	.347
R ² =.145, Adj. R ² =.126, F=7.793, p=.000						
Constant	Constant	.725	.740		.979	.329
	Fair play	.208	.171	.126	1.215	.227
	Social Value	.058	.161	.043	.364	.716
	Pursuit of excellence	.266	.190	.166	1.403	.163
R ² =.079, Adj. R ² =.055, F=3.362, p=.021						
Sharing and comporting						
K-OVEP participants (N=142)	Constant	.816	.547		1.492	.138
	Fair play	.157	.126	.116	1.245	.215
	Social Value	.018	.105	.016	.174	.862
	Pursuit of excellence	.559	.140	.380	4.009***	.000
R ² =.212, Adj. R ² =.195, F=12.409, p=.000						
Non-participants (N=122)	Constant	1.258	.608		2.069	.041
	Fair play	.162	.140	.112	1.156	.250
	Social Value	.372	.132	.310	2.821**	.006
	Pursuit of excellence	.138	.156	.097	.884	.378
R ² =.199, Adj. R ² =.178, F=9.753, p=.000						

* $p < .05$, ** $p < .01$, *** $p < .001$

= .145) in helping and 21.3% ($R^2 = .212$) in sharing and comporting, and for non-participant samples 7.9% ($R^2 = .079$) and 19.9% ($R^2 = .199$) respectively. According to the beta value as a relative influential power of Olympic values on prosocial behaviour, there was a positive influence of social value on helping ($\beta = .366, p < .000$) and the pursuit of excellence on sharing and comporting ($\beta = .380, p < .0000$) in the K-OVEP participants. However, significant relationships between social value and sharing and comporting in non-participants were presented ($\beta = .310, p < .01$).

As hypothesised (Hypotheses 5), Table 7 demonstrates that the influence of sport involvement on prosocial behaviour was statistically significant for both the K-OVEP participants ($F = 16.917, p < .000$; $F = 16.869, p < .000$) and non-participants ($F = 13.411, p < .000$; $F = 7.368, p < .01$). The entire explanatory power turned out to be 19.6% ($R^2 = .196$) and 19.5% ($R^2 = .195$) for the K-OVEP participants, and 18.4% ($R^2 = .184$) and 11.0% ($R^2 = .110$) for non-participants respectively. According to the beta

value as a relative influential power of sport involvement on helping, a positive influence by primary involvement and secondary involvement was found in both the K-OVEP participants ($\beta = .238, p < .01$; $\beta = .284, p < .01$) and non-participants ($\beta = .251, p < .01$; $\beta = .307, p < .001$). Furthermore, a positive influence of primary involvement on sharing and comporting was statistically evident for the K-OVEP participants ($\beta = .482, p < .001$) and non-participants ($\beta = .272, p < .01$).

Discussion and Conclusion

Discussion

The aim of this study was to (1) examine the differences on Olympic values, sport involvement, and prosocial behaviour between the K-OVEP participants and non-participants and (2) investigate the impacts of Olympic values on sport involvement and prosocial behaviour, and the impacts of sport involvement on prosocial behaviour among South Korean youth.

Table 7. Impact of Olympic values on prosocial behaviour

		B	SE	β	t	p
Helping						
K-OVEP participants (N=142)	Constant	1.200	.669		1.793	.075
	Fair play	.144	.154	.091	.936	.351
	Social Value	.482	.129	.366	3.741***	.000
	Pursuit of excellence	.161	.171	.093	.945	.347
$R^2=.145, \text{Adj. } R^2=.126, F=7.793, p=.000$						
Non-participants (N=122)	Constant	.725	.740		.979	.329
	Fair play	.208	.171	.126	1.215	.227
	Social Value	.058	.161	.043	.364	.716
	Pursuit of excellence	.266	.190	.166	1.403	.163
$R^2=.079, \text{Adj. } R^2=.055, F=3.362, p=.021$						
Sharing and comporting						
K-OVEP participants (N=142)	Constant	.816	.547		1.492	.138
	Fair play	.157	.126	.116	1.245	.215
	Social Value	.018	.105	.016	.174	.862
	Pursuit of excellence	.559	.140	.380	4.009***	.000
$R^2=.212, \text{Adj. } R^2=.195, F=12.409, p=.000$						
Non-participants (N=122)	Constant	1.258	.608		2.069	.041
	Fair play	.162	.140	.112	1.156	.250
	Social Value	.372	.132	.310	2.821**	.006
	Pursuit of excellence	.138	.156	.097	.884	.378
$R^2=.199, \text{Adj. } R^2=.178, F=9.753, p=.000$						

* $p < .05$, ** $p < .01$, *** $p < .001$

The results obtained in the present research concerning the differences demonstrate that there was a statistically significant difference in only secondary (cognitive and affective) sport involvement between the K-OVEP participants and non-participants. The K-OVEP participants had significant higher mean values for secondary involvement in sport than non-participants. This indicates that the K-OVEP participants in this study had higher levels of attending sporting events, watching sport-related programmes on TV, and reading sport-related articles on the internet. Surprisingly, in contrast to previous studies that revealed significant differences between the Olympic education participants and the non-participants in Olympic values (Šukys & Majauskiene, 2013) and prosocial behaviour (Šukys & Majauskiene, 2014; Glapa et al., 2016; Šukys et al., 2017), the result of this study showed there were no significant differences depending on Olympic education.

Although the exact reason for this is difficult to analyse, no significant differences between the K-OVEP participants and non-participants are most likely due to a combination of contents and quality of the K-OVEP. Most of the programmes lacked a systematic and structural framework, being implemented as a one-off event without serious investigation on Olympic values. Furthermore, proper physical activities were largely absent from these programmes because the K-OVEP focussed on a multidisciplinary approach in the contents creation of the programme – blending with culture and art.

Olympic values in this study turned out to be positively correlated with all variables of sport involvement and prosocial behaviour. Šukys and Majauskiene (2014) implied that Olympic values and prosocial behaviour are correlated, indicating that the Olympic education was a significant predictor of prosocial behaviour. Glapa et al. (2016) also revealed that increased efforts to provide various opportunities for students to learn Olympic values can lead to prosocial behaviour. Thus, the findings confirm the previous studies showing it to be possible to derive prosocial behaviour if Olympic value education is implemented. Current educational achievements in

promoting Olympic education suggest an important and effective role of prosocial behaviour (Glapa et al. 2016; Šukys & Majauskiene, 2014; Šukys et al., 2017). Moreover, empirical findings support the recommendations from other researchers that Olympic values should be given top priority in Olympic education (Patsantaras, 2008; Peneva, 2009).

Sport involvement also has a significantly positive correlation with prosocial behaviour, as shown in a study on Icelandic adolescents (Vilhjalmsson & Thorlindsson, 1992). This finding agrees with the recent research of Kowalska and Świerczyńska (2015) conducted among students of junior secondary schools in concluding that among students participating in sport, prosocial behaviour has improved (Glapa et al., 2016).

Limitations and future research

This study is not without limitations. The primary limitation of this study is the narrow range of students surveyed, as the samples include only primary and middle students collected from the Seoul Olympic park and several schools within South Korea; thus, it is difficult to generalise the findings. This research needs to be examined in a wider range of students in South Korea as well as overseas where in regions that highlight Olympic value education as a means of promoting sport involvement and prosocial behaviour for youth. In addition, this study relied on a self-administered survey, where there could be only declared prosocial behaviour measured which is likely to produce a social desirability bias. In future research, additional qualitative research (e.g. interviews and observation) should be performed to record the actual behaviour of students. Although Olympic values have shown significant influence on sport involvement and prosocial behaviour in the current study, future research should also consider other factors in the personal value system that could influence sport involvement and prosocial behaviour. Furthermore, since this study was cross sectional in design, a longitudinal and experimental research can provide more convincing evidence of

relationships between Olympic values, sport involvement, and prosocial behaviour. Lastly, as it is not convincingly argued that the manifested Olympic values have critical importance in South Korean society where most of youngsters struggle with competitive academic culture, the future research need to investigate how well Olympic values are aligned with the values of Korean society and culture.

Implications and conclusion

A surprising and interesting finding of the present study is that significant higher mean values were displayed for only secondary involvement in sport by the K-OVEP participants than non-participants. The data in this research demonstrated that there were no significant differences between the K-OVEP participants and non-participants in Olympic values and prosocial behaviour depending on Olympic education, although Olympic values positively correlated with and influenced all variables of sport involvement and prosocial behaviour.

While there are supportive studies of the educative worth of Olympism (Kidd, 1996; Naul, 2008; Parry, 2007), scholars reveal that there are diverse, multiple and contested forms of Olympic education across the globe (Binder, 2001, 2005; Naul, 2008). Scholars also report that offered Olympic education programmes often rely on a curricula approach that does not promote learning through active participation in physical education or sport (Culpan & McBain, 2012). Unfortunately, this criticism provides an explanation for the result of this study. It is important and meaningful that at least some programmes have been available for people who are interested in the Olympic movement, particularly considering the current official curriculum of physical education in South Korea where Olympic education is not implemented. However, it could not be convincingly shown that these programmes realise Coubertin's ideals properly, and that the participants actually benefit from the programmes.

Olympic education programmes are principally oriented toward the promotion of actual participation in sport.

Consistent with Binder (2001, 2005) and Naul (2008), however, Olympic education programmes in South Korea are characterised by a plethora of Olympic education kits and do not have a discernible pedagogy; furthermore, the present programmes seem to propagate the Olympic ideal as an unproblematic, universal good. Physical activities and critical or analytical thinking barely are included in these programmes. It is largely attributed to that Olympic education has received far less scholarly attention to date unlike the enthusiasm to hold mega-sporting events including the Olympic Games on South Korean soil.

It is undeniable that education is primarily a responsibility of parents and, to a lesser extent, of schools. Nonetheless, there can be no doubt that each social practice in which young people participate Olympic education with sport involvement included exerts an influence on them (Biesta, 1997). Agreeing with the findings of the present study, Olympic values still can be used as a moral agenda and source of inspiration in educational programmes and be organised in the global cultural space of the Olympic movement. It is possible to work towards the aim of the Olympic movement through Olympic education utilising a critical pedagogy and making sport accessible to children, adolescents and even to older people as a part of a complete education. Considering the South Korean context where more active involvement in physical activities and critical/creative thinking have been overriding concerns in the heart of the youth development, Olympic education as a value-based learning with a multidisciplinary approach is arguably an attractive tool and opportunity. Furthermore, now it is time to take Olympic education more seriously as a part of sustaining the Olympic legacy of a host country at the 2018 winter Olympic Games in PyeongChang. However, it must not be a rushed education. A constructive discussion, criticism of the Olympic ideology and subsequent efforts to adapt Olympic education to the South Korean environment properly with physical activities are required as a starting point.

In summary, the evaluation of implementing a programme is a significant part of the evaluation of the

education. It helps educators to discover uncertain aspects of the programme and determine the elements that are decisive for the success of the programme. Hence, the result of the current study has practical utility in Olympic education or physical education field: Policy makers and practitioners who intend to encourage new opportunities of working with children and adolescents in terms of Olympic education may benefit from the findings of the current study.

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