

RESEARCH ARTICLE

Influence of the Olympic winter games PyeongChang 2018 on the Korean Wave: Comparison of perceptions between Koreans and Americans

Eyun-Jung Ki^{1*}, Jeyoung Oh², Chan Souk Kim³

¹Department of Advertising and Public Relations, College of Communication & Information Sciences, The University of Alabama, Alabama, U.S.A.

²Department of Communication Studies, University of Michigan-Flint, Flint, U.S.A.

³Department of Advertising and Public Relations, Cheongju University, Republic of Korea

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*CORRESPONDING AUTHOR

Eyun-Jung Ki,
Box 870172 Tuscaloosa,
Alabama 35487-0172, U.S.A.
ki@apr.ua.edu

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Abstract: This study was designed to investigate the effects of the Olympic Winter Games PyeongChang 2018 on South Koreans' and Americans' perceptions of the "Korean Wave," or Hallyu. To achieve this purpose, a survey that included questions about the awareness of Hallyu among South Koreans and Americans was conducted before and after the Olympics. The results show that the Olympics positively influenced Hallyu and that the effect was greater for Koreans than for Americans. After watching the Olympics, Koreans had a greater sense of cultural soft power and their perception of Hallyu's influence on the United States than before they watched the Olympics. However, for American participants, enduring involvement with Hallyu was the only factor that reflected a positive influence. This study demonstrates the relationship between international mega-sport events and a host country's perceived cultural values.

Keywords: Korean Wave; Olympics; Culture; Sports

1. Introduction

The Olympic Games are like a wagon moving on two wheels – sports and culture. The founder of the modern Olympics, Pierre de Coubertin, emphasized culture because promoting mutual understanding among diverse nationalities and cultures was one of his principal goals. The combination of sports and culture in the modern Olympic Games became explicit in 1992 at the Barcelona Olympic Games, which were declared to be "without any conflicts" as the Cold War had recently ended. The cultural aspects aired during the Barcelona Olympic Games highlighted the host city of Barcelona as a tourist destination with beautiful culture and heritage. Since then, culture has been regarded as a primary factor connecting those who participate in, watch, talk about, or think about the Olympics (Nauright, 2004).

Cultural value was deeply rooted in the Olympic Winter Games PyeongChang 2018 from its inception. The strong support of the government and the community was key to South Korea's selection to host the Games after two unsuccessful attempts since 2003 (Kim, Choi, and Kaplanidou, 2015). Specifically, the combination of the local culture of Gangwon Province, the host city for the PyeongChang Olympic Games, and the culture of the host country played a major role in being selected to host the game.

It is impossible to discuss the Winter Olympics without discussing the cultural wave. In the mid and late 1990s, the Korean Wave, or Hallyu, started in Japan and China. Hallyu

refers to the phenomenon of South Korean popular culture, such as TV shows, fashion, cuisine, and music, becoming immensely popular in other countries (Nye, 1967). By 2016, it had grown to generate \$6.2 billion, or about 1% of Korea's total exports per year (Korea Creative Contents Agency, 2018). The success of Hallyu can be explained by both direct and indirect factors. First, localization strategies with different approaches for each market were successful. To enter the global market, cultural aspects of Hallyu were adjusted for each country through the efforts of private cultural content companies, such as SM Entertainment and JYP Entertainment (Kim, 2016; Cho, 2017). Indirect factors include governmental policies that emphasize soft power, such as cultural content and Hallyu activities that pursue mutual growth between Korean cultural content and other countries' content (Jang and Paik, 2012).

Scholars have endeavored to understand Hallyu in diverse ways. Some examine the phenomenon in Asian countries, such as Japan and China (Kim, 2013), its effects on the country's image, attracting tourists, and the purchase of products made by Korean companies (Kim, Agrusa, and Lee, 2007). However, few studies have examined the influence of a mega sporting event on Hallyu.

To fill this gap, this study focuses on the effects of the PyeongChang Winter Olympic Games on the perception of Hallyu among people of the host country and the United States; thus, the study included Korea, the host country, to measure the effect of the Olympics on Hallyu in the host country in comparison to another country that shares different cultures and perspectives. The PyeongChang Olympic Games were held 30 years after the 1988 Olympic Games, the first to be held in South Korea. The influence of the 2018 Winter Olympic Games was expected to be significant, as it was a large global event in which 45,000 sports officials and journalists as well as 6500 athletes from more than 90 countries participated directly. With that in mind, the purpose of this study was to measure the influence of the PyeongChang Winter Olympic Games on Koreans and Americans in relation to Korean pop culture, Hallyu. For this purpose, this study assessed the perceptions of Koreans and Americans about Hallyu before and after the PyeongChang Winter Olympics.

1.1. The Impact of Sport Mega-events on the Host Country

Scholars have undertaken to understand the potential consequences of mega-sport events, such as the Olympic Games and the FIFA World Cup, for their host countries (Kaplanidou, 2006). Mega-sport events that people around the world can see are reported in numerous media (Horne and Manzenreiter, 2006). As a global asset, a mega-sport event affects various aspects of the host country, including social, political, and psychological aspects (Parent, 2009). Although the magnitude of the impact of these mega-events is debatable, there is no question that mega-sport events such as the Summer and Winter Games are influential (Toohey and Taylor, 2008).

1.2. The Cultural Impact of Mega-sport Events

Since the Olympic Games were re-established in 1894, an underlying ideology of the Games has been to acknowledge the differences in each culture and to make the world a better place by reducing apprehensions between cultures. While political and economic modernization may change the Olympics at face value, the ideology of the Olympic Games has not changed much from the beginning (Chatziefstathiou, 2005). Media coverage of the Olympic Games showing fairness, friendship beyond borders, and the efforts of athletes is an opportunity to enhance national image by linking such positive aspects with the overall image of the host country. This is also an opportunity to deepen the understanding of a host country's culture among the global audience of the Games.

Mega-sport events can improve the image of the host country in various ways. First, successful events can be transmitted to people around the world through media and affect the awareness and attitudes toward the host country (Lee, Lee and Lee, 2005). Specifically, those who watch the Games are exposed to and learn about the beautiful cities and natural landscapes of the host country, the nation's capability and infrastructure to host mega events, and the cultural and historical heritage of the country (Hede, 2005). Those who attend the events can learn and experience new facts about previously unfamiliar host countries, which can affect behaviors in favor of the host country (Kaplanidou and Vogt, 2007). In particular, because cultural values can affect an individual's emotions, attitudes, and consequences, mega-sport events can have a big impact on the public (Allik and Realo, 2004).

Korea's popular culture, known as Hallyu or the Korean Wave, has developed into a cultural phenomenon that has transcended national boundaries in the past decade (Yoon and Jin, 2016). Hallyu has already had a significant impact on the culture of Southeast Asia and is also the reason many foreign tourists choose to visit Korea (Kim and Ryoo, 2007). Hallyu is the reason Korean popular culture, including popular music, drama, and movies, has become influential and recognized in other countries (Ryoo, 2009). Now the boundaries of Hallyu are expanding to include Korea's lifestyle, cooking, fashion, and so on (Park, 2011).

Cultural cross-border exchanges have been facilitated by globalization and a new world cultural infrastructure (Held *et al.*, 2000). As a potential counterflow of the Western-dominant media stream, Hallyu is considered “a first sign of how a country ‘in between’ can find a niche and reposition itself as an influential cultural mediator and creator in the midst of global cultural transformation” (Ryoo, 2009). In response to these changes, the Korean government adopted Hallyu as part of its cultural diplomacy programs, strengthening cultural relations with other countries and people (Kwon and Kim, 2014). The government of Korea officially named the 2018 Olympics the “2018 PyeongChang Culture Olympiad” and sought to provide various cultural events to raise awareness of Korean culture in the world. In particular, the opening ceremony of the PyeongChang Olympic Games was praised as a successful showcase of Korean culture and history (Petrusich, 2000).

1.3. Cultural Soft Power

Scholars have investigated the potential soft power capabilities of media messages, as national media messages can be disseminated internationally (Holyk, 2011). Soft power is the ability of a country to “attract and co-opt them (other countries) to want what you want” (Nye, 1990). It is the converse of hard power, which is a country’s physical strength – economic and military power. Soft power stimulates sensuality and the rational part of human beings and can be achieved by convincing others through intangible values, such as culture and education. The soft power of a country takes various forms in the media. For instance, soft power can be strengthened by a country’s cultural history and heritage, as a tourist destination, or through its popular culture (Holyk, 2011). Scholars have indicated that “popular culture has become a potentially important resource for soft power diplomacy, transcultural collaborations, dialogues, and struggles to win hearts and minds of people” (Nye, Kim, and Kim, 2013). Similarly, another scholar indicated that the appeal of popular culture is a type of cultural soft power along with other types categorized as human capital soft power and political soft power (Holyk, 2011). Studies have found positive associations between the perception of Korean soft power and the benefits it may bring to the nation, such as tourism intention (Ng, Lee, and Soutar, 2007). Many countries are pursuing the development of soft power through their cultural features.

1.3.1. Involvement in Hallyu (*situational versus enduring involvement*)

Popular media, such as drama, entertainment, and movies, influence the evaluation of the country from which the popular culture originates. Considering the audience from a socio-psychological perspective through involvement can lead to a better understanding of how a mega-sport event influences the perception of global viewers (Havitz and Mannell, 2005). Involvement refers to the degree of importance or concern given to any stimulus in a particular situation (Zaichkowsky, 1985). In addition to interest in objects, arousal is also included in determining involvement levels (Havitz and Dimanche, 1997). Reflecting this, scholars define popular culture involvement as “an individual’s interest or arousal toward a certain pop culture” (Whang, Yong, and Ko, 2016). It is important to understand the involvement of individuals in cultural content because individual involvement is often closely related to their supportive behavior (Shao, Baker, and Wagner, 2004).

Involvement can be divided into two categories: Situational involvement and enduring involvement (Richins and Bloch, 1986). Situational involvement refers to involvement caused by a particular situational phenomenon, whereas enduring involvement refers to a sustained involvement with the subject (Havitz and Dimanche, 1997). While situational involvement is a short-term concern for a particular subject in a particular context, enduring involvement is more likely to last longer than situational involvement because it is related to an ongoing interest (Richins and Bloch, 1991). Since there is a tendency for many media to show the culture or arts associated with the host country during the Olympics, audiences are likely to temporarily engage in situational involvement in the culture of the host country. They can be divided into those who participate in enduring involvement with the host country’s culture in accordance with their interest and those who do not. Studies have indicated that situational involvement is closely related to enduring involvement, as it leads individuals with a short-term interest in the media content to engage in similar messages or objects (Whang, Yong, and Ko, 2016). This means that it is important to engage the short-term involvement of the audience through interesting and positive media messages to trigger their enduring involvement with a country and its culture. While a handful of studies have discussed the various types of involvement with culture and their consequences, few have examined the association between involvement types and mega-sport events such as the Olympics. To bridge this gap, this study examined the effects of the Olympic Winter Games PyeongChang 2018 on situational and enduring participation.

1.3.2. Likeability of Hallyu

With advances in media technology, popular culture plays an important role in not only its country of origin but also in other countries (Gross and Brown, 2006). Hallyu has become a global phenomenon as interest in Korean culture – Korean

food, brands, and popular culture – has grown (Onishi, 2019). Hallyu has been successful across Asian countries, such as Japan, China, Vietnam, the Philippines, and Thailand, and has recently spread to the Middle East, South America, Africa, and the United States (Shim, 2006). This global success cannot be achieved without public interest and an affinity for Hallyu.

Whether an individual likes a particular object is a reliable indicator of their attitude and future behavior. The audience's favorability toward Korean culture has some expansion effects. In particular, the favorability of Korean culture, such as Korean celebrities and dramas, has led to a better image of Korea as a nation held by consumers in other countries, which in turn has led to a preference for Korean products and travel destinations (Lee, Ham, and Kim, 2015). Hallyu can be indirectly used as a promotion for Korean brands (Hong and Liu, 2009). Sports have been continuously attractive and appreciated by viewers around the world. Especially in the case of mega-sport events such as the Olympic Games, the host nation's traditions and popular culture can be positively shaped through the overall image of the country (Florek, Breitbarth, and Conejo, 2007).

1.3.3. Influence of Hallyu in the US

Popular culture has traditionally flowed from the West to the rest of the world (Schiller, 1971). American media have been especially dominant on the screens of many countries (Hoskins and Mirus, 1988). As a result, it has directly and indirectly influenced other countries' cultures. However, with the development of the internet and other emerging media, the boundaries of culture transferred through media have become blurred (Tunstall, 2008). In that regard, the spread of Hallyu through emerging media has also affected viewers across borders (Jung, 2009). Based on the above discussion, this study proposes the following research question to evaluate the impact of the Olympic Winter Games PyeongChang 2018 on Hallyu.

Research Question 1: Did the 2018 Winter Olympics affect the audience's perception of cultural soft power, involvement, favorability, and influence?

1.4. The Impact of the Olympic Winter Games PyeongChang 2018 on US and Korean Viewers

The image of a country is determined by the way people from other countries view it. A mega-sport event that can show many positive aspects of the host country to audiences around the world is an opportunity to build national identity (Gorokhov, 2015). To measure the effects of large events and the impact on other countries' perception of host countries, researchers have sought to find differences in the effects of large events according to the viewer's nationality. For example, previous studies have described the change in perceptions of China among foreigners, such as Americans and Koreans, following the 2008 Beijing Olympics (Kim, Kang, and Kim, 2014). Another study investigated the impact of the Sydney Olympic Games in four countries and found that the features used to describe Australia had a significant impact on the perceptions of other countries' citizens (Rivenburgh, Louw, and Loo, 2004). For example, the South African press portrayed Australians in a negative way, and as a result, Australia's positive image diminished there after the Games. Based on this point, the second research question is proposed as follows:

Research Question 2: Are there differences in perceptions of Korean cultural content before and after the Olympics among Koreans and Americans?

2. Method

2.1. Data Collection

To answer the research questions and assess the impact of the Olympic Winter Games PyeongChang 2018 on Hallyu, this study conducted two (pre- and post-) online panel surveys among residents of South Korea and the United States. Pre- and post-event impact assessment is a widely accepted research design to test the impact of an event (Ritchie, Shipway, and Cleeve, 2009). Survey invitations were emailed to a nationally representative group maintained by online research companies in Korea and the United States. The first wave of data was collected for a week beginning 2 weeks before the Olympics and ending a week before the opening ceremonies. For the second wave of data collection, the research team repeated the survey immediately after the Olympics ended, and it also ran for a week (February 26, 2018–March 3, 2018). In the first wave, each research panel company distributed the survey links to 2500 people. We received 1057 responses from Korea and 1012 from America. In an effort to secure at least 500 responses among the second wave participants in each country, we aimed to collect double the size of the sample. For the second wave, 798 Koreans and 517 Americans

responded by completing the same questionnaire used in the first wave. Therefore, the retention rates were 75.50% for Korean data and 51.07% for American data.

The participants in the study were residents of South Korea (the host country) and residents of the US who planned to watch (pre-Games) and who had watched (post-Games) the Olympic Games. The surveys targeted adult residents of specifically these two countries for the following reasons. First, a majority of previous Hallyu studies focus on other Asian countries, such as China, Japan, and Taiwan (Kim and Ryoo, 2007), while there has been little research on North America as a Hallyu market, but the recent success and popularity of the song “Gangnam Style” and the pop band BTS in the United States hint at the potential of Hallyu in Western countries. PSY’s “Gangnam Style” music video has been viewed over 2 billion times on YouTube, and 12 million copies of the single were sold across the globe, which is a world record (McIntyre, 2020). Second, previous studies on many mega-sport events have explored changes in the perceptions of foreigners about the host country after an event or how such an event affects the host country’s economy or community (Kasimati and Dawson, 2009). The current study is important because studies on changes in the overall cultural perception of the host country are limited.

2.2. Measures

The questionnaire was originally created in English. To adapt it for collecting data from Koreans, two native Korean speakers fluent in English translated the questionnaire from English into Korean. To verify its reliability, the Korean version was back-translated into English for comparison.

2.2.1. Screening questions

As the purpose of this study was to assess the impact of the Olympic Winter Games PyeongChang 2018, the intention to watch and having watched was the inclusion criteria applied. Before participating in the survey, potential respondents were asked, “Are you planning to watch the 2018 Winter Olympics?” for the pre-game survey, and only respondents who answered Yes were included in the sample. For the post-game survey, participants who had completed the first survey received a link asking whether they had watched the Games, and an affirmative response was the inclusion criterion for the post-game survey. In the pre- and post-surveys, all questions were the same except the screening question. Participants answered all of the items on a 7-point Likert scale with optional answers ranging from *strongly disagree* (1) to *strongly agree* (7).

2.2.2. Cultural soft power

This variable relates to a country’s ability to persuade other countries to want what it wants through cultural exchange. The authors adapted the three items included to fit the purpose of this study (Holyk, 2011). The items were: “South Korea has an appealing popular culture,” “South Korea has a rich cultural heritage,” and “South Korea is an attractive destination for tourism.” The reliability of this variable is 0.88 (K1), 0.92 (A1), 0.88 (K2), and 0.92 (A2). K1 indicates Korean data collected before the Olympics; A1 refers to US data collected before the Olympics. K2 indicates Korean data collected after the Olympic Games, and A2 means US data collected after the Olympic Games.

2.2.3. Situational involvement with Hallyu

This variable refers to the degree of short-term involvement and interest in Hallyu due to the Olympics. The study modified four items developed for previous research (Whang, Yong, and Ko, 2016). The items included: “I recognize Korean pop culture-related products,” “I have a favorable impression of Korean pop culture products,” “I recognize popular culture-related products influenced by Korean pop culture,” and “I think Korean pop culture influences people to travel to Korea.” The reliability of situational involvement for Hallyu is 0.82 (K1), 0.96 (A1), 0.81 (K2), and 0.95 (A2).

2.2.4. Enduring involvement with Hallyu (EIH)

This variable is defined as the state of ongoing interest or engagement in the Hallyu content, taking into account the original definition from previous literature (Havitz and Dimanche, 1997). This study adapted the scale established in previous literature and used the following five items to measure enduring involvement for Hallyu (Whang, Yong, and Ko, 2016). The items included: “I am interested in Korean pop culture,” “I love and enjoy Korean pop culture,” “I am a fan of Korean pop culture,” “I am more drawn to Korean pop culture than US pop culture,” and “I feel close to Korean pop culture.” The reliability of this variable was 0.94 (K1), 0.97 (A1), 0.94 (K2), and 0.97 (A2).

2.2.5. Likeability of Hallyu

The preference for Hallyu was measured with modified items based on previous literature (Lee, Ham, and Kim, 2015). A total of 12 items measuring the likeability of various Hallyu types (e.g., drama, entertainers, music, food, and movies) were used to measure the variable. The reliability of this variable was 0.93 (K1), 0.97 (A1), 0.94 (K2), and 0.97 (A2).

2.2.6. The influence of Hallyu in the United States

This variable measures the respondents' perception of the level of influence Hallyu has in the United States using these items: "Korean films have a positive impact on US popular culture" and "Korean pop culture has a positive effect on American pop culture." The reliability was 0.94 (K1), 0.96 (A1), 0.93 (K2), and 0.96 (A2).

All variables used in this study are above the acceptable level of reliability. Each variable was measured with multiple items. A composite measure was created by summing the items for each variable and was used for further analyses. Independent sample t-tests were conducted to answer the two research questions to determine changes in responses before and after the Games.

2.3. Demographic Profiles

The study included several demographic questions on gender, age, education, and annual household income. As shown in Table 1, the composition of survey participants in the two countries varies. In the first survey, the gender composition of respondents in South Korea and the US was similar (approximately 49% men and 51% women for both Koreans and Americans). In the second survey after the Olympics, men and women participated evenly in the Korean group, but more women (61%) participated in the US group. The average age of Korean respondents was slightly younger than that of US respondents for both pre- and post-surveys ($M = 38.54$ [K1], $M = 40.87$ [K2], $M = 40.38$ [A1], and $M = 43.18$ [A2]). Respondents with a college degree accounted for the largest portion of both groups, with annual household incomes ranging from \$50,000 to \$75,000 for both countries across both surveys. American participants were asked about their ethnicity, and a majority of them were White.

Table 1. Demographic profiles.

	Korea Wave 1 (K1) n, %	U.S. Wave 1 (A1) n, %	Korea Wave 2 (K2) n, %	U.S. Wave 2 (A2) n, %
Gender				
Male	516, 48.8	500, 49.4	401, 50.3	201, 38.9
Female	541, 51.2	512, 50.6	397, 49.7	316, 61.1
Education level				
(1) High school diploma	164, 15.5	328, 32.4	130, 16.3	173, 33.5
(2) Some college	133, 12.6	175, 17.3	72, 9.0	66, 12.8
(3) College degree	607, 57.4	354, 35.0	493, 61.8	182, 35.2
(4) Graduate degree	121, 11.4	125, 12.4	92, 11.5	73, 14.1
(5) None of the above	32, 3.0	29, 2.9	11, 1.4	23, 4.4
Income				
<\$10 k	46, 4.3	75, 7.4	28, 3.5	44, 8.5
\$10 k-<\$20 k	77, 7.3	101, 10.0	56, 7.0	41, 7.9
\$20 k-<\$30 k	139, 13.1	104, 10.3	90, 11.3	51, 9.9
\$30 k-<\$40 k	163, 15.4	111, 11.0	126, 15.8	50, 9.7
\$40 k-<\$50 k	176, 16.7	91, 9.0	139, 17.4	45, 8.7
\$50 k-<\$75 k	264, 25.0	181, 17.9	206, 25.8	107, 20.7
\$75 k-<\$100 k	139, 13.1	128, 12.6	106, 13.3	60, 11.6
\$100-<\$150 k	44, 4.2	120, 11.8	38, 4.8	55, 10.6
\$150 or more	9, 0.9	60, 5.9	9, 1.1	38, 7.4
Prefer not to answer	--	41, 4.1	---	26, 5.0
Ethnicity				
White		767, 75.8		408, 78.9
Black or African American		126, 12.5		56, 10.8
Asian or Pacific Islander		59, 5.8		28, 5.4
Mixed race		25, 2.5		8, 1.5
Native American		3, 0.3		2, 0.4
Others		32, 3.2		15, 2.9
Age	M=38.54 (19-58)	M=40.87 (18-79)	M=40.38 (20-59)	M=43.18 (19-62)

3. Results

3.1. The Impact of Olympic Winter Games PyeongChang 2018 on Hallyu

The first research question addressed changes in the soft power of Hallyu, situational and enduring Hallyu involvement, likeability of Hallyu, and the influence of Hallyu in the United States as perceived by Koreans and Americans before and after the 2018 Winter Olympics. Testing homogeneity of variance showed that 10 of 48 analyses returned significant results. To control the influence of demographic variables, a series of one-way ANCOVA tests was conducted to determine a statistically significant difference between pre- and post-Olympics on the dependent variables, controlling for demographic variables (i.e., gender, age, income, and educational level). Table 2 shows the influence of PyeongChang Olympics on Hallyu.

All the mean post-Games scores were higher than pre-Games scores across both countries' samples, but not all differences were statistically significant. The effects of the Games on Hallyu were higher in the Korean sample than in the US. Variables that revealed significant differences before and after the Olympics among the Korean participants included "cultural soft power" ($M = 4.93$ [pre-Olympics], $M = 5.02$ [post-Olympics] [$F = 14.652$ (1, 1853), $P < 0.05$]), and "the influence of Hallyu in the US" ($M = 4.37$ [pre-Olympics], $M = 4.47$ [post-Olympics] [$F = 3.670$ (1, 1853), $P < 0.01$]). For respondents in the United States, a statistically significant change was observed for "EIH" ($M = 2.90$ [before the Olympics], $M = 3.00$ [after the Olympics] [$F = 5.489$ (1, 1497), $P < 0.05$]).

3.2. Perceptual Differences between Koreans and Americans

The second research question sought to address whether Koreans and Americans differ in terms of the variables tested in this study. Table 3 shows the results of independent sample t-tests conducted to compare the responses of Koreans and Americans collected before and after the Olympics. The mean scores of all variables for Americans and Koreans showed significant differences. The mean scores of Koreans were significantly higher than those of Americans for all variables measured. More specifically, "EIH" showed the greatest differences ($M = 4.83$ for Koreans and $M = 2.90$ for Americans [$F = 349.940$ (2048), $P < 0.05$]) while "the influence of Hallyu" demonstrated the smallest differences between the groups

Table 2. Influence of PyeongChang Olympics on Hallyu.

Variable name	Korea		ANCOVA F (df1, df2), p	US		ANCOVA F (df), P
	Pre-Olympics (n=1057) M (SD)	Post-Olympics (n=798) M (SD)		Pre-Olympics (n=1012) M (SD)	Post-Olympics (n=517)	
Cultural soft power	4.93 (1.15)	5.02 (1.02)	14.652 (1, 1853), <0.05	4.15 (1.69)	4.27 (1.72)	n.s.
Situational involvement	4.68 (1.01)	4.84 (.93)	n.s.	3.26 (1.83)	3.30 (1.91)	n.s.
Enduring involvement	4.83 (1.12)	4.95 (1.07)	n.s.	2.90 (1.86)	3.00 (1.97)	5.489 (1, 1497), <0.05
Likeability of Hallyu	4.85 (0.99)	4.87 (0.94)	n.s.	3.67 (1.65)	3.72 (1.73)	n.s.
Influence of Hallyu on U.S.	4.37 (1.06)	4.47 (0.98)	3.670 (1, 1853), <.01	3.83 (1.68)	3.95 (1.68)	n.s.

Table 3. Perceptual differences between Koreans and Americans.

Variable name	Pre-Olympics		t-test F (df), p	Post-Olympics		t-test F (df), P
	Korea (n=1057) M (SD)	US (n=1012) M (SD)		Korea (n=798)	US (n=7517)	
Cultural soft power	4.93 (1.15)	4.15 (1.69)	147.119 (2066), <0.05	5.02 (1.02)	4.27 (1.72)	179.707 (1313), <0.05
Situational involvement	4.68 (1.00)	3.26 (1.83)	849.624 (2066), <0.05	4.85 (0.93)	3.30 (1.91)	458.770 (1313), <0.05
Enduring involvement	4.83 (1.12)	2.90 (1.86)	349.940 (2048), <0.05	4.95 (1.07)	3.00 (1.97)	387.540 (1305), <0.05
Likeability of Hallyu	4.85 (0.99)	3.67 (1.65)	266.355 (2029), <0.05	4.874 (0.936)	3.72 (1.73)	255.458 (1293), <0.05
Influence of Hallyu on U.S.	4.37 (1.06)	3.83 (1.68)	203.669 (2056), <0.05	4.469 (0.983)	3.95 (1.68)	138.102 (1308), <0.05

($M = 4.37$ for Koreans and $M = 3.83$ for Americans [$F = 203.669$ (2056), $P < 0.05$]). The post-Games data displayed the same pattern. In other words, Koreans rated all measured variables much higher than Americans, and these differences were statistically significant. These results suggest that Koreans perceived the influence of Hallyu from the PyeongChang Winter Olympics more positively than Americans.

4. Discussion

This study was designed to achieve two purposes: (1) To understand the impact of the PyeongChang Winter Olympic Games on Hallyu and (2) to examine perceptual differences between Koreans and Americans in terms of Hallyu. These goals were fulfilled by conducting two surveys, one before and one after watching the Olympics, in the two countries, South Korea and the United States. In short, Koreans perceived Hallyu more positively than Americans as a result of the Olympic Games. This study has several meaningful findings as follows.

First, the PyeongChang Winter Olympic Games brought synergy to Hallyu. When comparing viewers' perceptual differences before and after the Olympics, all items – cultural soft power, situational involvement, enduring involvement, likeability of Hallyu, and the influence of Hallyu in the United States – were enhanced after the Games. Although three of the five items in the Korean survey and four of the five items in the US survey were not statistically significant, the cultural recognition of Hallyu after the Olympics was higher than the pre-Olympics level. This indicates that the Games had a synergy effect on Hallyu. This finding expands the literature on the influence of mega-sport events in regard to host countries' cultural features and supports previous findings suggesting that the Olympic Games offer an opportunity to build and maintain national identity among global citizens (Havitz and Dimanche, 1997). The statistical analysis indicated that the Olympics significantly impacted Koreans between pre- and post-Olympics, in terms of cultural soft power and their perceived influence of Hallyu in the United States; it is worth noting that the margin of difference was not large. One of the explanations for this phenomenon may be the design of the study. This study did not consider participants' previous attitudes or perceptions toward the Olympics. Studies have indicated that the citizens of countries who benefit from hosting the Games, either directly through tourism or indirectly, have a tendency to view positively the impact of mega sporting events (Fredline, 2004). Future studies should control pre-existing individual factors that may influence the results to gain more robust results.

Second, the effects on the host country of the Olympic Games were reflected in Hallyu. The statistically significant change in levels of cultural soft power and influence of Hallyu on Americans that was perceived by Koreans from the PyeongChang Winter Olympic Games may represent how Koreans feel about Hallyu. It is possible that Koreans are proud of Hallyu and their culture, and as a result, the perceived influence of Hallyu was higher among Koreans than among Americans. In particular, positive results in the perceived influence of Hallyu in the United States can be interpreted as the confidence Koreans have in Hallyu being circulated successfully in the US market as a result of the PyeongChang Winter Olympic Games. Reflecting the effects of hosting the PyeongChang Winter Olympic Games on Hallyu, it can be said that policy related to Hallyu can be managed based on the cycle of creation-growth-peak-decline.

Third, EIH showed a statistically significant change before and after the PyeongChang Winter Olympics among Americans. Enduring involvement is a long-term interest in Korean pop culture, rather than short-term enjoyment (Havitz and Dimanche, 1997). The 2018 Olympic Games were held not only in the pure sports context but also under the shadow of the threat of North Korea's nuclear development and missile launches, which could have produced a fear factor for Americans. The theme of the PyeongChang Olympic Games was the global harmony of communication and peace through the history and culture of Korea. For Americans who were able to see peaceful cultural messages throughout the Olympics, including the unified Korean ice hockey team, the long-term relevance of Korea's popular culture may have played a role beyond a short-term awareness of Korean culture. In other words, rather than directly associating the mega-sport event of the PyeongChang Winter Olympics with Hallyu, Americans may associate it with complex political, diplomatic, and military issues and consider fundamental aspects of the peaceful culture of Korea.

Fourth, this study expanded the horizons of Hallyu research using an approach that has not been used in previous research – asking Korean and American viewers about their perceptual changes before and after a mega-sport event. The results of this study suggest that the current trends of Hallyu can penetrate countries of the Organization for Economic Co-operation and Development beyond the Asian countries (Japan, China, and the Middle East) and Africa that have been previously studied.

Last, this study provided a research topic – cultural aspects of the host country – on international mega-sport events such as the PyeongChang Winter Olympic Games. In this study, the specific effect regarding the cultural aspects of a hosting country was examined by comparing changes in the perceptions of viewers in target countries before and after the

Games. This can contribute meaningfully to the literature and suggests a comprehensive view that mega-sports events are a good opportunity to enhance the national image.

4.1. Limitations

Certain shortcomings should be noted in this study. First, although the participants' evaluations of all variables were more positive after the Olympics than before, the changes in some variables were statistically insignificant. The short time difference between surveys (before and after the Games) could be a reason. While the first survey was completed before the Olympics, at the time of the first survey, media coverage about Korea in light of the upcoming Olympics was being widely disseminated. Future scholars might consider completing the first data collection at least 100 days before the Olympics to limit the potential influence of news coverage related to the Olympics and the host city. This could improve data accuracy regarding changes in perception. Second, this study did not measure the perceptions of the participants who did not watch the Games. To evaluate more accurately the effect of the Olympics, researchers should consider evaluating the differences between changes in a control group who did not watch the Games and in a study group who did.

5. Conclusions

This study examined the effects of the Olympic Winter Games PyeongChang 2018 on the perceptions of the host country's citizens and of Americans with regard to the "Korean Wave" or Hallyu. The findings support the fact that the Olympics not only played a role as a cultural Olympic Games but also played a major role in the ripple effect of Hallyu throughout the United States and Korea. The authors hope that this study opens doors to evaluating the diverse effects of the Olympics in the hosting country and other countries.

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Conflicts of Interest

No conflicts of interest were reported by the authors.

Authors' Contributions

Introduction draft: Chan Souk Kim. Literature Review draft: Jeyoung Oh. Method, data analysis, results, discussion, and conclusion: Eyun-Jung Ki. Revised the manuscript: Eyun-Jung Ki, Jeyoung, and Chan Souk Kim. Contributed to tools/materials/data collection: Eyun-Jung Ki, Jeyoung, and Chan Souk Kim.

Ethical Approval

Overall study design, questionnaires, and consent processes were reviewed and approved by the IRB of the University of Alabama.

Availability of Supporting Data

None.

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