Impact of the Special Olympics World Games on the Attitudes of Youth in China

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I. INTRODUCTION

Over the past several years China has made substantial progress in recognizing the rights and needs of its citizens with disabilities, particularly with the "Law of the People's Republic of China on the Protection of Disabled Persons" (Decree No. 36, 1991) and the increased presence of the China Disabled Persons Federation (CDPF). Most recently in 2003, China and fellow members of the UN Economic and Social Commission for Asia and the Pacific (ESCAP) region adopted the "Beijing Declaration on Elaboration of an International Convention to Promote and Protect the Rights and Dignity of Persons with Disabilities," a document which recognizes that persons with disabilities have the same rights and fundamental freedoms as any other person, including full participation in society. China's educational practices have also been evolving rapidly, which demonstrates its commitment to enhancing the independence and productivity of its citizens with disabilities. The Compulsory Education Law passed in 1986 for example, requires all children with and without disabilities to receive 9 years of schooling. It is interesting to point out that during the time this law was passed, only half of school-aged students with disabilities were attending school. In addition, China has demonstrated an openness and willingness to learn about and consider contemporary Special Education practices found in Western cultures such as the inclusion of students with intellectual disabilities through the "Learning in the Regular Classroom" initiative.

Not withstanding these legislative acts and political initiatives in China today, there are challenges to successfully integrating people with disabilities into society, including schools. Most often it is the negative attitudes of the public that create a major barrier to inclusion and acceptance. As part of its goal as a community development organization, Special Olympics International has made changing public attitudes a major priority in their efforts to improve the lives of people with intellectual disabilities throughout the world. To that end, Special Olympics International and the University of Massachusetts Boston have been engaged in a global effort to bring attention to the attitudinal barriers that impede the inclusion of individuals with intellectual disabilities in the community, workplace and schools worldwide. Many of these studies to date have documented the attitudes of adults toward individuals with intellectual disabilities, yet the attitudes of youth have generally been overlooked. It is important to understand the attitudes and beliefs of youth, as they represent the next generation who will play a critical role in creating a world where people with intellectual disabilities are accepted and included in all aspects of society.

To better understand the attitudes of youth toward their peers with intellectual disabilities, Special Olympics International. and UMass Boston, in collaboration with the Shanghai Academy of Social Sciences (SASS), carried out a national survey with over 4,000 youth in China. This study was one of the first to document Chinese youths' perceptions of their peers with intellectual disabilities as well as their beliefs and expectations about the inclusion of students with intellectual disabilities in regular schools. One of the most important findings of this national survey is that the results followed the same trends found among youth in other countries such as the United States and Japan. Overall, youth in China report limited contact with their peers with intellectual disabilities, underestimate the competence of students with intellectual disabilities and are hesitant to interact with these students socially. Furthermore, similar to youth in other countries, while youth in China are generally supportive of the inclusion of students with

intellectual disabilities in their non-academic classes, such as gym, they are less supportive of inclusion in academic classes.

While the results from China indicate that youth generally hold negative attitudes toward their peers with intellectual disabilities, there is evidence to suggest that attitudes can change. Research carried out in conjunction with the 2003 World Games in Ireland and the 2005 Games in Nagano, Japan examined the role Special Olympics plays in changing attitudes. Specifically, Special Olympics was able to document that the World Games events challenge stereotypes of inability and raise awareness as to the broad ranging capabilities of people with intellectual disabilities. In fact those youth from Japan who had the opportunity to be involved in the Games as volunteers or spectators reported that the World Games gave them a better appreciation of the true abilities of persons with intellectual disabilities. However, this suggestive evidence regarding the positive impacts of Special Olympics involvement on youth attitudes is based only on limited number of youth providing anecdotal accounts of their experience in the World Games.

Therefore, the 2007 Special Olympics World Games held in Shanghai provided a unique opportunity to revisit the attitudes of youth in China as well as to further document and explore the value of the World Games in fostering positive youth attitudes. To do so, Special Olympics International and UMass Boston in collaboration with East China Normal University, surveyed a group of youth from three separate cities in China –Beijing, Chongqing, and the host city Shanghai – in the months before the World Games and then immediately following the Games to document how attitudes can change as a result of awareness and involvement with Special Olympics. It was strongly believed, given what is known about the gradient effect with adults (that greater involvement in Special Olympics is associated with more positive attitudes), that the World Games would have a powerful impact on the attitudes of youth, in particular for those youth with the opportunity to be directly involved in the Games.

II. METHODS

A. Participants

A sample of middle school students from Shanghai (n = 353), Beijing (n = 214) and Chongqing (n = 222) participated in the survey. Youth were chosen from Shanghai because it was expected that youth in the host city would have the greatest opportunity to become directly involved in Games activities (attending events, volunteering, etc.). Because Beijing is the capital of China, it was expected that youth living here would be exposed to information regarding the Games but have less opportunity to become personally involved. Finally, Chongqing was selected to represent those western cities farthest from Shanghai, where opportunities for personal involvement were expected to be virtually nonexistent and where information about the Games, and public awareness, would be more limited.

The participating students were selected from five middle schools (3 in Shanghai, 1 in Beijing, and 1 in Chongqing) with the assistance of East China Normal University, and the Chongqing Normal University and Institute of Educational Science China. The selected schools were those

with whom these institutes had previous relationships and which represented average-level schools in these cities. In total, 23 6th grade classes were selected from these schools to participate in the survey.

B. Measures

To assess youth's attitudes toward individuals with intellectual disabilities* and document their experiences in the Special Olympics World Games, the Multinational Youth Attitude Survey was used (Siperstein, Parker, Norins Bardon, & Widaman, 2007). This survey instrument, which is made up of several scales, has successfully captured the breadth of youth attitudes, including their present and prior contact with and exposure to individuals with intellectual disabilities, their perceptions of students with intellectual disabilities, their beliefs about inclusion and their willingness to interact with students with intellectual disabilities. These scales, which are subsequently described in greater detail, are as follows:

- Perceived Capabilities Scale.
- Behavioral Intentions Scale.
- Beliefs about Inclusion Scale.

Perceived Capabilities Scale. The first attitude scale consists of 16 questions that are used to assess youths' perceptions of the capabilities of students with intellectual disabilities. The scale includes a list of items addressing a number of skills common to adolescents' everyday living. Each item begins with the stem, "Do you think most middle school students with intellectual disabilities can …". Sample items include: talk with students without intellectual disabilities about common interests, learn the same academic subjects as students without intellectual disabilities, understand the rules of a competitive sports game, use public transportation without adult supervision, handle their own money, etc. For each of the 16 items, students answer on a dichotomous Yes/No scale (1 = Yes, 0 = No). Total score can range between 0 and 16. The coefficient alpha index of internal consistency reliability is .77.

Behavioral Intentions Scale. The second attitude scale consists of two sub-scales (Behavioral Intentions-School; Behavioral Intentions-Nonschool) of six questions each to assess youths' willingness to interact with a peer with an intellectual disability. For each question, youth are asked if they would do a certain activity with a peer with an intellectual disability on a 4- point scale: no (0), probably no (1), probably yes (2), yes (3). Six of the items assess activities at school. Sample school-related items are *"Choose a student with intellectual disabilities to be on your team in a gym class"* and *"Lend a student with intellectual disabilities a pencil or a pen"*. The remaining six items assess activities in non-school settings. Sample non-school-related items are *"Talk about personal things with the student with an intellectual disability"* and *"Invite a student with intellectual disabilities to your home"*. Total scores across the six items on each subscale can range from 0 to 18. The coefficient alpha index of internal consistency reliability is

* On the survey instrument administered to youth the term "Zhi Zhang" or in Chinese "智障", was used meaning "mental retardation". We used this term because it was most clear for youth in China. In this report however, the term intellectual disabilities is used throughout.

.79 for the Behavioral Intentions-School and .91 for the Behavioral Intentions-Nonschool subscales.

Beliefs about Inclusion Scale. The third scale consists of two sub-scales (Academic Inclusion; Nonacademic Inclusion). Academic Inclusion consists of three questions to assess youths' beliefs about the inclusion of students with intellectual disabilities in their academic classes. In the first question, youth are asked to indicate whether most middle school students with intellectual disabilities could take part in a math class with students who do not have an intellectual disability. In the subsequent questions, youth are asked about participation in English class and Chinese class. Nonacademic Inclusion consists of two questions to assess beliefs about the inclusion of students with intellectual disabilities in two nonacademic classes: music and gym. For each question, youth can answer simply No or Yes (1 = Yes, 0 = No). In Academic Inclusion, the total score across the three items can range from 0 to 3. For Non-Academic Inclusion, the total score across the two items can range from 0 to 2. The coefficient alpha for the Academic Inclusion scale is .75, while the coefficient alpha for the Nonacademic Inclusion scale is .38.

In addition, youth are also asked about their Contact with persons with intellectual disabilities as well as their Exposure to information about intellectual disabilities. For Contact, youth are asked if they have a family member with an intellectual disability, a friend with an intellectual disability, if they have a current classmate or schoolmate with an intellectual disability, or if they had a schoolmate with an intellectual disability previously in elementary school. For each of the seven sub-questions, youth answer on a dichotomous Yes/No scale, (1=Yes, 0=No). For Exposure, youth are asked questions such as: *"Have you ever read about intellectual disabilities in a book, comic book, newspaper, or magazine?"*, *"Have you ever watched a TV show that was about intellectual disabilities?"*, and *"Have you ever heard about intellectual disabilities from your parents or other adults?"*. For each of the eight Exposure questions, youth answer on a dichotomous Yes/No scale, (1 = Yes, 0 = No). Total scores across the eight items can range between 0 and 8. The coefficient alpha index of internal consistency reliability is .56 for the total score across the Exposure items.

Finally, before the Games youth were asked about their knowledge of, and involvement with, Special Olympics. Questions included, for example: "Have you ever heard about Special Olympics?" and "Have you heard about the Special Olympics Summer World Games being held in Shanghai". After the Games were held youth were asked about their' awareness of the Special Olympics Summer World Games in Shanghai and their involvement in the Games. Sample questions include, "Did you see or read anything about the Special Olympics World Games on TV or internet: Opening/Closing Ceremonies, competition, stories about athletes?" and "Were you involved in the Games (e.g. volunteering, attending an event, etc.)." Each item is answered on a dichotomous Yes/No scale, (1 = Yes, 0 = No).

C. Procedures

The Multinational Youth Attitude Survey was administered to the students on two different times: Time 1 in May/June 2007 (before the Special Olympics World Games), and then Time 2 in November 2007 (after the Special Olympics World Games). Questionnaires were administered during school hours, to whole classrooms by two trained administrators for both Time 1 –Before

the Games and Time 2 – After the Games in Beijing, Chongqing, and Shanghai. The project coordinator and survey administrators worked with the school principals to schedule and finalize the data collection procedures. For each survey administration project staff followed a scripted protocol where they introduced themselves and explained the purpose of the survey. In addition, all students were assured that their responses were voluntary and confidential, and that they may decline to answer any question or participate at any time. All questionnaire instructions and items were read aloud to the participating students. Students were also provided written instructions on the first page of the survey questionnaire.

The Time 1 survey included all scales of the Youth Attitudes Survey as well as questions about youths' Contact with people with intellectual disabilities, their Exposure to information about intellectual disabilities and their awareness of Special Olympics. The Time 2 survey included all scales of the Youth Attitudes Survey, as well as questions addressing youth's involvement with the Special Olympics World Games.

III. RESULTS

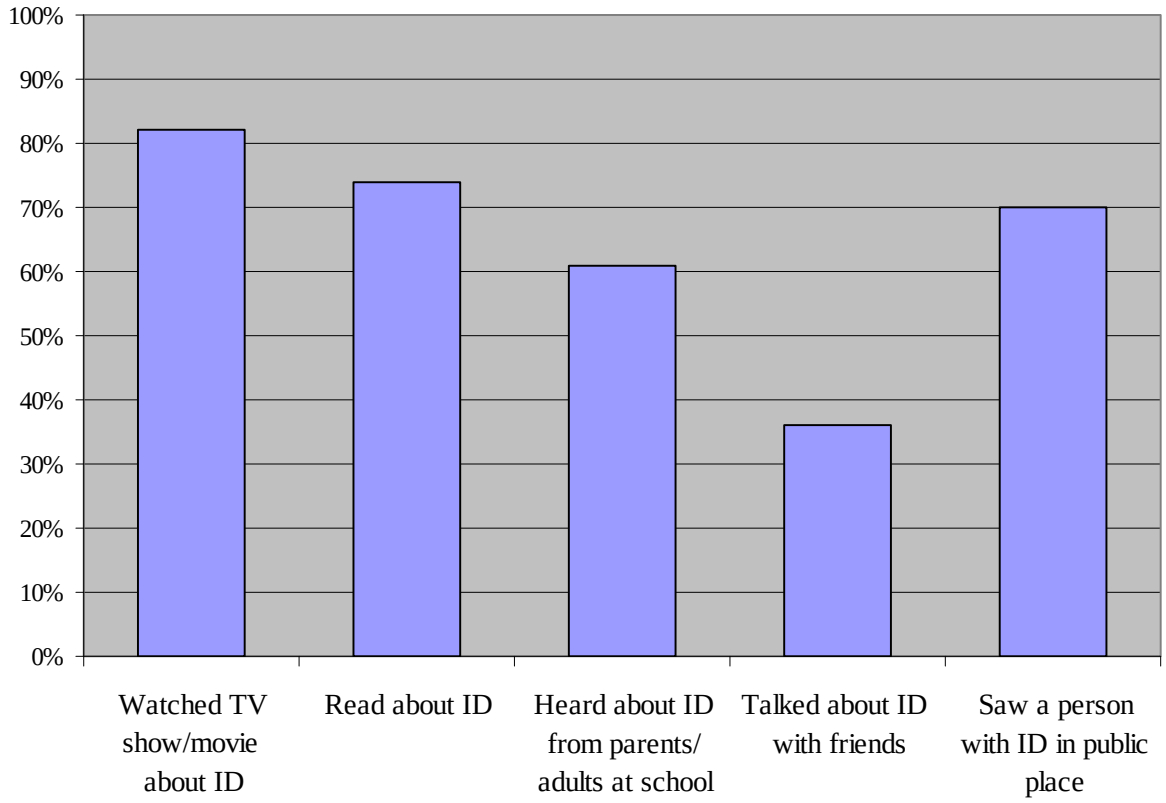
In the following section the attitudes of youth toward students with intellectual disabilities will be explored through the different scales of the Youth Attitudes Survey including: 1) youth's perceptions of the competence of students with intellectual disabilities (Perceived Capabilities Scale), 2) youth's willingness to interact with students with intellectual disabilities both in and out of school (Behavioral Intentions Scale - School and Nonschool), and 3) youth's beliefs about the inclusion of students with intellectual disabilities in both academic and nonacademic classes (Beliefs about Inclusion Scale). To best present the findings, results from each scale will be presented in which the responses of youth in Time 1 and Time 2 will be compared and contrasted. In addition, the attitudes of those youth from Shanghai that were directly involved in the Games will be explored separately and compared and contrasted with those youth from Shanghai not involved in the Games. Finally, the lasting impressions of the Special Olympics World Games on youth from Shanghai will be discussed.

As a first step to examining the effects of the World Games on youth attitudes, it is important to document their exposure to information about intellectual disabilities, their prior contact with people with intellectual disabilities and their knowledge of and experiences with Special Olympics.

A. Youths' Exposure to and Contact with People with Intellectual Disabilities

In Beijing, Chongqing, and Shanghai almost all youth reported having exposure intellectual disabilities through the media. Overall, most youth (82%) had watched a television program or movie about people with intellectual disabilities, or read about intellectual disabilities (74%) in a magazine or book (see Figure 1). In addition, almost two thirds of youth across the three cities (61%) had talked to a parent or an adult at school about intellectual disabilities.

Figure 1: Chinese youths' exposure to people with intellectual disabilities.



Although many youth reported having been exposed to information about intellectual disabilities, very few youth have actually had personal contact with a person with an intellectual disability either in or out of school. In fact, across the three cities only 37% of youth reported that they knew a person with an intellectual disability (see Table 1). Most importantly, very few youth reported having a current classmate (7%) or schoolmate (13%) with an intellectual disability, or having had a student with an intellectual disability in their elementary school (10%).

Overall, youth have been exposed to people with intellectual disabilities through the media but have had little or no contact with fellow students with intellectual disabilities in their elementary and middle schools.

Table 1. Chinese youth's actual contact with students with intellectual disabilities.

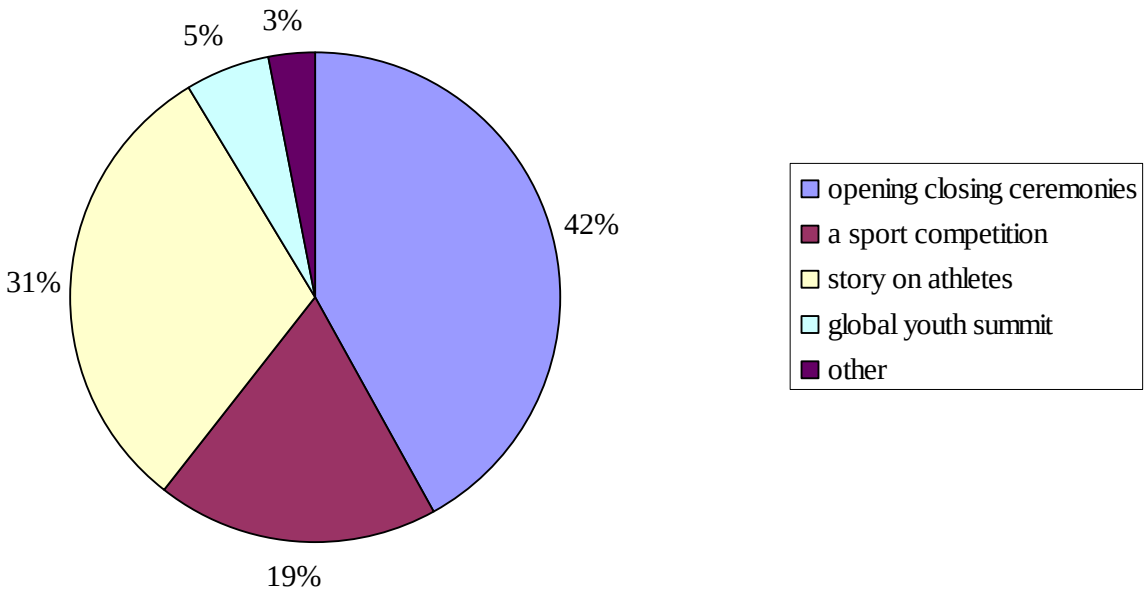
Type of Contact	Percentage of youth
a schoolmate in middle school	13%
a classmate in middle school	7%
a past classmate in elementary school	10%
family member	1%

B. Youths' Awareness of Special Olympics

An important aspect of this study was to understand what youth know about Special Olympics at Time 1 – Before the Games, and more importantly, at Time 2 – After the Games. Before the Special Olympics World Games, youth in China had a limited understanding of Special Olympics although there was some variation by city. For example, almost all youth in the host city of Shanghai (91%) had heard of Special Olympics, however only a little more than half of the youth in Beijing (58%) and Chongqing (57%) shared this knowledge. It is important to note that for some of the youth who had heard of Special Olympics, there was misunderstanding about the constituency of Special Olympics. While there was a general recognition that Special Olympics provided sports opportunities for people with disabilities, some youth did not know it was for people with intellectual disabilities. For example, a third of youth in Chongqing (33%) believed Special Olympics served individuals with disabilities more generally, not intellectual disabilities. In addition, while well over half of the youth in Shanghai (77%) were aware that the 2007 World Games would be held in Shanghai, far fewer youth in Beijing (50%) and Chongqing (29%) shared this awareness.

After the Special Olympics World Games, it was not surprising that almost all of the youth in Shanghai (97%) had seen or read something about the Special Olympics World Games. In addition, in Shanghai over half of the youth had information provided to them about the Games in school. In Chongqing, where there was a limited awareness of Special Olympics before the Games, over three-quarters of the youth surveyed (78%) reported hearing about or reading something about the World Games. Overall almost half of the youth across all three cities who had heard about the World Games reported that they saw or read about the Opening or Closing Ceremonies, which was nationally televised throughout the duration of the Games (see Figure 2). In addition, almost half of the youth from Shanghai (48%) and Chongqing (40%) reported that they saw something on television or read something specifically about participating Special Olympics athletes. In Shanghai there were also some youth (16%) who had the opportunity to be personally involved in the Games as spectators or volunteers. Not surprisingly, very few youth from Chongqing or Beijing actually had a similar opportunity for such personal involvement.

Figure 2: Types of stories that youth read or heard about concerning the Special Olympics World Games.



C. Impact of the Special Olympics World Games on Youth Attitudes

With an understanding of youths' exposure to information about intellectual disabilities, contact with students with intellectual disabilities, and their awareness of Special Olympics and the World Games, the next step was to directly assess the degree to which the Special Olympics World Games in Shanghai changed youth attitudes. To do this, a series of analyses of variance (ANOVAs) were carried out involving two main variables: City (Beijing, Chongqing, Shanghai) and Time (Time 1 – Before the Games, Time 2 – After the Games). These 3 x 2 ANOVAs were conducted using the different scales of the Youth Attitudes Survey, specifically, the Perceived Capabilities Scale, Behavioral Intentions Scale, and the Beliefs about Inclusion Scale. There are three possible results that can occur when using analyses of variance, a significant main effect for "Time", a significant main effect for "City", and a significant interaction between "Time and City". A significant main effect for Time indicates that youth attitudes improved from Time 1 - Before the Games to Time 2 - After the Games. A significant main effect for City indicates that youth attitudes are different across the three cities. Finally, a significant interaction between Time and City indicates that the improvement in youth attitudes from Time 1 to Time 2 is greater in one city than another. In the following section the results will be presented for each individual scale.

1. **Perceived Capabilities Scale:** Youth perceptions of the capabilities of students with intellectual disabilities

At Time 1 the mean on the Perceived Capabilities scale was 9.17, just above the midpoint of 8, suggesting that youth had mixed perceptions of the capabilities of students with intellectual disabilities. This is reflected in the variation among youth as to what skills students with intellectual disabilities are capable of. For example, almost all youth across the three cities (70%)

felt that students with intellectual disabilities are capable of more simple tasks such as engaging in physical activity. In addition, there was agreement among youth that students with intellectual disabilities could be responsible for choosing their own clothes (78%) as well as household chores (70%). However, youth in the three cities generally did not believe that students with ID are capable of performing more complex skills such as acting appropriately when introduced to strangers (37%), handling money (41%), or using technical gadgets like a cell phone (43%).

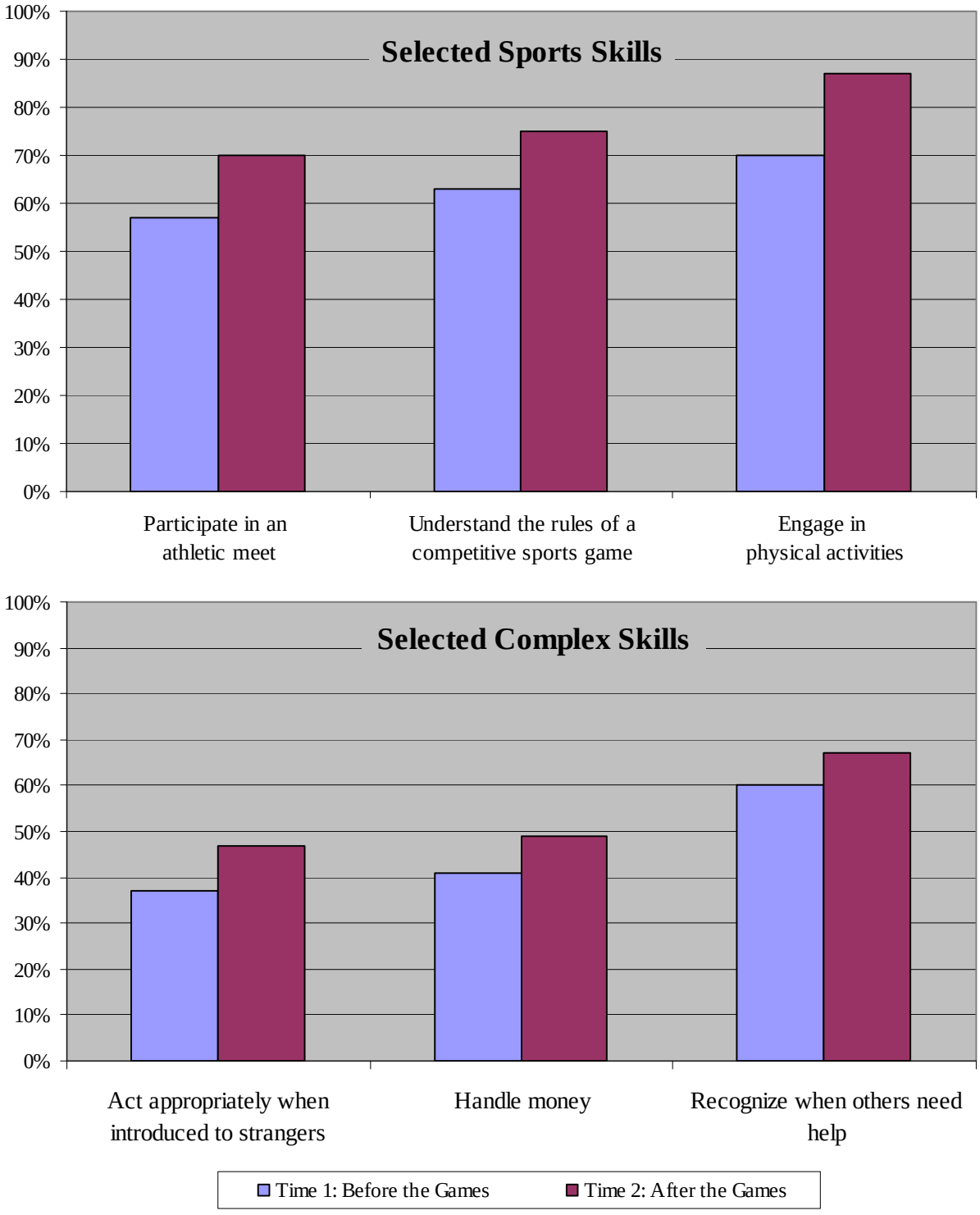
As expected, there was a significant main effect for Time which showed that youth became more positive in their perceptions of the capabilities of students with intellectual disabilities from Time 1 to Time 2 ($F(1, 1486) = 33.71$, $p < .001$) (see Table 2). It is interesting to note, given Special Olympics is a sports organization, that the most significant increases in youths' perceptions at Time 2 – After the Games were with sports related items (see Figure 3). For example, youth's perceptions of the ability of students with intellectual disabilities to engage in physical activity, understand the rules of a sports game, and participate in an athletic meet all improved from Time 1 to Time 2. Youth were also more positive in Time 2 regarding their perceptions of the ability of students with intellectual disabilities to perform selected complex skills such as act appropriately when introduced to strangers, handle money, and recognize when someone needs help (see Figure 3). In addition to the significant main effect for Time, there was also a significant main effect for City. This showed that youth from Shanghai were, overall, more positive in their perceptions of the capabilities of students with intellectual disabilities than the youth from Beijing or Chongqing ($F(2, 1486) = 6.05$, $p < .001$).

Most importantly, there was a significant interaction between Time and City. This indicated that youth in Shanghai and Chongqing showed the most improvement in their perceptions of competence from Time 1 to Time 2 while youth in Beijing showed the least improvement ($F(2, 1486) = 4.30$, $p < .004$). In fact, youth in Beijing showed almost no improvement from Time 1 to Time 2.

Table 2. Changes in youths' perceptions of the competence of students with intellectual disabilities from Time 1 to Time 2

City	Time 1 Perceived Capabilities M(*SD*)	Time 2 Perceived Capabilities M(*SD*)
Shanghai	9.52 (*3.47*)	10.80 (*3.33*)
Chongqing	8.54 (*3.43*)	10.38 (*3.17*)
Beijing	9.33 (*3.76*)	9.59(*3.92*)

Figure 3: Youth perceptions of the capabilities of students with intellectual disabilities at Time 1 and Time 2



2. Behavioral Intentions Scale: Youth's willingness to interact with students with intellectual disabilities

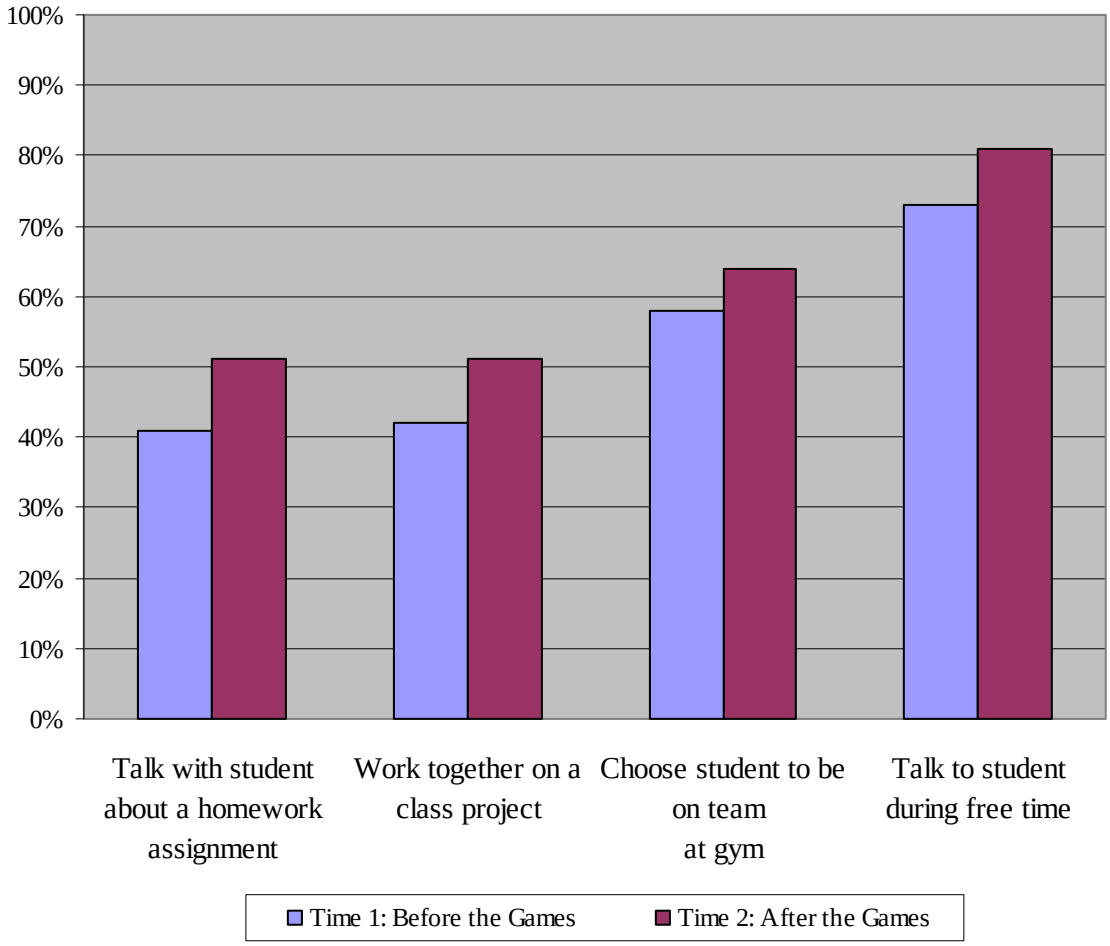
Behavioral Intentions: *School*: At Time 1 - Before the Games the mean on the Behavioral Intentions - School scale was 11.22, above the midpoint of 9, suggesting that youth to some extent were willing to interact with students with intellectual disabilities in school activities. In fact, there was a clear delineation as to the types of activities youth would be willing to do in school with a student with an intellectual disability. For example, before the Games almost all youth across the three cities reported that they would engage in perfunctory interactions with a student with an intellectual disability such as lending a pencil or stationary to a student with intellectual disabilities (93%) or saying hello (85%). Fewer youth however were willing to interact with these students in activities that could affect their academics, or that were more personal in nature. For example, less than half of the youth (42%) would be willing to work with a student with intellectual disabilities on a class assignment or talk with them about a homework assignment (41%).

Similar to their perceptions of the capabilities of students with intellectual disabilities, all youth showed significant improvement in their willingness to interact with a student with an intellectual disability in school from Time 1 to Time 2 ($F(1, 1461) = 18.39$, $p < .001$) (see Table 3). Specifically, youth across the three cities were more willing to interact with a student with an intellectual disability in each of the six school-related activities. Significant improvement was even evident in regard to academics, such as working on class project together or talking with a student about a homework assignment (see Figure 4). In addition to the main effect for Time, there was a main effect for City such that overall, youth in Shanghai were more positive in their willingness to socially interact with students with intellectual disabilities than youth in Chongqing and Beijing ($F(2, 1461) = 3.92$, $p < .02$). Interestingly, although there was no significant interaction between Time and City ($F(2,1461) = 2.57$, $p < .08$), youth in Chongqing did show the greatest improvement from Time 1 to Time 2. This was in part because youth in Chongqing were the least willing to interact with a student with an intellectual disability prior to the Games.

Table 3. Changes in youths' willingness to interact with students with intellectual disabilities in school from Time 1 to Time 2.

City	Time 1 Behavioral Intentions: School M(*SD*)	Time 2 Behavioral Intentions: School M(*SD*)
Shanghai	11.41 (*3.70*)	12.29 (*3.43*)
Chongqing	10.51 (*3.93*)	11.95 (*3.49*)
Beijing	11.69 (*4.18*)	11.95(*3.96*)

Figure 4: Youth's willingness to interact with students with intellectual disabilities in school activities at Time 1 and Time 2 (selected items*)



*Note: Respondents answered each item on a scale where 0 = *no*, 1 = *probably no*, 2 = *probably yes*, and 3 = *yes* Percents indicate combined *yes* and *probably yes* responses.

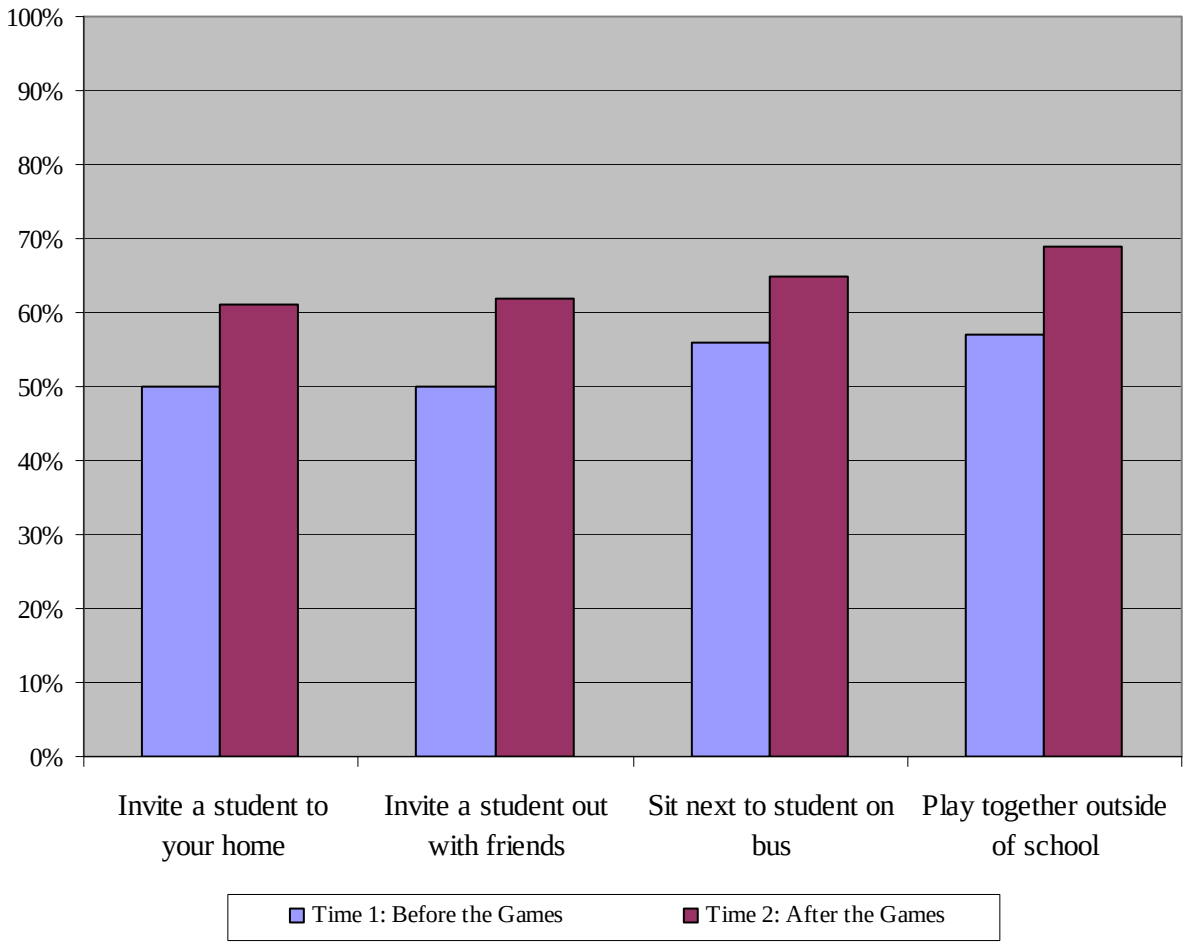
Behavioral Intentions: *Nonschool*: At Time 1 the mean on the Behavioral Intentions – Nonschool scale was 9.41, just at the midpoint of 9 suggesting that youth were hesitant about the types of activities they would engage in with students with intellectual disabilities outside of school. Overall, only about half of the youth across the three cities reported a willingness to socially interact with students with intellectual disabilities in activities outside of school that are more personal in nature. For example, at Time 1 only half of the youth would invite a student with an intellectual disability to go out with their friends (50%) or to their home (47%). It is not surprising that were less positive in their willingness to interact with students with intellectual disabilities outside of school than in school.

The important finding was that youths' willingness to interact with a student with an intellectual disability outside of school showed significant improvements from Time 1 to Time 2 ($F(1, 1450) = 26.59$, $p < .001$) (see Table 4). Specifically, youth were more willing to interact with a student with an intellectual disability in each of the six non-school related activities. Significant improvement was evident in regard to playing with a student with an intellectual disability outside of school as well as inviting a student out with friends (see Figure 5). In addition to Time, there was also a main effect for City. This indicated that youth from Beijing were more positive in their willingness to interact with students with intellectual disabilities out of school than those youth from Shanghai and Chongqing ($F(2, 1450) = 5.42$, $p < .005$). Interestingly, as with the Behavioral Intentions: School subscale, although there was no significant interaction between Time and City, youth in Chongqing did show the greatest improvement from Time 1 to Time 2. The reason for this was because youth in this city were the least positive in their willingness to interact with a student with an intellectual disability outside of school prior to the Games.

Table 4. Changes in youths' willingness to interact with students with intellectual disabilities in Nonschool activities from Time 1 to Time 2

City	Time 1 Behavioral Intentions: Nonschool M(*SD*)	Time 2 Behavioral Intentions: Nonschool M(*SD*)
Shanghai	9.50 (*4.68*)	10.95 (*4.66*)
Chongqing	8.54 (*5.04*)	10.46 (*3.49*)
Beijing	10.24 (*5.54*)	11.01(*5.48*)

Figure 5: Youth's willingness to interact with students with intellectual disabilities in Nonschool activities at Time 1 and Time 2 (selected items*)



*__Note:__ Respondents answered each item on a scale where 0 = *no*, 1 = *probably no*, 2 = *probably yes*, and 3 = *yes* Percents indicate combined *yes* and *probably yes* responses.

3. Beliefs about Inclusion Scale: Youth's beliefs about the inclusion of students with intellectual disabilities in their classes

Academic Inclusion: At Time 1 few youth from Beijing or Chongqing believed that students with intellectual disabilities could participate in academic classes, such as English class (30%) or mathematics (31%). It is interesting to note that youth from Shanghai were more supportive of students with intellectual disabilities in their academic classes prior to the Games with close to half believing that these students could participate in math (47%) and English (50%).

Once again, similar to the Perceived Capabilities Scale and the Behavioral Intentions Scale, youth showed significant improvement in their beliefs about academic inclusion from Time 1 to Time 2 ($F(2, 1481) = 13.30$, $p < .001$) (See Table 5). Also not surprisingly, there was a significant main effect for City in that youth from Shanghai were more positive in their beliefs

about the inclusion of students with intellectual disabilities in their academic classes than youth from Beijing and Chongqing ($F(2, 1481) = 6.05$, $p<.002$). Most importantly there was a significant interaction between Time and City ($F(2, 1482) = 4.30$, $p < .01$), such that youth from Beijing and Chongqing showed the most improvement in their beliefs about the inclusion of students with intellectual disabilities in their academic classes from Time 1 to Time 2. Although youth in Shanghai did not demonstrate a similar change in their beliefs about academic inclusion, their beliefs were, and remained positive at Time 1 and Time 2.

Table 5. Changes in youths' beliefs about the inclusion of students with intellectual disabilities in their Academic classes from Time 1 to Time 2

City	Time 1 Academic Inclusion M(*SD*)	Time 2 Academic Inclusion M(*SD*)
Shanghai	1.65 (*1.22*)	1.64 (*1.23*)
Chongqing	1.22 (*1.05*)	1.60 (*1.13*)
Beijing	1.29 (*1.17*)	1.61(*1.21*)

Nonacademic Inclusion: While most youth across the three cities believed that students with intellectual disabilities could participate in nonacademic classes such as music class (83%) or gym class (80%), they still showed significant improvements in their beliefs ($F(1, 1485) = 9.49$, $p < .002$) (see Table 6). That is, after the Games youth were significantly more positive about the inclusion of students with intellectual disabilities in both their music and gym classes than before the Games. Considering that most of the youth across the three cities believed that students with intellectual disabilities could participate in nonacademic classes, there was no main effect for City.

Table 6. Changes in youths' beliefs about the inclusion of students with intellectual disabilities in their Nonacademic classes from Time 1 to Time 2

City	Time 1 Nonacademic Inclusion M(*SD*)	Time 2 Nonacademic Inclusion M(*SD*)
Shanghai	1.62 (*.60*)	1.77 (*.51*)
Chongqing	1.65 (*.58*)	1.71 (*.55*)
Beijing	1.63 (*.62*)	1.71(*.58*)

D. Involvement in the Special Olympics World Games

It was expected that the most improvement in attitudes would be observed among those youth from Shanghai who had the opportunity to be directly involved the Games. In all, 16% of the youth from Shanghai included in our sample reported that they had been personally involved in the Games in some way, for example as a spectator or a volunteer. While many significant improvements were noted overall in the attitudes of youth from Shanghai, those youth who were involved in the Games showed the greatest improvements. To best present the findings, results from each scale will be presented in which the responses of Shanghai youth involved in the Games are compared and contrasted with Shanghai youth not involved in the Games.

1. Perceived Capabilities

Those youth from Shanghai who were involved in the Games held a significantly more positive view of the capabilities of students with intellectual disabilities than those youth surveyed in Shanghai who were not involved (see Table 7). For example, involved youth tended to view students with intellectual disabilities as more capable not just on simple skills but also on more complex tasks such as acting appropriately when introduced to strangers. In addition some of the strongest differences between those youth who were involved in the Games and those who were not were in their views of the academic skills needed for inclusion, such as the ability of students with intellectual disabilities to learn the same subjects as their non-disabled peers and to talk about homework assignments with other students (see Figure 6).

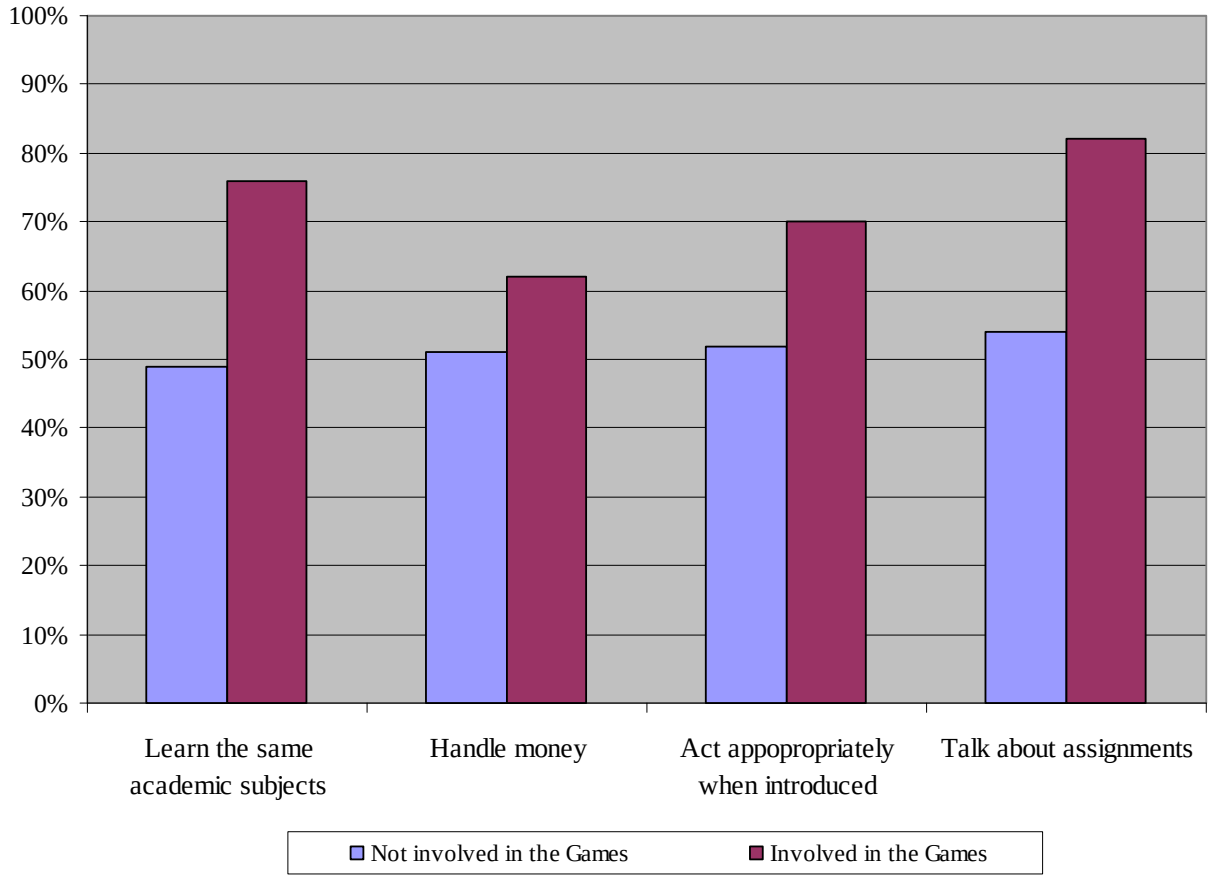
Table 7. Perceptions of Competence: A comparison of youth from Shanghai who were *involved* in the Games and youth from Shanghai who were *not involved*

	Involved (N = 50) M (*SD*)	**Not Involved (N = 273)** M (*SD*)	**t-value**	**effect size**[1]
Perceived Capabilities Scale	11.84 (*2.34*)	10.62 (*3.45*)	3.12**	.41

**p < .01

[1] Effect size is a way to understand the magnitude of the difference between groups, particularly when the size of groups vary Effect sizes that are less than 0.2 are considered small, while 0.5 is considered medium, and effect sizes over 0.8 are considered large. The larger the effect size the more confidence you can have that the groups do in fact differ.

Figure 6: Shanghai youths' perceptions of the capabilities of students with intellectual Disabilities (selected items)



2. Behavioral Intentions: *School* and *Nonschool*

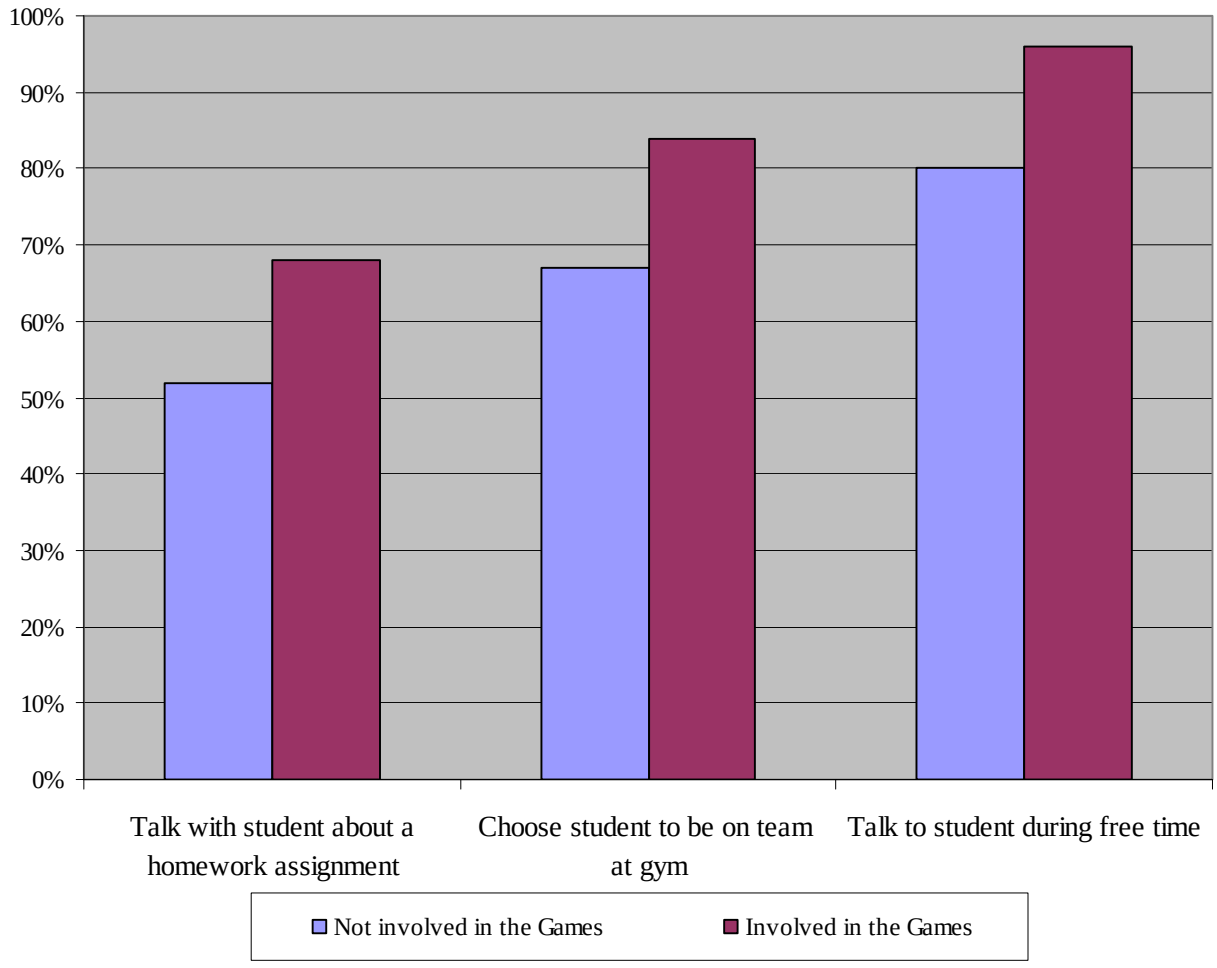
As with perceptions of capability, those youth from Shanghai who were involved in the Games were more willing to interact with students with intellectual disabilities both in school activities and nonschool activities (see Table 8). Specifically in school, involved youth were more likely to be willing to choose a student with an intellectual disability to be on their team in gym and to talk with the student during lunch or free time. In addition, these youth were also more willing to talk with a student with an intellectual disability about a homework assignment than youth who were not involved in the Games (see Figure 7). While youth in Shanghai were generally positive in their willingness to socially interact with students with intellectual disabilities outside of school, youth who were involved in the Games were even more positive (see Figure 8)

Table 8. Behavioral Intentions: A comparison of youth from Shanghai who were *involved* in the Games and youth from Shanghai who were *not involved*

Behavioral Intentions Scale	Involved (N = 50) M (*SD*)	Not Involved (N = 267) M (*SD*)	t-value	effect size
School	13.48 (*2.35*)	12.06 (*3.56*)	3.57**	.47
Nonschool	12.55 (*4.07*)	10.66 (*4.72*)	2.92**	.43

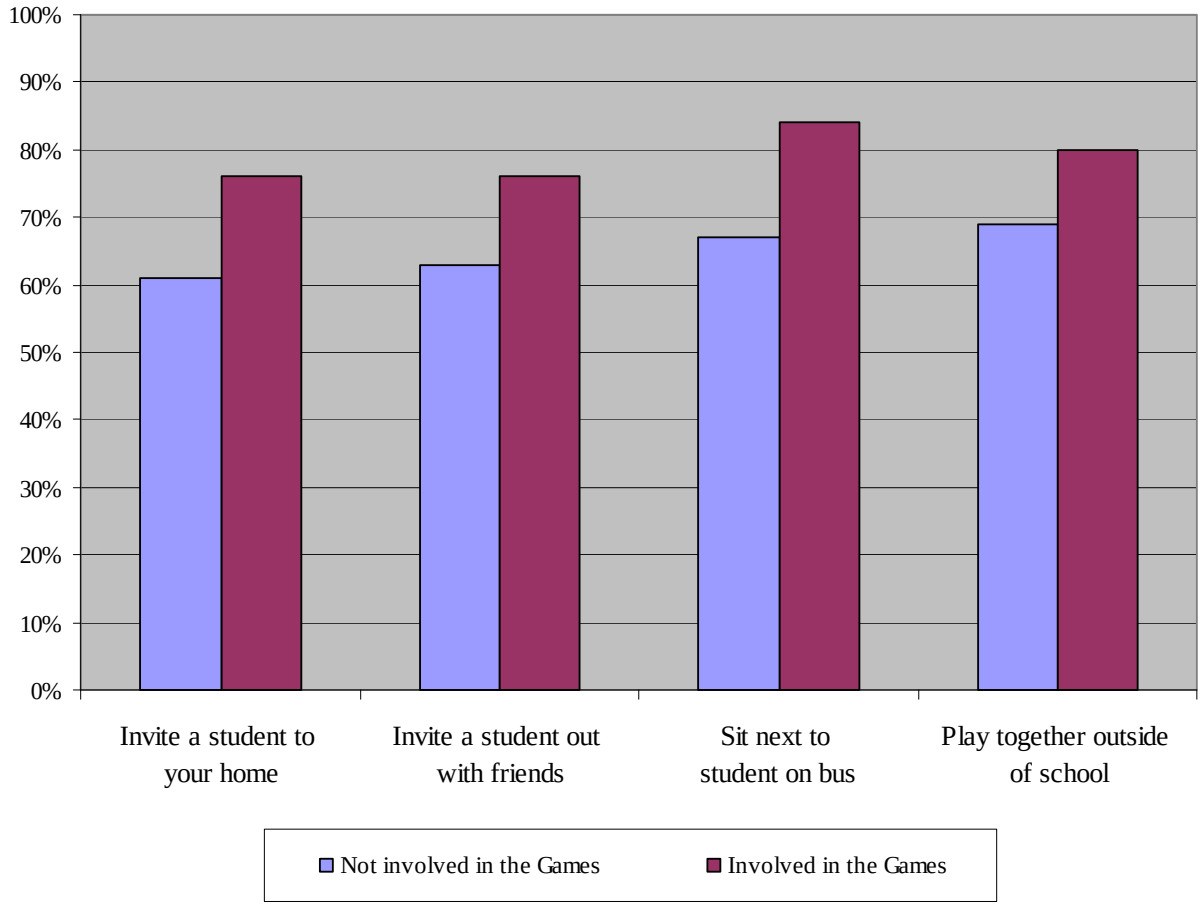
**p < .01

Figure 7: Shanghai youths' willingness to interact with students with intellectual disabilities in School activities (selected items*)



*Note: Respondents answered each item on a scale where 0 = *no*, 1 = *probably no*, 2 = *probably yes*, and 3 = *yes* Percents indicate combined *yes* and *probably yes* responses.

Figure 8: Shanghai youths' willingness to interact with students with intellectual disabilities in Nonschool activities (selected items*)



*Note: Respondents answered each item on a scale where 0 = *no*, 1 = *probably no*, 2 = *probably yes*, and 3 = *yes* Percents indicate combined *yes* and *probably yes* responses.

3. Beliefs about Inclusion: *Academic* and *Nonacademic*

There were also differences observed between the youth from Shanghai who were involved in the Games and those youth who were not in terms of their support for the inclusion of students with intellectual disabilities in academic classes. Involved youth were significantly more positive in their beliefs about the inclusion of students with disabilities in their academic classes, such as mathematics and English (see Table 9). With regard to their beliefs about the inclusion of students with intellectual disabilities in their nonacademic classes such as gym and music, both groups of youth were equally positive.

Table 9. Beliefs about Inclusion: A comparison of youth who were *involved* in the Games and youth who were *not involved*

Beliefs about Inclusion Scale	Involved (N = 50) M (*SD*)	Not Involved (N = 273) M (*SD*)	t-value	effect size
Academic	2.12 (*1.14*)	1.55 (*1.23*)	3.21**	.48
Nonacademic	1.84 (*.37*)	1.76 (*.53*)	n.s	.18

**p < .01

Overall, those youth from Shanghai who were involved in the Games were more positive in their perceptions of the capabilities of students with intellectual disabilities, their willingness to interact with students with intellectual disabilities in and outside of school, and in their beliefs about the inclusion of students with intellectual disabilities in their academic classes than youth from Shanghai who were not involved. The differences between those youth with direct involvement in the Games and those without such involvement speak to the gradient effect among youth. As we have seen among adults in the US, this gradient effect suggests that personal involvement in Special Olympics, such as attending an event or volunteering, results in more positive attitudes towards persons with intellectual disabilities. Moreover, the medium effect sizes on four out of the five scales of the Multinational Youth Attitudes Survey highlights the significant role that the Special Olympics World Games plays in fostering attitude change.

E. Legacy of the Special Olympics World Games

It is clear from the data that the Games made a lasting impression on many of the youth included in this study and in particular, youth from Shanghai. When youth from Shanghai were asked to share in their own words a memorable moment from the Games many mentioned the Opening and Closing ceremonies, specifically the celebrities that attended like Yao Ming, Hu Jin Tao, and Arnold Schwarzenegger. Some youth also described specific events from the Opening and Closing Ceremonies. For example, several youth were impressed by the performances that took place during the opening ceremony. One youth commented that a memorable moment was the, "Special Olympics athlete Wu Fangmiao bravely climbed the 'Great Wall' at the opening ceremony, at the time when she climbed at the last step, she revealed the big and confident smile."

Above all, many youth in Shanghai were deeply impressed by the Special Olympics athletes themselves. Youth talked about the characteristics of the athletes, such as their spirit, happiness and similarity to themselves (see Table 10). Youth mentioned how the Special Olympics athletes never gave up, how they showed perseverance and bravery in their competitions. This is not surprising given that in China spirit encapsulates a number a characteristics, including effort, hard work, perseverance, diligence and bravery in adversity. Another major theme that arose reflects recognition that people with intellectual disabilities were not really different from

"normal" people. As with the Opening and Closing Ceremonies, the sport competitions presented occasions for youth to see the skills and emotions of athletes with intellectual disabilities. Watching the athletes compete, some youth even recognized that athletes were better than people without disabilities in these sports.

Table 10. Shanghai youths' impressions of the Special Olympics World Games.

Perseverance and Bravery	"The most encouraging images is the great effort that they make. No matter how tired they are, they will always try their best to prepare such Olympic games." "Special Olympics' spirit, "I know, I can", spirit of persistence and endurance." "They defeat the struggles they are facing with their strong will."
Spirit and Achievement	"Sometimes, I thought they were unable to finish. But they did." "Even though they are disability people, they work very hard" "Even though they are physically not as well as we are, their never-give-up spirit should be followed by us."
Similarity to all Youth	"Their performances are so good. Some of them do even better than normal people do." "The special athletes are not as stupid as that I thought. They are as the same as normal people." "They are so depressed when they are leaving. They are as the same as normal people." "Everybody is equal; let people know that they have their own things to be proud of." "They have their own dreams"
Positive Attitude	"No matter if they are winners or losers, there are always smiling on their faces." "Every Special Olympics athlete has a smile on their face." "Every people can finish the game with smiling"

In addition to thinking about the most memorable aspect of the Special Olympics World Games, youth in Shanghai commented on how the Games could potentially change China. Many of the youth in Shanghai believed that the Games would bring about positive change to China, either in how people will treat people with intellectual disabilities, how China will be viewed in the world, or how the Games will improve China's society (see Table 11). In fact, there were several sentiments of pride that China was the host of such an important event.

Table 11. Lasting impact of the Special Olympics World Games on youth from Shanghai

Impact on the Treatment of People with Disabilities	"Because of the Special Olympics Games, more people will understand that we can't look down upon Special Olympics Games athletes." "Before that I feel strange to those disability people. Now I know more about them." "People will [show] more concern about the athletes of the Special Olympics and won't look down on them." "Let people know the Special athletes can do all the things that normal people can." "Chinese will know more about the spirit of Special Olympic Games and will not look down upon disability people." "Under our help, they can also make contributions to the country." "China's high attention to Special Olympics shows the care given by modern people to people with intellectual disabilities; shows China's quality has improved."
Improved Harmony	"China will change certainly. People will become more friendly and concerning." "I think China will become more and more harmonious and friendly." "Hosting such a special Olympics Games will advance the inner quality of the Chinese people." "China will be different as a result of hosting such Olympics Games. Chinese people will be more caring about other people."
World View of China	"Special Olympics makes the whole world pay attention to China." "Because the previous Special Olympics games were hold in the US and this time other countries might pay attention to China because of this game, attract foreign investments." "It is not easy for China to get the opportunity for hosting the Special Olympics Game. This is a very important proof that shows China is embracing the world." "Can let the foreigners know the improvement of the China's human rights." "Because of this special Olympic games, many countries will understand china is also a nation with love and caring. China is no longer a nation with Chaos and bad human right."

Interestingly, there were some youth who also believed that the Games had an impact on how China relates to people with intellectual disabilities. Youth in Shanghai felt that the Games allowed people to learn more about people with intellectual disabilities and their comments suggested that this may help put an end to discrimination. Many youth also commented that they now view people with intellectual disabilities as more similar to themselves than they had

previously thought. Some youth also believed that because the public now knows how to treat people with intellectual disabilities, there will be improvements in services.

Another important theme mentioned by youth was how the Games would benefit the greater society of China. Interestingly, a few of the youth surveyed from Shanghai believed that the Special Olympics World Games would make China more harmonious, more caring of people (in general). Like "spirit", it seems that the qualities of harmony and friendliness are important to youth, not only for individuals but also for the country as a whole. The comments also suggest that youth were moved by the joyous atmosphere of the Games, and how this mood spread throughout the city. There were also some youth who believed that the Games would impact how China is viewed internationally. These youth focused on political or economic benefits that could result from the Games and on how China's reputation in the world might be improved. It is reasonable that some youth would see the Games as a means to improve China's position internationally given the global nature of the Special Olympics Games,

IV. CONCLUSIONS

Before the World Games, youth in Beijing, Chongqing and Shanghai reported little contact with their peers with intellectual disabilities and held attitudes that were negative in regards to their perceptions of the capabilities of students with intellectual disabilities, their willingness to interact socially with students with intellectual disabilities, and their beliefs about the inclusion of students with intellectual disabilities in their academic classes. These findings were similar to what was found previously among youth in China who participated in a broader national survey. Youth in this same national study however, also expressed a sense of caring and concern for their peers with intellectual disabilities and an openness to learning more about Special Olympics. The World Games events, a major Special Olympics initiative, offer the opportunity for all involved to not only learn more about Special Olympics, but also to witness firsthand the breadth of athletes' competence and humanity. The findings clearly show that with raised awareness and involvement with Special Olympics, change is possible. Moreover, the greatest change in attitudes occurred among those youth with the most exposure to and involvement with the Games, providing evidence of a gradient effect among youth.

The key findings of this study are as follows:

- Prior to the World Games youth across the three cities had varying levels exposure to information about Special Olympics. There was also variation evident in the attitudes of youth from the different cities. In particular, those youth from Chongqing who had the least exposure to and awareness of Special Olympics had the least positive attitudes overall.

- After the World Games there were significant changes in youth's attitudes. Specifically, all youth were more positive in their perceptions of the capabilities of students with intellectual disabilities, their willingness to interact with a student with intellectual disabilities both in and out of school, and in their beliefs about the inclusion of students

with intellectual disabilities in their classes. As expected, some of the largest changes were observed in the city that began with the least positive attitudes, Chongqing.

- Youth in Shanghai, who had the greatest opportunity for exposure to the Special Olympics World Games, expressed more positive attitudes after the Games than youth from Beijing or Chongqing. Most importantly, those youth from Shanghai who were directly involved in the Games as spectators, volunteers, etc. were the most positive among all other youth.

- Youth in Shanghai not only experienced the greatest change in attitudes following the World Games, but also recognized the value of the World Games for generating change throughout the greater society of China. Many youth believed that the World Games would make China more harmonious and compassionate, and influence how people with disabilities are treated. Interestingly, and somewhat surprising given the ages of the youth included in the study, many focused on the political or economic benefits that could result from the Games, including the promotion of a more positive image of China on the international stage.

While it is clear from the results that the Special Olympics World Games made an impression on many of the youth, the most significant changes were among those youth who had the opportunity to be directly involved in the Games. These results are certainly encouraging and provide support for a gradient effect among youth, similar to what has been noted with adults. However, there are many questions that remain unanswered. First, it is clear that youth attitudes are malleable and can change, however the sustainability of this change is less clear. Without follow up it is difficult to determine that lasting impact of the World Games among youth. To effect lasting change there must be involvement of both the regional and local Special Olympics programs that are in a position to bring youth with and without intellectual disabilities together in meaningful ways, such as through Unified Sports. Future research should aim to further document the value and lasting effects of involvement in Special Olympics. One way to do so would be to continue to explore the gradient effect with those youth in China, specifically Shanghai, involved in other Special Olympics initiatives such as Unified Sports.

Overall the results of this study provide another documentation of the effects as to the power of Special Olympics to impart meaningful experiences upon those without intellectual disabilities who become involved. In China, the World Games provided youth with an opportunity to witness firsthand the wide ranging abilities of people with intellectual disabilities, something that has been found to be the key to fostering positive attitudes. Finding ways to harness this power and build upon the foundation that has been established by the Games will ensure that the impact on youth observed in this study is not only sustained, but enhanced and expanded.