

ORIGINAL SCIENTIFIC PAPER

Sports Image, Attitudes, and Positive Psychological Capital of MZ-Generation Viewers in the 2020 Tokyo Olympic Games Depending on Medal-Winning Status

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Abstract

Each generation of modern society has lived in varying environments, and different reactions occur while viewing sports. This study compared and analyzed sports, sports attitudes, and positive psychological capital of two groups according to the presence or absence of medals in the event that most impressed them after watching the 2020 Tokyo Olympics. In total, 328 survey responses were collected, and the differences between the groups were statistically verified using multivariate analysis of variance. The results showed that Group 1, which was impressed by a medal-winning event, had a relatively higher average value of self-efficacy than Group 2, which was impressed by an event in which a medal was not won. In contrast, Group 2 had a higher positive image and more resilience than did Group 1. In addition, different psychological attitudes were found in the results of factors (behavioral image, evaluative image, cognitive attitude, affective attitude, behavioral attitude, and optimism) that were not statistically significant in the differences between the groups compared to those of the previous generation. The results of this study can be used as meaningful data in sports viewing-related studies.

Keywords: *Olympic Games, sports image, attitudes, positive psychological capital, MZ-generation*

Introduction

Large sporting events induce positive emotions and images in viewers (Smith, 2006) through the display of games, and fair sportsmanship, and a gamut of entertaining acts (Liao & Pitts, 2006). In addition to gaining information on various sporting events, viewers' psychological, affective, and emotional characteristics are largely influenced by the games played by athletes representing their countries, according to the media effects of the Olympic Games (Lu, Mihalik, Heere, Meng, & Fairchild, 2019). Viewers of the Olympics develop sports-related attitudes and intentions depending on the outcome of the games (Potwarka, Nunkoo, & McCarville, 2014) and learn about the culture and images of the host country (Essex & Chalkley, 1998).

Since the 1984 Los Angeles Olympic Games, South Korea has maintained a relatively high Olympic performance level, generally finishing around 10th place. However, compared to previous games, the country did not win as many medals or show as strong of a performance during the 2020 Tokyo Olympic Games. Instead of expressing disappointment over the game results, which had been the focus of viewers in the past, unlike the previous generation, the MZ generation tends to enjoy life, which is causing significant changes in various areas (Park, 2022). In this respect, these MZ generations displayed a trend of valuing the games themselves more than the medals that the athletes may win. With the newer generation, the primary viewers of the 2020 Tokyo Olympic Games are the



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MZ generation, that is, those born between 1980 and 2000, and who are known to emphasize their personal characteristics and importance (Baum, 2020). A generational shift in the viewers of mega-events, such as the Olympics, is changing how such events are perceived. Ultimately, the public reaction to the results of the Olympics is expected to vary according to the generation of viewers.

Among the preceding studies related to the Olympics with many issues and values around the world, there are studies comparing the emotional and psychological status of athletes according to medal status and grade (Medvec, Madey, & Gilovich, 1995; McGraw, Mellers, & Tetlock, 2005). In addition, from an economic point of view, there were studies that analyzed the national and corporate interests (Choi, Cho, & Im, 2011; Liu, Kim & Bea 2013) and losses (Chung, 2008) of hosting and broadcasting the Olympics. However, on the contrary, research related to the viewer's psychological perspective according to the presence or absence of an Olympic athlete's medal is very insufficient. Therefore, this study can help build data on sports images, sports attitudes, and the positive psychological capital of viewers depending on whether athletes won medals at the 2020 Tokyo Olympic Games. This may be used as basic data to improve the quality of life of people.

Literature Review

Sports image

Some images associated with sports include stadium and team images (Khatibzadeh, Kozechiyan, Honarva, & Saghdel, 2018), athlete image (Arai, Ko, & Ross, 2014), national image (Kim, Kang, & Kim, 2014), gender image (Hallmann, 2012), and sports image (Han, 2014). According to Ferrand and Pages (1999), there is an approximately 15% increase in ticket sales of a sports club after it is able to build a positive image. Kaplanidou and Vogt (2007) demonstrated that the image of a host country and city for a sporting event affects tourists' intentions to revisit the place as well as positive perceptions. This study examines sports images with a particular focus on the Olympic Games, which were chosen because viewers could watch numerous games and feel a wide spectrum of emotions. It analyzes changes in sports images perceived by viewers according to four sub-factors (behavioral, psychological, evaluative, and negative) based on whether athletes in both popular and unpopular sports in Korea won a medal.

Sports attitude

Attitude is formed by an individual's phenomena of interest (Schwarz, 2007) and perceived thoughts (Kayai, Cicoğlu, & Demir, 2018). It plays an effective role in individuals' value creation (Lee, Whitehead, Ntoumanis, & Hatzigeorgiadis, 2008). In particular, modern people have a positive attitude toward sports. Zaman, Mian, and Butt (2018) examined the sports attitudes of adolescents and college students and found that the majority responded positively to sports attitudes. Such an outcome can play a substantial role in individuals' overall quality of life, for it encourages participation in sports, raises psychological happiness and the value of an individual's life (Güngör & Çelik, 2020), and helps them stay future-oriented during physical activity (Graham, Sirard, & Neumark-Sztainer, 2011). Studies on sports attitudes are important because it is possible to predict participants' behaviors and psychology from multiple perspectives. This study classifies sports attitudes of the viewers of Olympic Games by cognitive, affective,

and behavioral sub-factors and analyzes how attitudes affect individuals' sports participation and life value creation.

Positive psychological capital

Self-efficacy, optimism, and resilience are sub-factors of positive psychological capital created in positive psychology. Self-efficacy refers to positive trust in oneself (Stajkovic & Luthans, 1998). Optimism indicates an individual having a positive outlook for the future and it decreases psychological uneasiness in the face of difficulties (Carver, Scheier, & Segerstrom, 2010). Resilience signifies an individual's ability to recover quickly from past stress or negative experiences. To this end, Bockorny and Youssef-Morgan (2019) argue that a high level of positive psychological capital helps to improve life satisfaction. Furthermore, Li et al. (2014) found that positive psychological capital plays an intermediary role in linking social support and subjective happiness. Finally, Afzal (2016) determined a significant correlation between individuals' positive and negative emotions and relative happiness by measuring positive psychological capital. The aforementioned studies support the notion that positive psychological capital is a key factor in improving quality of life. This study classifies the positive psychological capital that viewers gain from watching sports into self-efficacy, optimism, and resilience to offer viewers information on building a high quality of life.

Methodology

Data collection procedure and participants

Data were collected via online and offline (collecting data from respondents in person) survey forms from November 9 to December 15, 2021. Participants were male and female adults aged 20 years or older belonging to the MZ generation (which includes millennials, i.e., those born in the early 1980s to the mid-1990s, and Generation Z, i.e., those born in the mid-1990s to the early 2000s) with experience watching the 32nd 2020 Tokyo Olympics. This study is officially waived from Ethics Approval by the institutional review board (IRB) Committee at Kyung Hee University (reference number: KHGIRB-22-190) as a research in social science not collecting sensitive personal information. For online data collection, survey forms were distributed and collected via the Naver Office, an online survey platform. For offline data collection, the survey was conducted to collect data from respondents in person at two universities in Gyeonggi-do, Republic of Korea. Data were collected only from participants who voluntarily agreed to participate after the research purpose and the fact that there were no benefits or disadvantages to participating in the survey was explained.

A total of 400 questionnaires were distributed online and offline, and 354 responses were received (approximate response rate: 88.50%). However, 26 unfaithfully written, offline survey forms were excluded. Finally, 328 survey responses were collected for statistical analysis. Additionally, based on the question of what the most impressive game at the 2020 Tokyo Olympics was, the survey respondents were categorized into two groups depending on the presence or absence of medals, which was applied as the independent variable (Group 1: Viewers who indicated an event resulting in medals was impressive; Group 2: Viewers who indicated an event without a medal was impressive). Finally, all survey participants reported basic demographic information, such as gender, education, and preferred media device type. The study participants' demographic information is reported in Table 1.

Table 1. Study Participants' Social Demographic Information

		Group 1 (with medal) 191 (58.2%)	Group 2 (without medal) 137 (41.8%)
Gender	Male	105 (55.0%)	79 (57.7%)
	Female	86 (45.0%)	58 (42.3%)
Employment	Self-employed	10 (5.2%)	5 (3.6%)
	Public servant	25 (13.1%)	16 (11.7%)
	Employed	50 (26.2%)	28 (20.4%)
	Homemaker	49 (25.7%)	41 (29.9%)
	Student	32 (16.8%)	26 (19.0%)
	Professional	16 (8.4%)	12 (8.8%)
	Prefer not to say	9 (4.7%)	9 (6.6%)
Highest level of educational achievement	High school	16 (8.4%)	12 (8.8%)
	Bachelor's	127 (66.5%)	85 (62.0%)
	Master's or higher	37 (19.4%)	28 (20.4%)
	Prefer not to say	11 (5.8%)	12 (8.8%)
Media device type	Television	72 (37.7%)	68 (49.6%)
	Personal computer	37 (19.4%)	27 (19.7%)
	Smartphone	69 (36.1%)	36 (26.3%)
	Prefer not to say	13 (6.8%)	6 (4.4%)

Instruments

The public perception of international sporting events, such as the Olympics, differs from that of the past. Regardless of the game outcome, the public displayed positive feelings, such as emotion, hope, and encouragement, and tended to value the game higher than the medals. First, in the case of sports images, the factors used in Han (2014) were modified to suit the participants and three sub-factors (behavioral, psychological, and evaluative) were evaluated in 12 questions. Next, in the case of sports attitudes, the factor applied to Park's (2010) study was modified and supplemented, and 13 questionnaires were used for three sub-factors (cognitive, affective, and behavioral). Finally, in the case of positive psychological capital, 12 items were included in the four sub-factors revised and supplemented to suit the participants of this study from the questionnaires used in Liu's study (2017). All scales were applied on a five-point Likert scale (1 = not at all, 5 = very much).

Statistical Data analysis

Statistical data analyses were implemented via SPSS version 23.0. First, the analysis reported the study participants' social demographic information (e.g., gender, employment, and education). Second, to secure the scale validity of the data collected,

exploratory factor analysis (EFA) was conducted for three factors (i.e., sports image, sports attitude, and positive psychological capital). Third, Cronbach's alpha coefficients were calculated to verify the scale reliability of the data collected. Last, a multivariate analysis of variance (MANOVA) was performed to examine the differences in dependent variables between two groups. For all statistical analyses, significance was accepted at $p < 0.05$.

Results

Scale validity and reliability

The scales applied in the statistical analyses were tested for acceptable validity and reliability in previous research. However, as this study modified and supplemented the measurement tools to meet the research topic and study purpose, exploratory factor analysis (EFA) was implemented three times to ensure statistical clarity. Based on the results of the EFAs with Varimax rotation, eigenvalues greater than 1.0 were retained. Each factor was determined by a structure including three sub-factors: (a) sports image (behavioral, psychological, and evaluative), (b) sports attitude (cognitive, affective, and behavioral), and (c) positive psychological capital (self-efficacy, optimism, and resilience). The specific results of the EFAs and the survey questionnaires are reported in Tables 2, 3, and 4.

Table 2. Results of Exploratory Factor Analysis for Sports Image Factor

Items	1	2	3
Fun	0.822	0.016	0.158
Interesting	0.796	-0.033	0.167
Competitive	0.771	0.160	0.050
Dramatic	0.750	0.140	0.099
Healthy	-0.018	0.842	-0.067
Strong	-0.062	0.799	0.084
Active	0.241	0.764	0.256
Dynamic	0.268	0.613	0.256
Popular	0.168	0.082	0.836
Successful	0.128	0.115	0.826
International	0.100	0.136	0.789
Eigenvalues	3.786	1.966	1.505
Variance (%)	34.423	17.877	13.683

Note. 1 = Psychological image, 2 = Behavioral image, 3 = Evaluative image.

Table 3. Results of Exploratory Factor Analysis for Sports Attitude Factor

Items	1	2	3
I need sports.	0.864	0.119	0.068
I have learned the rules and methods of the game.	0.864	0.053	0.098
I get information about my favorite team or player.	0.834	0.150	0.007
I gain expertise about games.	0.822	-0.040	0.024
I praise the players for their games.	0.098	0.810	0.094
Sports are effective for refreshment.	0.042	0.809	0.141
I feel like I am a player.	0.066	0.795	0.227
I am touched by the world-class players' games.	0.072	0.784	0.131
I have a desire to work out.	0.052	-0.014	0.837
I want to buy sports supplies or products.	0.024	0.284	0.789
I have the urge to become an athlete.	0.142	0.101	0.753
I look for a favorite player's game.	-0.038	0.294	0.671
Eigenvalues	3.937	2.575	1.626
Variance (%)	32.809	21.460	13.550

Note. 1 = Cognitive attitude, 2 = Affective attitude, 3 = Behavioral attitude.

Table 4. Results of Exploratory Factor Analysis for Positive Psychological Capital Factor

Items	1	2	3
I can expect the best results even in uncertain situations.	0.892	0.063	0.084
When I start a new job, I think I can succeed.	0.888	0.111	0.028
I think that where there's a will, there's a way	0.849	0.002	0.080
I will be able to recover quickly even if I go through difficulties.	0.021	0.861	-0.025
I do not think it will take long to recover even if I'm stressed out.	0.118	0.820	0.009
I will be able to endure hardships without any difficulties.	0.025	0.817	0.053
I think I can achieve most of the goals I planned.	0.108	-0.015	0.863
I think I can do something perfectly even if I face difficulties.	-0.053	-0.052	0.807
I think I can solve difficulties well.	0.138	0.110	0.781
Eigenvalues	2.707	2.007	1.774
Variance (%)	30.082	22.298	19.714

Note. 1 = Optimism, 2 = Resilience, 3 = Self-efficacy.

The reliability of the questionnaire was tested using Cronbach's alpha. The results were verified based on a cutoff value of 0.700 for satisfactory internal consistency for reliability (Nunnally & Bernstein, 1994): (a) behavioral image, $\alpha=0.782$; (b) psychological image, $\alpha=0.813$; (c) evaluative image, $\alpha=0.790$; (d) cognitive attitude, $\alpha=0.872$; (e) affective attitude, $\alpha=0.836$; (f) behavioral attitude, $\alpha=0.790$; (g) self-efficacy, $\alpha=0.755$; (h) optimism, $\alpha=0.857$; and (i) resilience, $\alpha=0.783$. All the measurement tools used in this study showed satisfactory statistical reliability.

Multivariate analysis of variance (MANOVA)

A MANOVA was conducted to find the differences in sports image, sports attitude, and positive psychological cap-

ital of audiences in the 2020 Tokyo Olympic Games based on the type of event (acquisition of medals or not). Homogeneity of covariance was verified (Box's $M=76.614$, $F=1.651$, $p>0.001$), and statistically significant differences between the groups were found (Wilks' $\Lambda=0.779$, $F=10.044$, $p<0.05$). Specifically, as reported in Table 5, statistically significant differences between the two groups were found for three factors: (a) psychological image, (b) self-efficacy, and (c) resilience. However, no statistically significant differences were observed for (a) behavioral images, (b) evaluative images, (c) cognitive attitudes, (d) affective attitudes, (e) behavioral attitudes, or (f) optimism. Table 6 reports the mean scores of all dependent variables between the groups drawn from the survey data.

Table 5. Results of Multivariate Analysis of Variance

Dependent variables		df	F	p	η^2
Sports image	Behavioral image	1	0.188	0.665	0.001
	Psychological image	1	10.343	0.001**	0.031
	Evaluative image	1	1.144	0.286	0.003
Sports attitude	Cognitive attitude	1	3.269	0.072	0.010
	Affective attitude	1	1.024	0.312	0.003
	Behavioral attitude	1	0.041	0.840	0.000
Positive psychological capital	Self-efficacy	1	36.813	0.000***	0.101
	Optimism	1	0.134	0.715	0.000
	Resilience	1	19.124	0.000***	0.055

Note. * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

Table 6. Mean Scores of Dependent Variables between Groups

	1	2	3	4	5	6	7	8	9
Group 1	3.668	3.652	3.600	3.505	3.628	3.555	3.578	3.485	3.377
Group 2	3.703	3.918	3.501	3.677	3.538	3.571	3.056	3.521	3.766

Note. Group 1 = Viewers who were impressed by watching events where medals were won, Group 2 = Viewers who were impressed by watching events without medals. 1 = behavioral image, 2 = psychological image, 3 = evaluative image, 4 = cognitive attitude, 5 = affective attitude, 6 = behavioral attitude, 7 = self-efficacy, 8 = optimism, 9 = resilience. Statistically significant higher mean scores between groups are indicated in bold.

Discussion

This study examined individuals from the South Korean MZ generation who watched the 2020 Tokyo Olympic Games. Comparative analyses were conducted for sports image, sports attitudes, and positive psychological capital between the two groups, which were divided based on whether the research participants were emotionally moved by events in which the athletes won medals. This research also investigates shifts in psychological responses between the past and present generations. Among the nine comparative factors, psychological image, a sub-factor of sports image, and self-efficacy and resilience, sub-factors of positive psychological capital, exhibited statistically significant results. Furthermore, between the two research groups, psychological image and resilience were greater in Group 2 (no medal group) than in Group 1 (win medal group). However, Group 1 showed higher self-efficacy than did Group 2.

Group 2 ($M=3.918$) scored higher on psychological image than Group 1 ($M=3.652$). In the past, winning Olympic medals stimulated the development of a positive image for relevant countries (Essex & Chalkley, 1998), developing their economies (Berman, Brooks, & Davidson, 2000) and increasing their exports (Rose & Spiegel, 2011). Today's society, however, is led by the MZ generation, characterized by a strong sense of belief and independence rather than yielding to the social environment (Baum, 2020). Youths in their 20s and 30s watch sports to enjoy the game. People make dedicated efforts to improve the quality of their life (Costanza et al., 2007), however, past generations felt joy and triumph in good outcomes, such as winning medals, but the present generation is moved and inspired by how these games are played rather than the final outcome. Ultimately, this study's findings recognize the characteristics of the MZ generation that is rapidly changing how sports were viewed in the past, when Olympic medals were celebrated as a means of national prosperity.

Self-efficacy was higher in group 1 ($M=3.578$) than in group 2 ($M=3.056$). According to Fulton, Baranauskas, and Chapman (2021), self-efficacy in athletes increases through their participation in highly competitive games like the Olympics, having a positive effect on winning medals in the future. Self-efficacy in athletes' parents has been shown to increase simply because their children were competing in the Olympics (Arai et al., 2014). This suggests that individuals gain positive psychology in their ability to achieve something by watching others' successes even if they are not actually engaged in the performance. In line with the findings of this study, Dietz-Uhler and Lanter (2008) determined that interest in and passion for sports teams greatly influence viewers' emotions, and Wann and Branscombe (1993) found that viewers obtain an ego boost from the game results of teams they support. Moreover, Phua (2010) determined that watching sporting events, such as the Olympics, is an excellent measure of viewers' self-esteem. Therefore, the outcomes of the current

study indicate that viewers' interest in various sports may be a response to a high level of success, as in winning Olympic medals, and such analysis or results may not be definitively limited to the MZ generation.

Finally, resilience was greater in Group 2 ($M=3.766$) than in Group 1 ($M=3.377$). Resilience in athletes is the ability to handle unfavorable issues that occur during a game, such as errors, point loss, and unexpected situations (Secades et al., 2016). It includes situations where athletes can return to their usual performance level even when they get lesser time to address these issues (Codonhato, Vissoci, Nascimento, Mizoguchi, & Fiorese, 2018). Additionally, slightly less talented athletes are more likely to experience such issues than are outstanding athletes who win medals. Unlike in the past, when results were strongly emphasized (Lee, 2016), viewers today express, in increasing frequency, their support and praise for athletes who gave their best during difficult games. According to Harker (2019), when individuals focus on another person or team, they feel as if they are in sync with their emotions (e.g., emotional identification). As study results show, the fact that viewers' self-efficacy increases regardless of the outcome of the game they watch could become important information for the current generation to relieve the stress they experience in their everyday lives (Togo, 2018). It also demonstrates the positive influence of watching sports, which has progressively changed over the years.

Conclusion

The study results show that the positive psychological response of viewing sports has changed over time. The field was afflicted with economic and political instability in the past, and numerous efforts have been made to overcome a lack of elite athletes (Lee, 2016), which led to rapid growth in the sports industry (Gil & Mangan, 2002). However, the public's longing for excellent performances by athletes has persisted.

As evidenced by this, a Korean who won the Olympic medal in an unstable colonial environment in the early 1900s was considered a national hero (Podoler, 2021). It is true that the country has implicitly hoped for many gold medals and high rankings (Bridges, 2013). This has caused players to feel burdened; the public's excessive expectations can easily turn into strong criticism. The study results show that these expectations can be constructive for athletes and viewers to think of their own situations, a characteristic of the MZ generation, and help them develop positive emotions.

In addition, the lack of statistical differences between the two groups with regard to behavioral image, evaluative image, cognitive attitude, affective attitude, behavioral attitude, and optimism seen in the results of this study can be considered meaningful. Six out of nine factors did not have statistical significance biased to one side depending on the presence or absence of medals, and statistically significant statistical values (psychological image, self-efficacy, resilience) were also higher

in two out of three sub-factors (Group 2). Thus, the Olympic medal no longer has a substantial impact on the purpose of watching the games in modern society; our results indicate that the quality of the game itself, popular sports stars, and fandoms supported by individuals are becoming factors for enjoying the game.

Limitations

This study compared and analyzed MZ generation viewers of the 2020 Tokyo Olympics by dividing them into two groups depending on whether a team in a sporting event winning medals impressed them. The sample population was limited to the MZ generation and it was possible to focus on recent

Acknowledgments

There are no acknowledgments.

Conflict of Interest

The author declares that there is no conflict of interest.

Received: 31 March 2022 | **Accepted:** 25 September 2022 | **Published:** 01 October 2022

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trends. Nonetheless, other previous generations (e.g., baby boomers and the X generation) were excluded; hence, further research is needed for generalization. Additionally, owing to the COVID-19 outbreak, very few people watched the 2020 Tokyo Olympics. There were limitations in that the proportion of online survey responses was higher than that of offline responses. Furthermore, it is necessary to compare and analyze the public's sentiment, which may have changed since the 2020 Tokyo Olympics. Finally, this study explained the psychological reactions of comprehensive subjects by conducting quantitative research; however, future research that can compare and analyze more in-depth data by simultaneously conducting quantitative and qualitative research would be necessary.

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