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Osaka University
INITIATIVES AIMED AT REDUCING POVERTY WITH SPORT: A CASE IN ZIMBABWE

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Abstract

The Homeless World Cup (HWC) is an international futsal event in which only homeless people can participate. Annually, more than 500 men and women players are sent by national partners from over 60 countries. These national partners conduct activities in each country to select their members. Youth Achievement Sports for Development (YASD) is a Zimbabwean organization established in 2011, which aims to support disadvantaged and impoverished children and youth in the Hatcliffe suburb of the capital city, Harare. The author conducted semi-structured interviews with 12 people related to YASD mainly in English (the local language “Shona” was also used). The interviews were held in February 2017, with an average time of 45 minutes per interview. Prior to the fieldwork in Harare, two interviews were conducted with the president of YASD in August 2015 in Amsterdam, the Netherlands, and July 2016 in Glasgow, Scotland, venues of the HWC. The key themes of all interviews were 1) YASD activities; 2) YASD football activities; 3) opinions on football activities; 4) living situation in Hatcliffe; and 5) HWC, poverty reduction, and life after the HWC.

Based on our conversations with the interviewees, the author noticed several outcomes and contributions of YASD futsal activities and also re-realized the severe living situation and tough social issues requiring continued efforts for the Hatcliffe youth such as the forced early marriages of girls, the drug and alcohol abuse, and the spread of HIV/AIDS. The YASD activities contributed to helping people forget the stark realities of their lives, bonded people in their small communities, and created opportunities for people to build self-confidence. Although it is difficult and takes time to combat poverty and related issues, YASD develops youth in Hatcliffe so that they can be motivated to empower themselves to address their issues.

Key words: sport and poverty, Homeless World Cup, futsal, Zimbabwe

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1. Introduction

“Reducing poverty through sport”—this is the grand purpose the Homeless World Cup (HWC) tournament has in mind. It is an international futsal tournament aiming to “inspire people who are homeless to change their own lives” and create “a world where everyone who wants a home has a home.” The 15th tournament was held from 29th of August to 5th of September 2017 in Oslo, the capital city of Norway, with Mexico winning the men’s tournament and Brazil winning the women’s.

Only people in situations of homelessness can participate in the HWC, but this does not simply mean that these people are in situations of economic poverty; many also have multiple problems such as unemployment, criminal records, drug use, alcoholism, or mental illness. Moreover, because of differences such as legislative systems, family formations and public support, each country differs regarding the kind of situations referred to as homelessness. The countries that participate in the HWC have organizations called “national partners” that have in-depth knowledge of their country’s circumstances regarding poverty and homelessness, and they conduct tasks such as daily activities, players’ selection, and arrange players’ transportation, but these organizations vary in aspects such as their form, size, goals, and targets.

The present study considers the activities of Zimbabwe’s national partner, Young Achievement Sports for Development (YASD), through the results of fieldwork. The activities of YASD capture the relationship between sports and poverty in modern Zimbabwean society, and this study aims to verify the role played by sports in the context of reducing poverty.

2. Background to this research

2.1. The Homeless World Cup

The HWC is an international street soccer event, held in different countries, every year since 2003. More than 500 players in 45 men’s teams\(^1\) and 16 women’s teams participated in the 15\(^{th}\) tournament, held in 2017. People can participate in the HWC if: they are over 16 years of age; have not participated in the past events; and have, in the year prior, been homeless for more than 3 weeks, made a living selling street papers, received medical treatment for narcotics or alcohol dependence within 2 years previously, sought asylum, or applied for asylum. The HWC tournament headquarters offers the opportunity for lodging, transportation, food, and sightseeing to a total of 10 people from each country: 8 players, and 2 staff members such as supervisors or coaches.

\(^1\) The men’s teams also include women, so they are mixed teams of men and women. The women’s teams include only female players.
2.2. Research method

Semi-structured interviews were carried out with people concerned with the national partner YASD in Zimbabwe. The interviews were carried out in a community school, a community nursery, the area around a futsal ground, and outdoor areas such as the front yards of houses, with a total of 12 interviewees. These were 3 active players, 2 family members of active players, one family member of a retired player, one participant in another YASD program, and 2 of their family members. The author and a Zimbabwean researcher in sports studies used English and Shona and, when necessary, the Zimbabwean researcher translated from Shona into English. The interviews took an average of 45 minutes to one hour per person. Additionally, interviews were carried out in English in the YASD office in Harare city with 3 people: 2 founders of YASD and one staff member. These interviews took 65 minutes per person.

All interviews took place in a calm environment, and their goals and confidentiality were explained at the start of the interview. Moreover, consent was obtained for the audio recording and use of data in research, and interviewees were asked to sign an agreement document. The main content of the survey covered 5 points: YASD activities; YASD futsal activities; thoughts about futsal activities; the conditions of the interviewee’s current lifestyle; and how the interviewee’s lifestyle had changed after participating in the HWC or futsal activities.

Before conducting this survey in Harare and the surrounding areas, a preliminary investigation was carried out with YASD representatives and coaches during the HWC in 2015 and 2016. Moreover, an additional check was carried out with YASD representatives during the HWC in 2017. Between those times, through continuous contact by email, information was gathered concerning their activities, and an attempt was made to build a rapport. The protocol for the semi-structured interviews during the present survey was drawn up jointly after discussions over email between the author, the Zimbabwean researcher, and three YASD representatives.

3. Youth Achievement Sport for Development (YASD)

3.1. A brief history of modern Zimbabwe

Zimbabwe attained independence from Britain in 1980 and achieved favorable economic growth until the early 1990s, even being referred to as the “oasis of Africa.” Following independence, a policy of appeasing Caucasian people was adopted so, compared to surrounding countries, Zimbabwe had a larger population of second and third generation white people born in Zimbabwe, as well as mixed-race people referred to as “colored,” who had both white and non-white parentage, and it was one of the most successful independent countries in sub-Saharan Africa. However, in the late 1990s, instabilities in the governing political party began to be noticeable; the government ventured into compulsory expropriation of large-scale farming lands from white management, and strict policies were hammered out such as recommending the occupation of farms by ex-servicemen so that the white class would be looked on with suspicion.
As a result, Zimbabwe’s isolation from the international community intensified, having to forfeit its qualification as a member of the British Commonwealth of former colonies and being expelled from the IMF member nations.

With the 2005 general election, the leading opposition party made substantial gains, and the government carried out a policy known as *Murambatsvina* (Move the Rubbish) of forcing people to leave the slums on the outskirts of cities. The homes and street stalls of people living in the slums were bulldozed, on the pretext that they had been illegally held. The slums in the suburbs and the people living there were blamed for food shortages and the deteriorating business conditions and public order in the capital city of Harare, and “moving the rubbish” was an attempt to eradicate these problems. *Murambatsvina* was conducted in over 50 regions and, according to a United Nations report, about 700,000 people lost their homes and sources of livelihood such as shops and small businesses.

Hatcliffe district, located in the northern part of Harare, around 16 km from the center, was one of those regions. According to Zimbabwe’s 2012 population statistics, 45,344 people lived in 11,686 households in the Hatcliffe district (Ward 42). *Murambatsvina* destroyed not just homes and shops, but the entire infrastructure of the region, and it was said that “almost nothing remains of community facilities such as water services, roads, sanitation facilities, schools and sports grounds” (National Statistics Agency, 2012). As a result, hygiene conditions rapidly deteriorated, and new development problems arose that had not previously been seen in Zimbabwe, such as the spread of cholera.

Years of negative rates of economic growth followed, and in 2008, the year-on-year inflation rate hit a record level of 355,000%. This meant that prices of commodities increased 3,550-fold over a year, and the domestic economy was effectively void. Professionals, such as doctors, lawyers and such, teachers, and business people left the country for temporary refuge or to work away from home in nearby countries such as South Africa and Zambia. This resulted in the gradual breakdown of the foundations supporting the country and people’s lives, such as the economy, the society, education, and welfare. At that time, the rate of elementary school attendance dropped in Zimbabwe, although it had previously been the highest in Africa. Zimbabwe could not avoid being embroiled in problems, such as an unemployment rate surpassing 90%, and the rapid increase of persons infected with HIV, threatening the very continuation of the state. Regarding people’s livelihoods, there was anxiety about the chronic food and gasoline shortages, and it was common to depend on receiving money sent from acquaintances and migrant workers outside the country. When people were ill, they could not receive appropriate medical care; infectious diseases such as cholera became prevalent; alcohol and drug dependency increased; and issues that had not been major concerns before, such as pillaging and sexual violence, frequently occurred in urban and rural areas alike.
3.2. YASD

YASD was established by victims who returned to resettle areas in after Murambatsvina and, in 2007, it was registered with the government as a non-governmental organization. Three months after Murambatsvina occurred, the people of Hatcliffe district returned to resettle in an area 5 km from the former village, designated by the government (Photo 1). This vast, open space, with high and low areas, had no infrastructure facilities such as roads, water and sewer services, or electric power, and the people began living in tents or simple dwellings made by piling up blocks, receiving support from international and domestic NPOs. YASD provides opportunities, such as sports including soccer, education, and hobbies for children and young people in this area, and was established with the aim of raising children living in poverty, who had lost their parents, into capable people who could become leaders. The representative, Petros, recognized the “need to create smart communities and people” after Murambatsvina and brought together advocates to establish YASD (Petros, 2016).

YASD carries out 3 programs: “education support,” “youth support,” and “sports training.” The Education support program offers bursaries to children who have financial difficulty entering school. In 2016, 15 junior high and high school students from Hatcliffe district were sent to school with dormitories, and 20 were attending elementary school from their homes. YASD attaches importance to children, who are the future of the community, receiving an appropriate education, but often sees cases of children not being able to go to school because their parents are in poverty. For that reason, aside from support with uniforms and school supplies, such as stationery, tuition fees, and boarding expenses, YASD also offers water and food and is attempting to remove the causes hindering school attendance.

“Youth support service program” establishes centers for children to study and read books after school, and it carries out training in such matters as mental health and improving life skills, sometimes inviting specialists on-site. Moreover, the “Big Brother and Big Sister” program provides opportunities to receive advice from financially successful people in the district, and carries out classes regarding specific topics such as HIV-AIDS prevention, drug abuse, or forced early marriage of elementary school-aged girls. The “Sisters in Business” program asks women who are successful in business about the story of their experiences and creates a platform for advice on new business plans. The “youths” that YASD targets in its programs are between 6 to 30 years old, but the average age is 22.
3.3. **YASD sports training program**

One of the pillars of YASD’s activities is its “sports training program.” This program is based on daily soccer training and weekend matches, and participants build up training with the aim of participating in the HWC. The community schoolyard in the Hatcliffe district (Photo 2) is the primary location, but at 12 additional places independent practices are carried out with volunteer coaches, and among these are teams made up of only girls. Practices are carried out somewhere within the district almost every day, and an average of 30 children and youths participate in each, often surpassing 150 people. YASD does not manage these independent practices, but contacts volunteer coaches when they notice anything unusual about a participant’s circumstances, such as in their school record or family relationships.

YASD has sent players to the HWC every year since 2010. Until 2015, they chose players within the Hatcliffe district but, in 2016, they carried out selections that brought together 250 youths from 40 districts in the neighborhood. That year, 3 players from outside Hatcliffe were selected, and in 2017, they increased their partner organizations, and 7 players participated from outside Hatcliffe and only one from within the Hatcliffe district. YASD took the lead in expanding the player selection area and, since 2014, has started links with other organizations; in 2017 it supported tournament management and coach deployment for 10 organizations. YASD expanded its scope of activities with the intent of “not just carrying out the same activities in other districts that we did in Hatcliffe but supporting organizations that carry out activities using futsal in appropriate districts” (Petros, 2017).

4. **Results**

The 12 research targets were aged between 23 and 54. There were 3 women and 9 men; 8 had received the ordinary level of high school diploma; 9 were married and had an average of 2 children. This chapter considers the concrete results of YASD’s activities based on discussions with the research targets.

YASD conducts futsal activities in places that have been unsuitable as basic living environments since *Murambatsvina* (Photo 3),
and these activities started relatively quickly compared to other cases where sports have been introduced in disaster recovery periods. Gschwend and Selvaraju (2007) state that “theoretical considerations and research findings which prescribe that psycho-social interventions should only be introduced from the fourth month onward in a post-disaster setting. But there are some notable exceptions to this rule and in contrast to theoretical recommendations (for psychosocial intervention), many programs were introduced quite late, that is later than 2 years after the disaster, in the reconstruction phase.” Some comments indicated the results of YASD’s activities were born from the very fact that activities were carried out immediately following residents’ return.

*Sport is...let me say...the distressing agent. Because, you know, when we are living in poverty, can’t stop thinking we don’t have this, won’t be tomorrow, won’t be like what what. But if, you know, you try to play some sport, you kill some time of thinking. In that time, if you play and enjoy, you will be out of stress.* (Patience, 24 years old, female, ex-player, and volunteer staff)

*For this community, initially in that time, sport made people forget about their lives reality.* (Joe, 22 years old, male, ex-player, and coordinator)

Although within the survey many voices discussed reducing stress and anxiety, prior research demonstrates that the possibilities for coping with trauma are also undeniable. This suggests that sports activities are significant for carrying out relatively early stage reconstruction from disasters or conflicts, and it will be necessary to examine similar cases further.

YASD program began as activities that the director, Petros, and his friends did intuitively and, at first, “people did not share their thoughts about the significance of this activity,” (Joe, 2017) however, “people hopes for these activities increased more than we expected, and we could not simply stop doing them” (Petros, 2015). The trajectory on which these activities had been placed demanded a response to a new issue, because residents’ hopes for YASD increased, and the scope of activities expanded in response to these hopes.

*Here most of the ladies are getting married because of poverty. They have nothing to do. So, we introduce sport so that they will know there is something better besides getting married.* (Sowier, 23 years old, female player, small business owner in Hatcliffe, hairdresser, YASD volunteer)

(Looking at a young person who ran away from their small home during the migration because of drugs) *He doesn’t go to school, he has no job, all day he is here. There is safety in being with a circle of friends in the same situation. However, participating in YASD activities, there are many young people who have started to become enthusiastic about futsal instead of drugs.* (Joe, 22 years old, male, former futsal player, and YASD coordinator)
Children get information about HIV/AIDS through these activities. This is very important information in our society, but they can’t get this information at home or at school. (Patience, 25 years old, female, a participant in YASD activities, and housewife)

The majority of the regional issues for which YASD exists to respond to are focused on young people or are characteristic of young people. As mentioned earlier, the problems of early marriage of girls, drugs, and HIV/AIDS, affect not just the Hatcliffe district but have been understood as severe problems throughout Zimbabwe, and YASD continues engaging with these to this day. The circumstances in Zimbabwe regarding the forced early marriage of girls, drugs, and HIV/AIDS are briefly consolidated as follows.

Whereas the marriage rate for males aged 15–19 in Zimbabwe is 2%, the marriage rate for females in that age bracket is more than 22% (ZIMSTAT, 2012). Although Zimbabwe was traditionally a polygamous society, in recent years, monogamy has become common in urban areas. However, in the Hatcliffe district, polygamy has been increasing because of poverty and, based on the traditional system of patriarchy, the family may expect to receive a bride price (labola) from the husband at the time of marriage. Families that lack food on a day to day basis marry off their daughters as the second or third wife in a wealthy household, as a kind of quasi-housekeeper. Marrying off daughters creates the possibility of receiving not just labola but also continuous support from the new family, but it is not uncommon for the family the daughter has married into to end up in a distorted kind of relationship. There is no end of cases of girls receiving psychological or physical abuse from the husband or his family on the pretext of bad work or not getting pregnant.

The problems of drug and alcohol dependency have magnified and become more intense in Zimbabwe in recent years (Photo 4). Accompanied by high unemployment rates surpassing 85%, it is difficult to find employment in public institutions or private enterprises even if one has graduated from university, and young people with no means of making their own money cannot avoid spending time in boredom. In addition to illegal drugs, such as cannabis or stimulants, it is not rare in urban areas for dependence or overdose to be brought about by easily obtainable alcoholic drinks and over-the-counter medicines.

For example, a distilled liquor known as musombodyiya costs 50 cents for one 750 ml bottle, which is enough for three or four people. Abuse of a commercially-available cough medicine known as Broncoleear and of a psychotropic drug known as Blue Tablet also create problems. Aside from being imported across the national border, these are also manufactured domestically; people can easily
obtain them because regulation is lax, and it is possible to resell them. That is, there is a state of affairs in which people are overdosing on alcohol and over-the-counter drugs as substitutes for illegal drugs, and this may be a tragedy brought on by the lack of measures to regulate medicines in the country.

According to Zimbabwe’s Department of Health and Child Care, around 45% of mental disorders in the country were triggered by drugs and alcohol addiction. HIV-infected people in Zimbabwe number 1,600,000, and a reported 5.9% of people aged 15–24 are infected with HIV (UNICEF, 2016). Zimbabwe recognized the existence of HIV/AIDS within the country in 2000, relatively late compared to neighboring countries and, even after then, against the background of serious economic and political crisis, the country did not take any preventative measures. Meanwhile, there was a sudden increase in people infected with HIV, and it appears that about one in every 3 or 4 adults were infected with HIV, and many people knew someone, in their family or a friend, who was infected. A large number of people were unable to receive appropriate medical treatment with antiviral drugs, and AIDS orphans numbered more than 1,600,000. In the late 2000s, after receiving support from the international community, the government took measures, and in 2009–2015 the HIV infection rate in adults fell by half (Somse, 2017) but, for various reasons, new infections could not be wholly prevented, especially among young people. For example, regarding the aforementioned forced early marriage of elementary school-aged girls, there was in Zimbabwe a superstition that by having sex with a virgin, AIDS could be cured, and infection could be prevented. Because of this, there have been unending incidents of sexual violence targeting elementary school-aged girls, and this is assumed to be one of the causes of increased HIV infections.

YASD takes a straightforward approach in response to the problems characteristic of these young people, but there was also a fascinating discussion of the wider context.

*Sport, I have seen and I have realized, has power to uplift the lives of many young people. I have also seen that it can also play major goal of developing. Can I say…underdeveloped communities like ours, despite developing and financial problem, sports developed us a lot.* (Talent, 32 years old, male, ex-player, headmaster of the community school, YASD futsall coach)

*They [children and youth in the community] see themselves as a failure whether they did not want to be failed. Obviously, the way they feel about themselves will change by participating in the YASD programme. They start to see themselves someone who can achieve something, someone who is equal to anyone else in the society.* (Petros, 32 years old, male, and YASD representative)

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These mainly relate to individual participants, but YASD activities also have various kinds of impacts on the community as a whole.

*It [YASD activities] shows everybody can be a friend, everybody can assist someone...and everybody can be kind to one another. It’s a very good programme, and wherever you see someone, I just shocked, they are all friend not an enemy. (David, 54 years old, parent to an activity participant, carpenter)*

*Actually our community is divided affected of demarcation by the large political line. But, because of sports, people with the different political views and people who want enemies are now in the field of playing. So, I can say, peace is being viewed in the playing field. (Pegnas, 26 years old, male, former futsal player, and community school teacher)*

In the interview surveys, the research targets used the word “enemy” multiple times. The researchers checked the meaning indicated by “enemy” with the interviewees, and not all, but most, clarified that there was no specific target they were referring to as “enemy.” In difficult life circumstances, it can be assumed that the word “enemy” is used because it brings to the surface feelings of isolation from government, community, neighbors, and family. Additionally, this word “enemy” changed its in meaning as time passed and circumstances changed. The object of emotions, such as isolation and stress, change and it is assumed that, as a result of reflection, the word “enemy” is used.

Herman (1992), from a study of multiple examples, treats experiences core to the composition of psychological trauma as a “lack of support” and “isolation,” and experiences of “empowerment” and “reunion” as key to recovery from trauma. The author of this paper and researchers in Zimbabwe, as well as Petros and the other YASD staff, are not experts in psychological trauma care, and scientific verification is difficult. However, it may be clear that YASD activities reduce the participants’ sense of isolation and give a real sense of being able to receive some support from the activities themselves and the community.

5. Conclusion

From the dialogues of the people involved, the various results of the futsal activities by YASD were considered. According to YASD staff, an assumed result of futsal activities was that the participants were freed from the stress of their daily life, formed bonds with people in the community, and young people built self-confidence around skills acquisition for finding work or starting businesses. In semi-structured interviews, “context” was important, and although it is difficult to understand everything from excerpts, many aspects were important in the staff’s perception concerning the results of YASD for those concerned. This demonstrates that YASD
activities are carried out with specific goals in mind which address the appropriate contemporary problems in the relevant district and make a definite contribution to solving them.

YASD includes representatives, staff, and alumni in the Hatcliffe district and is steadily progressing in its work to imagine a vision of the future for the region’s children and young people, in discussion with residents. For that reason, they have confidently changed the futsal activities that had begun because “it was needed” into something “significant”, and moreover, an accompanying increase in activity hours seem to have given the futsal activities multiple meanings. More precisely, the meaning of the activities has magnified, from the extremely personal level of “coping with daily life stress” to the context of the social level of “creating an atmosphere for the whole community” and from here the possible social contribution of flexibility in methods, goals, and planned targets when making use of futsal and sports can be understood. Regardless of their content, it is clear that YASD’s activities have expanded and advanced their significance, regarding beneficial effects and concrete results.

In addition to qualitative expansion, efforts have also been made at quantitative expansion. As shown in Chapter 2, attempts have been made to expand to other districts using methods that have had definite results in the Hatcliffe district. Not all of the plans could be enforced because of limited budget and personnel, but in 2017 activities had begun with 10 teams. The content of the activities are based on futsal training for more than 3 hours at a time, 3 times a week, and are becoming a program aimed at solving problems in all regions, such as establishing basic education content and public awareness of HIV/AIDS.

Although it is evident that the activities within the country are improving both qualitatively and quantitatively, YASD is also aiming to increase the international visibility of the Zimbabwe team and Zimbabwe as a country. HWC coach Farai said, “We have to participate in the HWC every year just to show Zimbabwe is here. We want to let as many people as possible know what happened in Zimbabwe” (Farai, 2015) to “understand” modern Zimbabwe, including the Murambatsvina. In Zimbabwe’s media in recent years, although there have been increased opportunities to cover HWC and YASD activities (Photo 5), these are never linked to Murambatsvina. Moreover, in HWC, there are many opportunities for close-ups of individuals, and a few countries are seen trying to communicate the conditions in their country or their daily living situations. Participating in HWC, responding to overseas media coverage (Photo 6) and communicating the situation in Zimbabwe, indirectly may not just increase the international visibility of Zimbabwe, but also play a role in “peaceful protest” through sports responding to policies such as Murambatsvina.

Spaaij et al. (2016), from examples of sports activities in Kenya and Cameroon, has stated that “times of (social) renewal, in most cases, are slow and gradual.” Looking at a few of the changes

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3) The comments and photograph of one of Zimbabwe’s players was published on the Homeless World Cup homepage. 
https://homelessworldcup.org/ [08/25/2017].
that have occurred in the Hatcliffe district as a result of YASD’s activities, the pace has been as slow as Spaaij et al. argued, and at times hard to see. Depending on one’s point of view, there are also issues that cannot be assessed as change. In the early days, when their activities began, YASD staff were focusing on promoting responses to participants’ specific problems, but gradually their view broadened to the problems facing the whole community. As an extension of that, by giving people the shared topic (catalysts) of aiming at participation in a tournament, HWC has been pictured as being on the road leading to the resolution of Zimbabwe’s poverty and homelessness problems at home and abroad.

The present study can only verify part of YASD’s activities because the number of interviewees was small due to limited time for the survey in Zimbabwe. However, through the period of this survey, it was possible to clarify the essential existence of people’s activities in the relevant districts with the Hatcliffe-district-born YASD, and by talking with even a limited number of people, it was possible to see that concrete results were achieved. In the future, as well as verifying whether or not the results of YASD futsal and sports-related activities are limited to certain regions or time periods, the author would like to form a deeper understanding and appreciation of the relationship between the development of Zimbabwe’s society and “reducing poverty through sports.”

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References


