

The impact of the Hoodlinks Programme on developing life skills and preventing youth violence in Guatemala City

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ABSTRACT

Hoodlinks is a sporting programme focused on the development of Olympic values that is run in two of Guatemala City's most violent zones. A total of 116 (80 males; 36 females) athletes (average age = 13 yrs.) participated in this study along with five coaches. Using a mixed-methods longitudinal design, athletes completed a series of questionnaires six months apart that assessed their level of aggressive and caring behaviours, use of life skills both in and outside the Hoodlinks programme, and their overall quality of experience within the programme. Interviews with athletes, their parents/guardians, and the programme's coaches also took place at both time periods. Results showed high positive experiences in the Hoodlinks programme at both time periods, significant increases in the use of life skills within the Hoodlinks programme as assessed by their coaches, and significant increases in overall communication skills. Interviews with the participants highlighted the importance of running the programme directly in high risk areas and the positive impact that the programme had on the development of life skills for the athletes, the positive changes within the communities where Hoodlinks took place, and the additional levels of support that the Hoodlinks programme had provided to athletes and their families. Recommendations for helping athletes transfer the life skills learned within the programme to their everyday lives are provided.

BACKGROUND

Guatemala has the fourth highest homicide rate in Central

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America and the fifth highest in the world.¹ Since 2000, the homicide rate has doubled from 3000 deaths per year to just over 6000 per year with the vast majority (89%) of the victims (and the perpetrators) being adolescent and adult males under the age of 30. The homicide rate for males aged 15 to 29 in Central America is four times that of males in this age range living in other regions of the world.² The costs associated with violence in Guatemala are close to \$2.2 billion per year or 7.7% of the country's total GDP.¹ Finding sustainable and cost effective ways to reduce youth violence is one of Guatemala's most urgent public health and economic issues.

The World Health Organization^{3(p.29)} suggests that "developing life skills can help young people to avoid violence, by improving their social and emotional competencies, [and] teaching them to deal effectively and non-violently with conflict". Life skills have been defined as "...the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life."^{4 (p. 8)} By developing life skills, students "... learn self-protection, ways to recognize perilous situations, cope and solve problems, make decisions, and develop self-awareness and self-esteem."^{5 (p. 30)} Violence prevention programmes that focus upon the development of life skills cost a fraction of the costs of treating victims of violence and show significant net savings when compared to the costs of treating victims of violence and punishing those who commit acts of violence.⁶

Participation in sport programmes has been linked to the

avoidance of criminal activities,⁷ risky behaviours⁸ and gang membership⁹ due to their potential in fostering the development of life skills amongst youth.¹⁰ The use of sport programmes for this population has been identified by leading organizations such as the International Olympic Committee (IOC) and the United Nations (UN) as one of the most cost effective ways to address conflict and violence. The International Olympic Truce Foundation recognizes the role that sport plays to initiate conflict prevention and resolution. Resolution A/RES/68/9 passed by the United Nations¹¹ also recognizes that "sports can foster peace and development and can contribute to an atmosphere of tolerance and understanding." When life skills are intentionally taught through sport, they can result in higher levels of problem solving skills¹² which in turn form a critical foundation for children and youth to effectively deal with issues such as conflict and violence.^{13, 14}

However, participation in sport does not automatically guarantee positive outcomes such as the attainment of life skills. A report released by UNICEF⁵ points out that sport can be an avenue for bullying and hazing, physical maltreatment, emotional and psychological abuse, sexual violence, and discrimination. While there is support that life skills can be learned implicitly through sport under the right conditions,¹⁵ the majority of the literature has stressed the importance of developmentally and individually appropriate sport programmes delivered by trained and competent coaches and teachers who intentionally teach life skills within a supportive socio-cultural environment focused upon positive youth development as the most effective way to intentionally foster the development of life skills.^{13, 15-18} Or stated more succinctly "... life skills must be taught, not caught."¹⁹ (p. 78)

The area of sport for development and peace has been recognized as one of the fastest growing areas of research and development in the sporting literature.¹⁰ However, despite a rapid increase of sport for development programmes around the world, there is a paucity of behavioural research that has systematically investigated the impact of these programmes on its participants over time. In addressing this issue, the present study aims to better understand the impact of a sport for development programme called Hoodlinks on the development of life skills and aggression levels amongst youth who live in high crime areas of Guatemala City.

Literature Review

Despite the lack of research that has specifically and

systematically conducted behavioural research over an extended period of time, a number of studies contribute to our understanding of the role of sport in the development of life skills amongst children and youth. The Sports United to Promote Education and Recreation (SUPER) programme is one of the few programmes that have consistently and repeatedly examined such behavioural changes. A typical SUPER lesson lasts 45 minutes and includes: "learning the physical skills of a particular sport, practicing the physical skills, and learning life skills related to sports and how these skills are applied outside of sport."²⁰ (p. 44) Examples of life skills that are taught as part of the sporting instruction include team-building, goal setting, problem solving, positive thinking, overcoming obstacles, positive self-talk, stress management, appreciating diversity, confidence and courage.²⁰ Goudas et al.²¹ reported the findings from 17 SUPER sessions (10 to 15 minutes each) integrated into basketball and volleyball lessons. The youth participants in the programme reported higher levels of knowledge about using life skills and increased beliefs about their ability to control negative thoughts. Papacharisis et al.¹² reported that boys and girls averaging 11 years of age reported significantly higher levels of knowledge about life skills, goal setting, problem solving, and positive thinking following eight SUPER sessions (15 minutes each) integrated into soccer and volleyball lessons over a two month period. Brunelle et al.²¹ also used the SUPER programme during a one-week golf academy with 13 to 17 year old boys and girls. Their results showed that after receiving five SUPER workshops (45 minutes each) during a weeklong intervention, participants reported significantly higher levels of social interest, social responsibility, and goal knowledge. Those who completed a community service component continued to report higher social responsibility and empathetic concern scores six months after the intervention compared to those who did not complete a community service component related to their SUPER training workshops.

The importance of peer interaction and providing an avenue for the application of life skills in sport has also been identified as a key feature in their development. Holt et al.²² reported that in both team and individual sports, former competitive athletes identified the role that sport played during adolescence in the development of positive social skills. They also indicated that these skills had carried on into their adulthood. Finally, Mandigo et al.²³ reported the results of a longitudinal study over a three-year period that examined the role of physical education (PE) on the development of life skills with Salvadoran students. Their interviews with school principals, PE teachers, and students revealed that all three groups were able to identify specific

examples of how PE helped foster the development of life amongst students at the school.

At a very basic level, participation in sport can be a diversion from delinquent behaviour. This has been referred to as the averting-mode of crime prevention.²⁴ When youth are participating in sport, they are less likely to be "on the streets" and hence are diverted from committing crime. However, others^{24, 25} have challenged the long-term sustainability of sporting programmes that are simply designed to avert youth from participating in criminal activities. Rather, the focus should be on if and how sport could encourage behavioural changes by fostering the development of positive life skills. Following a systematic review of 38 peer reviewed international articles examining the relationship between sport participation and crime prevention, Ekholm²⁴ (p. 6) concluded that "... sport as a means of crime prevention should emphasize non-sport components such as education in non-violence and moral values, de-emphasize competition, and deploy a rational and explicit development plan." Such approaches are consistent with a social change-mode of crime prevention that are designed to foster positive social behaviours through direct educational approaches. Intentionally integrating more pro-social approaches to sport through education is also supported by Bailey¹⁶ (p. 399) who highlighted that "... appropriately structured and presented activities can make a contribution to the development of prosocial behaviour, and can even combat antisocial and criminal behaviors in youth." However, in order for sport programmes to have the kind of impact in the prevention of youth violence, they should focus on both the needs of the community and the individual. Coakley¹³ suggests that sport programmes where participants develop feelings of being physically safe, personally valued, socially connected, morally supported, personally empowered, and hopeful about the future are much more likely to have a positive impact upon the development of all participants. For example, grassroots sports programmes such as Open Fun Football Schools (OFFS) and Football 4 Peace (F4P) highlight the positive impact that programmes run by trained local instructors at the community level can have on helping to develop conflict resolution skills between youth from Bosnia and Herzegovina²⁶ and Israel and Palestine²⁷ respectively. Such programmes highlight the importance of cultural understanding and solving conflict peacefully by fully integrating cultures together through football as opposed to demonstrating cultural superiority in football.

Research Context

The Hoodlinks programme takes place within the capital of

Guatemala. Guatemala City is divided into 22 zones. The Boxing and Taekwondo programmes take place in Zone 18 while Athletics, Badminton, Boxing, Judo, and Gymnastics programmes take place in Zone 7. Zone 18 is the most violent area within Guatemala City with 62 homicides reported in the first five months of 2014. This represents 25% of all homicides in Guatemala City during that period. Zone 7 had the fifth highest homicide rate with 16 reported homicides during the first five months of 2014, which represented 6% of homicides. Combined, these two zones where the Hoodlinks programs take place account for close to one third of all homicides in the capital.²⁸ Implementing this programme directly in the most high-risk areas of Guatemala City is a primary mandate of Hoodlinks. As a result, the Hoodlinks programme uses a variety of existing infrastructure directly within each zone to run its programming. In some cases, the programme is run in a small room in a community centre that is located near the entrance of a particular barrio. In other cases, local parks that are accessible on bus routes located in a central area of a zone are used.

The Hoodlinks programme was started by the Guatemalan Olympic Foundation (GOF) in 2012 to directly address growing concerns around youth violence. The various federations of these sports provide support in the form of equipment and training for Hoodlinks coaches. Each Hoodlinks coach receives training related to Olympic values, technical and tactical overview of each sport they are coaching, sport administration, coaching pedagogy and basic sport science principles. The goal of the programme is to: "... place education of Olympic values and sport at the service of the harmonious development of humankind with a view to promoting a peaceful society concerned with the preservation of human dignity."²⁹ (p. 1)

Each month, the programme focuses upon one of the educational themes from the Olympic Values Education Program (OVEP). These themes include Joy of Effort, Respect, Fair Play, Balance of Mind, Body, Spirit, and Pursuit of Excellence. These themes are taught in a number of different ways by the coaches. Coaches are typically former athletes who receive additional training from the Guatemalan Olympic Foundation on how to implement the themes into their daily lesson plans. Strategies such as talking directly to the athletes about each theme and playing games that focus on the development of outcomes related to each theme are commonly utilized throughout the programme. Coaches also attend regular workshops that focus on a number of topics that have included how to develop a lesson plan, sport and peace, supporting personal growth for athletes, and being a positive leader for children.

Athletes in the Hoodlinks programme are eligible to receive a scholarship to support their primary or secondary education by helping cover the costs of school tuition, school supplies, and school uniforms. Athletes must maintain good grades and regular attendance at school and in the Hoodlinks programme to maintain their scholarship. Athletes in the Hoodlinks programme are also provided with access to tutors who are available on-site to assist the athletes with their homework.

Parents and family members of the athletes are also encouraged to be actively engaged in a number of areas of the programme. Workshops for parents on topics related to the goals of the programme, parenting tips, sport and peace, and healthy development are provided on a regular basis by the Guatemalan Olympic Foundation. Parents of athletes who receive a scholarship are also required to commit to ensuring their children attend Hoodlinks and school on a regular basis, attend workshops and meetings convened by the Hoodlink organizers, and assist their children with their academic progress. In some cases, family members will participate with their children in the sporting activities as was evident during one of the site visits by the lead author who witnessed a grandmother and a mother participating in the Boxing programme alongside their grand/daughter.

The purpose of this study was to review and understand the athletes' experiences in the Hoodlinks programme to date and examine whether it had an impact on the development of life skills and on levels of aggression of the participants over a six-month period. Measuring aggression rather than actual violent behaviours in this group was important due to aggression levels, particularly amongst boys, which serve as a predictor of violent behaviour as they get older.³⁰ Hence, targeting the reduction of aggressive behaviours in children and youth has been shown to be critical with any intervention aiming to reduce youth violence amongst adolescents and adults.

METHODS

A mixed-methods approach that attempted to balance the importance of both qualitative and quantitative methods was utilized. A mixed-methods approach is an effective way to examine real world issues because it "... focuses on research questions that call for real-life contextual understandings, multi-level perspectives, and cultural influences...and... integrates or combines these methods to draw on the strengths of each."³¹ (p. 4) It is an effective approach for the purpose of this study as it enabled the researchers to examine both the current impact of the programme, any potential changes over a six-month time

period, and potential reasons for trends in the data over time. For example, the use of questionnaire data enabled the researchers to see if there were any changes over the six-month time period in any of the behavioural variables. The use of the interviews with the athletes plus their parents and coaches helped to shed further light on the nature and potential causes of any changes that might have occurred during the same period.

Participants

A total of 116 (80 M; 36 F) athletesⁱ participated in the study. Informed consent for athletes was provided by their parent/guardian. Athletes also provided informed assent to participate in the study. This represents 77% of all athletes registered in the Hoodlinks programme. Athletes ranged in age from 9 – 19 years (average age = 13 years). Of the 116 athletes, 62 (53%) had been in the programme for less than 1 year and 54 (47%) for more than 1 year. Sports represented included Athletics, Badminton, Boxing, Judo, Gymnastics, and Taekwondo. In addition to the athletes, five of the coaches provided informed consent to participate in the study. The five coaches who volunteered to participate in the study were all males and represented the sports of Badminton, Boxing, Judo, Gymnastics, and Taekwondo. All research protocols were approved by the Brock University Research Ethics Board and approved by the Scientific Review Committee from the Universidad Pedagógica in El Salvador.

Coach's assessment tool

Hoodlinks coaches completed the Life Skills Assessment Scale³² for each athlete at the beginning and end of the study. Hoodlinks coaches assessed each athlete's level of interaction with others, ability to overcome difficulties and solving problems, initiative, ability to manage conflict, and ability to understand and follow instructions (total of 5 items) on a scale of 1 (Does not do) to 5 (Does independently). An overall Life Skill Score was then obtained by taking the mean score of all five ratings. Kennedy et al³² reported strong internal reliability, inter-rater reliability, and test-retest reliability when used to observe youth aged eight to 16 years of age. Evidence of construct validity was also presented.

Athlete questionnaires

Athletes were asked to complete the following battery of questionnaires that assessed their development of life skills and levels of aggression (total of 145 items). These questionnaires were administered at the beginning and end

ⁱThe term athletes is used to describe the youth participants in this study as this is the term used by the Hoodlinks program.

of the study period (i.e., August 2015 and March 2016). A research assistant was available on site at all times to assist athletes with any questions they had or to provide clarity regarding reoccurring issues.

*Part A: Aggression, caring and cooperation scale.*³³⁻³⁵ Nineteen items measured the self-reported frequency of aggressive behaviours (e.g., hitting, pushing, name-calling, threatening) and the frequency of caring and cooperative skills over a seven-day period. There was a total of 11 items measuring the frequency (ranging from 0 – 6) of self-reported aggressive behaviors over a seven-day period. Each point represents one aggressive behaviour reported over that period. Scores can range from 0 to 66. For the caring and cooperative measure, there were eight items measuring the frequency (0 – 6) of caring/cooperative behaviour over a seven-day period. Similarly, each point represents one caring/cooperative behaviour reported over the past seven days. Scores can range from 0 to 48. These items were modified from a 30-day recall survey³⁴ to a seven-day recall in order to be consistent with and to provide a comparison to Oprinas et al's³³ aggression scale format. The target audience for these scales was grade three to eight (or eight to 14 years of age). Dahlberg et al³⁵ have reported its internal consistency to range from .88-.90 for measures of aggression and .60 for the caring and cooperation scale.

*Part B: Life skills scale.*³⁶ This questionnaire contained 115 items that provide an overall life skills score and sub-scale scores ranging from 1 (Never) to 5 (Always) measuring levels of: i) Decision making skills; ii) Problem solving skills; iii) Empathy; iv) Self-awareness; v) Communication skills; vi) Interpersonal relationship skills; vii) Coping with emotions; viii) Coping with stress; ix) Creative thinking skills, and x) Critical thinking skills. A copy of the scale was purchased from Dr. Vranda and permission was provided to use the scale for research purposes. An overall internal consistency alpha coefficient of .94 for the overall life skill score and test-retest reliability coefficients ranging from .70 to .95 have been previously reported when used with adolescents 13 to 16 years of age. Given the lack of a viable alternative to measure life skills with youth at the time of the study, it was determined that athletes aged nine and older could still complete the questionnaire with assistance from the research assistant should they require help with the wording.

*Part C: Youth Experience Survey – Sport.*³⁷ This 27-item questionnaire generated for youth aged nine to 19 used a Likert scale ranging from 1 (Not at All) to 4 (Yes, Definitely) to assess the degree to which the Hoodlinks programme developed the following skills: i) Personal and

social skills; ii) Cognitive skills; iii) Goal setting; and, iv) Initiative. MacDonald et al³⁷ report strong internal consistency scores using Cronbach Alpha which ranged from .82 to .94 for the various subscales.

Hoodlink coach interviews

In-depth semi-structured interviews with the five Hoodlink coaches took place in August 2015 and then again in February/March of 2016. The average time of the interviews was 26.5 minutes in August and then 25.8 minutes in February/ March 2016. The interview guide was developed to help obtain a richer sense of the type of experiences that athletes have had in the programme and to better understand changes that coaches had seen in their athletes since they joined the Hoodlinks programme. The in-depth interviews with the coaches gathered insight into:

- a) Hoodlink coaches' experiences of teaching for non-violence.
- b) Their perceptions of the impact that the Hoodlinks programme has had upon athletes such as noticeable changes in behaviour both within and outside the Hoodlinks programme.
- c) The role of the Hoodlinks programme to support the development of life skills.

Athlete and parental/guardian interviews

Baseline semi-structured interviews were conducted with 38 athletes (23 males; 15 females) and at least one of their parents/ guardians. To facilitate a representative sample, a mix of athletes representing gender, sport, and age were selected. Availability of the parent/ guardian and the athlete to participate in an interview were also a factor in interview selection. The ages of the athletes who were interviewed ranged from nine to 17 years with an average age of 12.7 years. The average time of the interviews was 21 minutes.

Semi-structured interviews were once again conducted with 20 athletes (10 males; 10 females) and at least one of their parents/ guardians. The ages of the athletes who were interviewed in this phase of the study ranged from nine to 17 years with an average age of 12.7 years. The average time of the interviews with the athletes and their parents was 17.7 minutes. All of the Hoodlinks sports were represented by the athletes. These 20 athletes were part of the original cohort of 39 who were originally interviewed at baseline. Due to time constraints, it was not possible to re-interview all 39 athletes. The 20 athletes were chosen using

their scores from the questionnaire data collected at baseline as a guideline. Scores for each variable were converted into a z-score. Z-scores reflect the number of standard deviations away from the group mean. The higher the z-score (either positive or negative) the further away from the group mean for that particular variable. Z-scores from each of the variables were then added together to produce an overall z-score. Using this as a general guideline, an equal representation of athletes who had a high overall positive z-score and a high overall negative z-score was identified. In addition, an equal representation of males and females and equal representation from each of the Hoodlinks sports was attempted. The intention of this selection criterion was to attempt to re-interview athletes who initially scored high on the baseline questionnaires and low on the baseline questionnaires to produce a more heterogeneous sample.

The purpose of these interviews was to explore the impact that the Hoodlinks programme has had upon the athletes both inside and outside of the programme. For example, these interviews explored:

- a) Why their son/ daughter joined the programme
Any noticeable behaviour changes since starting the programme.
- b) The development of life skills both within and outside the programme.
- c) Any examples of how they have applied what they have learned in the programme into their everyday life.
- d) The role of the Hoodlinks programme to support the development of life skills.

All interviews took place directly at the Hoodlinks site and were conducted in Spanish by a research assistant hired in consultation with the Guatemalan Olympic Foundation. With the participants' permission, interviews were digitally recorded to ensure that the interviewer was able to accurately capture the participants' ideas and opinions. All digital files were transcribed verbatim and then translated into English for analysis.

Data analysis

Quantitative questionnaire analysis. SPSS 22.0 was used to analyse responses to the questionnaire data. Repeated Measures Multivariate Analyses of Variance (MANOVA) were used to test for possible changes from time one to time two. Only data from athletes who completed both the pre and post measures were included in these analyses.

Qualitative Interview Analysis. All English transcripts were uploaded into the Dedoose software package to assist data analysis. Using a coding system, data was identified as coming from either the athlete, parent/guardian, or coach. Data was also coded as Baseline and Follow-up interview. An inductive approach using a content analysis was then used to explore patterns and themes amongst the data.³⁸ Relevant interview excerpts were tagged for possible themes that began to emerge from patterns within the data. Once all the data was reviewed and possible themes were identified, the data was re-examined for possible duplicate themes within participant data sets and re-examined to ensure consistency in themes and important patterns across participant data sets were captured.

RESULTS

While 116 athletes completed the pre-measures, only 86 (62 males; 24 females) athletes completed both the pre- and post-questionnaires. This represents 73% of all athletes in the study. Possible reasons for attrition (i.e., not completing the post questionnaire) include relocation, change in school schedule (e.g., now attend school during the same time as the programme is offered), or being absent on the day of the post questionnaire.

Data was then screened to ensure accuracy of data input and for outliers to ensure that each variable was normally distributed. All of the skewness levels were within acceptable ranges of +/- 2.0 thereby conforming to assumptions of normal distribution required for analyses of variance.³⁹ Five (four pre-measures and one post-measure) of the total 54 variables had kurtosis levels that exceeded the recommended levels of +/- 3.0. However, due to the relatively small sample size of 86, the adequate skewness levels for each variable, the strong psychometric properties of the questionnaires, and the robustness of multivariate analyses, no data were eliminated or transformed in the analyses.

Questionnaire results

Table 1 provides an overview of the descriptive results of the pre- and post-measures for each variable. A significant multivariate effect for the within subject variable of time was found: [λ (18, 67) = .519; $p < .001$, $\eta^2 = .48$]. Subsequent univariate analyses indicated significant within-subject effects for Communication Life Skills [F(1, 84) = 8.83, $p < .01$, $\eta^2 = .095$] and the Coaches' overall rating of athletes' Life Skills [F(1, 84) = 27.14, $p < .001$, $\eta^2 = .244$]. In both cases, the mean score at Time 2 was significantly higher than the reported score at Time 1. Subsequent

Table 1. Means and standard deviations of participants who completed both pre and post questionnaires and coach observation (n = 86)

	Pre		Post	
	Mean	SD	Mean	SD
<i>Aggression, caring and cooperation scale</i>				
Aggressive behaviours	6.2	5.9	5.5	5.6
Caring behaviours	16.7	10.3	16.5	10.4
<i>Youth experience survey</i>				
Personal and social skills	3.2	0.5	3.2	0.5
Cognitive skills	3.3	0.6	3.3	0.6
Goal setting	3.4	0.6	3.4	0.5
Taking initiatives	3.5	0.5	3.5	0.5
<i>Life skills scale</i>				
Decision making	3.4	0.4	3.4	0.5
Problem solving	3.7	0.5	3.7	0.6
Empathy	3.5	0.6	3.6	0.5
Self awareness	4.0	0.6	4.1	0.7
Communication	3.5	0.5	3.7	0.5
Interpersonal skills	3.9	0.5	4.0	0.5
Managing emotions	3.6	0.6	3.6	0.6
Managing stress	3.6	0.6	3.5	0.6
Creative thinking	3.7	0.6	3.8	0.6
Critical thinking	3.5	0.6	3.6	0.6
<i>Life skills assessment scale (observation)</i>				
Interacting with others	3.8	0.9	4.1	0.9
Overcoming problems and difficulties	3.4	1.0	4.0	1.0
Taking initiative	3.6	1.2	4.2	0.9
Managing conflict	3.4	1.1	3.9	1.1
Understanding/following instructions	4.1	0.9	4.4	0.9
Overall	3.7	0.8	4.1	0.7

Repeated Measures of Analysis revealed that the coaches' observation ratings for each of the individual life skill ratings of Interacting with others [$F(1,85) = 7.25; p < .01, \eta^2 = .08$], Overcoming difficulty [$F(1,85) = 14.78; p < .001, \eta^2 = .15$], Taking initiative [$F(1,85) = 12.84; p < .01, \eta^2 = .13$], Managing conflict [$F(1,85) = 10.88; p < .01, \eta^2 = .11$], and Listening to and following instructions [$F(1,85) = 14.86; p < .001, \eta^2 = .15$] were significantly higher at follow-up compared to baseline.

Repeated MANOVAs were also conducted to explore the potential impact of Sex, Type of sport (combative vs non-combative), Location (Zone 7 vs Zone 18) and Years in the programme (Less than 1 year, More than 1 year). There were no significant multivariate or univariate interactions between Time and Sex and Time and Years in program. However, there was a significant univariate interaction effect for Time x Location for the coaches' Life skill ratings. [$F(1, 84) = 4.65, p < .05, \eta^2 = .053$]. Follow-up Pairwise T-tests revealed that the coaches' overall Life skill ratings of athletes in Zone 7 significantly increased from

Time 1 to Time 2 [$t(1, 68) = 5.76; p < .001$] while coaches overall Life skill ratings of athletes in Zone 18 did not significantly change [$t(1, 17) = 0.49; p > .05$].

Significant univariate interactions for Time x Type of sport for the coaches' Life skill ratings [$F(1, 84) = 4.14, p < .05, \eta^2 = .047$] and Critical thinking life skills [$F(1, 84) = 4.83, p < .05, \eta^2 = .055$] variables were also found. Follow-up Paired T-tests revealed that while coaches' overall Life skills ratings significantly improved for those in both non-combative sports [$t(1, 32) = 4.13; p < .001$] and combative sports [$t(1, 52) = 3.61; p < .01$], subsequent one-way ANOVA's demonstrated that at Time 2, coaches' ratings of Overall life skills were significantly higher for those in non-combative sports compared to those in combative sports [$F(1, 84) = 0.22, p > .05$]. These differences did not exist at Time 1 [$F(1, 84) = 4.11, p < .05$]. Paired T-tests revealed that Critical thinking skills significantly improved from Time 1 to Time 2 for those in combative sports [$t(1, 52) = 3.61; p < .01$] but not for those in non-combative sports [$t(1, 32) = 0.76; p > .05$].

Table 2. Themes and sub themes identified by group and time

	Athlete		Parent		Coach	
	Post	Pre	Post	Pre	Post	Pre
# Interviewed	20	39	20	39	5	5
# of Coded Excerpts	96	317	82	303	72	41
Safe place to play						
Adult supervised			✓	✓		
Financial support				✓		
Alternative to delinquent activities						
Provides a diversion	✓	✓	✓	✓	✓	
Alternative to being in dangerous streets	✓	✓	✓	✓	✓	✓
Discourages substance use		✓	✓	✓	✓	
Take in aggressive athletes						✓
Interpersonal skills						
Aggressive behaviours	✓	✓	✓	✓		
Collaboration					✓	
Communication	✓	✓	✓		✓	
Conflict resolution	✓	✓	✓	✓	✓	
Helpful			✓			
Gender equity					✓	
Fair play	✓					
Jealous		✓				
Leadership	✓	✓				
Respectful of others	✓	✓	✓	✓	✓	✓
Social cohesion	✓	✓	✓	✓	✓	✓
Teaching others		✓				
Teamwork	✓		✓			

Interview results

Five core themes related to the impact of the Hoodlinks programme emerged from the qualitative analysis: i) Provides a safe place for youth to play; ii) Provides an alternative to delinquent behaviours; iii) Supports the development of positive life skills (both interpersonal and personal); iv) Provides other forms of support; and v) Has a broader community impact. These themes were consistent from the Baseline interviews and 6-month Follow-up interviews. Table 2 provides a breakdown of the occurrence of each sub-theme based upon time (Baseline and follow-up) and participant (coach, athlete, and parent/guardian).

Themes

1. Safe place for youth to play

Many of the parents spoke about the dangerous communities in which they lived. Zones 18 and seven have some of the highest rates of violence in Guatemala City. Many parents spoke about not letting their children play outside in the street and having to leave their children alone at home because they had to work and/or because the child's other biological parent did not live with them. Therefore, the children were either at school or inside the

home watching TV, playing video games, or doing other indoor activities. The following quote provides an example of the type of neighbourhoods many of the participants live in and the fear that parents have of letting their children outside to play.

I prefer them to be locked down at home, I prefer to buy them some movies, and leave them watching TV because if I am not with them, they cannot go out because I go out to work and if something happens to them outside and I do not know. Oh no! Oh my God! I cannot give them permission to go out because sometimes young people with shotguns pass close to where we live... (Parent, baseline)

The addition of the Hoodlinks programme within the communities gave their children a place to play under adult supervision at no cost. For the most part, parents viewed these places as safe because there were adult coaches there to watch over their children.

My son did not have the opportunity to go to another place because the place we live at is dangerous, so he hadn't been able to go. So now that we had the opportunity to come here [to the programme], my son is too excited. So he told me to come here and thanks God, here we are and I even do the [Boxing] practice with him... (Parent, baseline)

Table 2 continued. Themes and sub themes identified by group and time

	# Interviewed	Athlete		Parent		Coach	
		Post	Pre	Post	Pre	Post	Pre
	# of Coded Excerpts	96	317	82	303	72	41
Personal Skills							
Appreciation			✓				
Awareness		✓					
Confidence		✓	✓	✓	✓	✓	
Decision making						✓	
Excellence						✓	
Goal setting		✓	✓	✓	✓	✓	
Health				✓	✓		
Honesty		✓	✓				✓
Leadership						✓	
Motivated				✓	✓	✓	✓
Personal responsibility		✓	✓	✓	✓	✓	✓
Problem solving		✓				✓	
Resilience			✓	✓	✓		
Self defense			✓		✓		✓
Self improvement		✓	✓	✓	✓	✓	✓
Self-regulation		✓	✓	✓	✓	✓	✓
Skill improvement		✓		✓	✓		
Stress management		✓		✓			
Provides other forms of support							
Received a scholarship			✓	✓	✓	✓	
Academic support				✓	✓	✓	
Bond with coach					✓	✓	
Family time		✓	✓	✓	✓		
Basic necessities					✓		
Parent workshop				✓			
Community wide impact							
Prevents gang membership				✓	✓		✓
More peaceful					✓		
Kids having fun			✓	✓			

Another athlete in a follow-up interview stated: “I always come to train and no longer keep me locked up [at home].”

2. Hoodlinks provides a diversion from delinquency

Several of the parents commented that without Hoodlinks, their children would be tempted to participate in delinquent activities.

When the Olympic Foundation hadn't arrived yet, there were some people who came to try to convince young people to be gang members. But we thank God because when the Olympic Foundation started the project in here, all the young people joined and this place gets full. Little by little the situation has been more calmed. (Parent, baseline)

One of the main outcomes identified by participants of the Hoodlinks programme was that it kept the kids “off the streets” and diverted their attention away from other, and in many cases more dangerous activities. These two athletes identified the important role that Hoodlinks played in their community: “It was something different for the neighborhood because everybody used to be outside doing bad things ... now everybody is doing good things, doing

sports.” (Athlete, baseline) Another athlete in a follow-up interview noted, “I think Hoodlinks has helped many young people because they are not in troubles, drugs or gangs any more they are training and focused on sport.

Coaches also identified with the role that Hoodlinks had of helping kids get off the street and participate in more positive prosocial activities offered through the programme. One coach in a baseline interview, stated:

I think that if programs like this were implemented, we would reduce delinquency rates considerably because it would be possible to keep the minds of the children busy, their bodies would be working, they would be thinking of a better future, and we would avoid gang members to come and influence them to do bad things.

3. Athletes learn life skills in Hoodlinks

Participants, parents, and coaches all identified the positive impact that the Hoodlinks programme had on learning various life skills. The type of life skills that participants identified were grouped under either Interpersonal or Personal life skills.

a) Interpersonal. Interpersonal skills refer to skills that individuals use to interact with others. Table 2 provides a summary of participants who identified specific interpersonal skills during both the baseline and follow-up interviews.

i) Respectful of others. All three groups mentioned becoming more respectful of others as a result of their participation in Hoodlinks. Athletes typically identified being more respectful of their coach, for others in the programme and for those outside the programme such as friends, family members, and teachers as an important life skill learned in the programme. An athlete in a follow-up interview stated:

In a Badminton competition you have to apply fair play because some points the judge don't see well and can score it or not. But if we are honest, the truth must be first of all. We have to respect the opponent because this is only a competition they are not our enemies. After the competition we can talk or be friendly with them.

Another athlete in in a follow-up interview stated: “About respect, I have learned to respect decisions and opinions of others, because all of us have different way of thinking,” while another athlete in a baseline interview noted, “I have learnt respect. You have to be respectful everywhere you go: the house, the school, and other places.”

ii) Social cohesion. Social cohesion, or the opportunity to make friends and develop a social network through the Hoodlinks programme, was also identified by all three groups. For the athletes they felt that Hoodlinks had provided them with an opportunity to make new friends. Some had commented on how much easier it was to make friends at Hoodlinks compared to school. Athletes also commented on how Hoodlinks had taught them the importance of developing friendships and positive interactions with others. An athlete in a follow-up interview maintained, “At school we used to do homework in a group and it is necessary to know how to work with others. If we do not work in group it can be more difficult.” These positive interactions were also noted by one of the coaches in a baseline interview, “At the beginning of the project, they pass in front of others and did not speak. The project came and help them to be friendly, and communicate better and avoid conflicts between them...”

iii) Conflict resolution. The ability to solve conflict in a more peaceful manner was another interpersonal skill that the athletes, parents, and coaches all felt that Hoodlinks taught the athletes. Strategies such as walking away and not

getting into a fight and to intervene when they saw a friend start to fight were identified by athletes as conflict resolution skills learned during the Hoodlinks programme. Parents also commented that their children had become less aggressive at school and at home and noticed less use of fighting to solve problems since participating in the programme. As this parent noted, her son has also passed on these strategies to his brothers at home: “Well, he try to talk with his brothers if they are fighting to avoid a worse fight. He don't like his brothers or others fighting. I can see a big change in my son.” (Parent, follow-up)

iv) Other interpersonal skills. Table 2 provides a summary of the other types of interpersonal skills identified by the participants. For the most part, these interpersonal skills promoted pro-social behavior such as helping generate leadership qualities, being able to communicate and collaborate better with others, helping others and helping out more at home, using more elements of fair play, and being able to defend oneself.

b) Personal skills. Personal skills refer to skills that individuals have and that impact people primarily at a personal level.

i) Self-regulation. All three participant groups commented on improvements to athletes' self-regulation skills. Specifically, many noted improvements in the athletes' temperament and ability to control their anger to avoid getting into fights. “I think so because in the past, my temper used to be like bad and since I come here, I have improved a lot. I don't get angry anymore. I try to handle things better.” (Athlete, baseline)

ii) Self-improvement. Participants identified areas of self-improvement, particularly with sport skill techniques such as improved flexibility and striving towards excellence. Other areas of self-improvement included not using foul language and stopping substance use of tobacco and drugs. The following quote by an athlete in a follow-up interview highlights how Hoodlinks has motivated them to be a better person:

Personally [Hoodlinks] has changed me a lot. Sometime ago, I used to answer bad to my mother, go out (on the street), but no more... I do not stay on the street. I prefer to use that time to read, to study. The behavior with my parents and brothers has improved. Definitely, the impact has been amazing. I was so rebellious but no more.

Parents in particular commented that athletes were discouraged from abusing substances such as drugs, alcohol,

and tobacco because it would negatively affect their sport performance. One parent in a baseline interview stated:

Yes, there are many guys who practice with us, in the past, they used to smoke marijuana, but they have stopped because they already realized on how that substance affects their performance.

iii) *Personal responsibility.* Personal skills pertaining to personal responsibility was identified by all three participant groups. Athletes and parents mentioned that Hoodlinks had taught them to be responsible by being punctual and arriving to the programme site on time and by assisting others. For example, one parent in a follow-up interview talked about the importance her son learning to be responsible by helping others in the neighbourhood without expectation of payment: “The most important value he has learned is responsibility, discipline and that he avoid problems. Now he helps me a lot at home.”

iv) *Goal setting.* The impact of Hoodlinks to help the athletes set individual goals was another theme common to all three groups of participants. As this athlete in a follow-up interview and one coach identified, Hoodlinks helped them not only to set goals, but also to track and monitor their personal goals in and outside of sport:

Most of them have set goals for life. Before the project they were aimless, do not know what they want, and neither what sport they were good [at]. But Hoodlinks programme helps us to understand, learn and focus on something that we really like and we know we are on the right track.

v) *Other.* A number of other themes were identified less frequently by participant groups. These included appreciation, confidence, honesty, motivation, decision-making, leadership, problem solving, stress management, striving for excellence, and resilience. Although not as frequently mentioned by all of the groups, these themes are important to recognize as contributing factors in the role Hoodlinks plays in these communities.

4. Hoodlinks provides other types of support

Parents commented on the additional support that the Hoodlinks programme provides in the form of academic support, scholarships, parent workshops, family support, and basic necessities. Often times, parents cannot afford to have their children attend school due to the additional costs (e.g., uniforms) or require their children to work to earn money for the family. However, by receiving a scholarship,

the families are able to afford to have their children attend schools. Athletes must maintain good academic standing and have regular attendance and positive behaviours to continue to receive the scholarship throughout the school year. One parent in a follow-up interview noted:

I tell to my kids they have to approach the benefits Hoodlinks give them, because this year I don't have money to continue studies. But thanks God and Foundation, three of my children have scholarship; that is one of the reasons I am grateful. The last year I got fired it was a difficult time for us. So I told them they have to take all blessings...

For many of the parents, they felt that participation in the Hoodlinks programme also encouraged success at school. Parents felt that athletes learned to be more disciplined through the programme and therefore were more likely to do their homework than to play on the streets during their free time. Coaches in particular stressed the importance of doing well in school and completing their homework. Another parent in a baseline interview maintained:

Until now that the foundation arrived to this place, they are doing so much for many kids because I see that there are many children who are getting benefits because of this project ... Last year, he did not do well at the school. But this year he has been doing great thanks to coach X who has been insisting him to do homework.

The coaches also served as mentors to many of their athletes and became someone with whom they could go to for advice. As one coach noted in a follow-up interview:

But I have seen significant changes on my athletes to someone it is difficult to stop bad habits like smoking, for example; because one of them came to training smelling of marijuana. (Despite they not smoke during training) but now I see that they are honest with me and told me: "teacher I smoked, I did this, or I did not do that"; I think we've created that bond of sincerity and honesty and I can work with them in a better way, get close and if they allow me, suggest some things. They are sincere with me and then I can work with them in a better way, approach and advise them like a friend.

5. Changes within the community

Parents in particular noticed positive changes in their community. They described it as more calm or peaceful. For example, one parent in a baseline interview stated:

Well, thanks God it has been calmed. I realized that there was a change when the project started because in the past, there was much delinquency, groups, and all the stuff. But now that the project started, I see here in Las Torres that there was a change. Almost every day you see people playing at the football court, so every group that arrives has their own rules, they leave and then another one comes at around 5pm or 6pm. The ones from here arrive and they play at until 9pm. That is the change that I have seen.

Parents and athletes also commented about the joy and fun that the programme had brought to the community. One parent in a follow-up interview stated, “Before the project there were many kids who were doing bad things, but when the project came it was a shock for us, because it is free. We can train, learn and have fun.”

When asked what would happen if the Boxing programme left their neighbourhood, this parent responded in a baseline interview, “But I think that it can continue being here, it is better to me if it is here because the peace will continue in this area. If they leave and go to start at another place, there is going to be violence again.”

Coaches also stressed the importance of ensuring that the programme is sustainable in the communities to which they have made a commitment to offer programming. One coach in a baseline interview emphasized:

The acceptance of the people [in the community] also counts. At the beginning it is going to be something like: Oh well, there is a project which just comes for certain period of time and then it is going to leave. At the beginning it is very complicated, but you have to...we have to demonstrate them the project as it is, the vision that you have.

DISCUSSION

The purpose of this study was to understand the athletes’ experiences in the Hoodlinks programme to date and whether it had an impact on the development of life skills and levels of aggression over a six-month period. While the number of self-reported aggression and caring/cooperation behaviours did not change over the six-month period, the number of self-reported aggressive behaviours over a seven-day period was low at baseline (mean of 6.2 out of a possible max score of 66) and remained low at the end of the study (mean of 5.5). Similarly, the number of caring/cooperative behaviours reported over a seven-day period at baseline were moderate (mean of 16.7 out of a maximum score of 48) and remained moderate at the end of the study (mean of 16.5). Whether these low levels of

aggression and moderate levels of caring/cooperative behaviours reported at the start of the study was a result of previous participation in the Hoodlinks programme could not be determined. However, results from both the YES-Sport and the interview data suggested that many athletes had already had a positive experience leading up to the start of the study. For example, scores from the YES-Sport questionnaire indicated that athletes in the Hoodlinks programme had positive experiences both at baseline and at the six-month follow-up period (see Table 1). On average, athletes indicated that they felt that the Hoodlinks programme had helped them to further develop personal and social skills, cognitive skills, goal-setting skills, and initiative skills. In addition to the questionnaire data, interviews with the athletes, parents, and coaches all highlighted various personal and interpersonal life skills that they felt were being further developed and applied within the Hoodlinks programme (see Table 2). Based upon the responses to the YES-Sport questionnaire and the interviews, it would appear that their experiences within the Hoodlinks programme were positive and consistent with the development of life skills. Not only were positive experiences reported at the beginning of the study, but also were maintained six months later during the follow-up period. In a recent study by Nanayakkara,⁴⁰ students in Sri Lanka improved their critical thinking, reflective judgement, decision-making, and self-correction skills after spending six months in a programme that integrated Olympism Education and Conflict Resolution strategies. The changes were the same regardless of gender or ethnicity. Bean et al⁴¹ also utilized the Youth Experience Survey to assess girls’ experiences in a physical activity programme geared towards the development of life skills. Similar to the results in this study, athletes from low-income families reported high quality of experiences where life skills were intentionally taught through sport. Qualitative results from interviews in the same programme also highlighted the development of similar personal (e.g., emotional regulation, goal setting) and interpersonal life skills (e.g., respect, responsibility, social interaction) as those reported in this study.⁴²

Coaches’ assessments of the athletes’ ability to interact with others, overcome difficulty, take initiative, manage conflict, and listen to and follow instructions each increased significantly during the six-month study. These results are particularly encouraging given that these are indicators of the athletes’ application of the life skills that they have learned in the programme. While athletes reported moderate levels of life skills using the self-report Life Skills Questionnaire (LSQ) at both time one and time two, only

the Communication variable significantly increased. During the interviews, athletes could identify with many different life skills related to being respectful towards others, positive social interactions with others, more peaceful conflict resolution strategies, controlling aggression through self-regulation strategies, personal goal setting, and personal responsibility for social and personal improvement. However, they often had a difficult time articulating how they were implementing them outside of the programme. This evidence suggests that athletes may require further support on how to transfer their life skills outside of the sporting environment. The ability to internalize the development of a life skill is critical if youth are to be expected to apply the same life skill outside of the sporting environment.¹⁸ Previous research by Nanayakkara⁴⁰ highlighted that when Olympic values were practiced and intentionally taught through games and sport activities that are focused upon conflict resolution, secondary students in Sri Lanka were better able to make the connection to applying these values at home, school and the community.

The one self-reported life skill from the LSQ that did increase significantly was Communication. It was also a common strategy that parents and athletes identified during interviews on how the athletes dealt with conflict both in and outside of the programme. Athletes often articulated that when confronted with aggressive behaviours from others or when seeing their peers engaged in aggressive behaviours, they would often resort to communication skills by avoiding physical aggression to solve problems and to tell others to “stop fighting.” Sport, it would seem, can provide an opportunity for athletes to practice their communication skills in a safe environment and can be an effective way to avoid conflict. Previous research with ex-gang members in Mexico found that games which focused on the development of communication, teamwork, trust and problem solving significantly improved perceptions of happiness, life satisfaction and self-concept.⁴³

The type of sport may have varying effects on athletes. In the case of this study, non-combative sports such as badminton, athletics and gymnastics elicited increases in coaches' observation of overall use of life skills in their athletes compared to athletes in combative sports such as boxing, judo, and taekwondo. Conversely, athletes in the combative sports self-reported higher levels of critical thinking skills after six months of participation compared to those in the non-combative sports. While at first glance it may seem counter-productive to use combative sports to assist in the reduction of youth violence, previous research does support the use of such sports to facilitate life skills. Wright⁴⁴ (p. 150) provides an insightful glimpse into the

culture of boxing and why it is such a positive sport for adolescents who are high risk and previous offenders of violent behaviours:

The environment inside the gym presents an alternative to their life outside. It is focused, supportive and respectful of space and others. When a young person enters the gym, he or she can embrace an engaging atmosphere and become a focused boxer. Gaining an athletic ethic through the groups helps the youth not only begin to form a positive self-identity that will help them live a fulfilling life, but it also encourages a practice of self-preservation.

Chinkov et al⁴⁵ also provided support for a link between participation in combative sports and the development of life skills. They interviewed 16 Brazilian Jiu-Jitsu athletes who had been participating in their sport anywhere between two and 20 yrs. Common life skills that the athletes reported as a result of their participation in Jiu-Jitsu were respect for others, perseverance, self-confidence, and healthy lifestyles. While positive results have been found for the use of combative sports (and non-combative sports for that matter), what is less understood is whether different sports produce different types of life skills. Following up on Chinkov et al's⁴⁵ study with Jiu Jitsu athletes, they were not provided with specific “life skills training” as part of their lessons. They identified the culture and ethos of the sport as a main contributor to foster life skills. Other research has found that sports that have a high degree of physical contact and that often encourage a culture of aggressive behaviour against opponents (e.g., American football, ice hockey) tend to produce more incidences of unsportsmanlike behaviour compared to sports that have only a moderate level of contact (e.g., basketball, baseball/softball, soccer, lacrosse).⁴⁶ Following an extensive review of research examining the impact of various sports on the psychological experiences of youth, Evans et al⁴⁷ recommends that further research is required to understand the contextual and environmental factors that influence a young person's experience when playing different type of sports. This study adds further support for examining the impact of different types of sports on life skill development.

Parents often reported that their children were spending more time focusing on doing well in the programme and doing well at school rather than participating in delinquent behaviours manifested on the streets in their communities. Previous research with child soldiers in Sierra Leone highlighted that a football programme geared to help reintegrate youth after a civil war played an important role in distracting youth from delinquent behaviours and served as a psychological coping mechanism for participants to

help them divert their memories away from the horrors of war.⁴⁸

The decision to take the programme directly to athletes within two of the most dangerous Zones of Guatemala City has been a very important one to ensure access to the programme. Providing children and youth with a safe place to play is consistent with Article 31 of the United Nations⁴⁹ Convention on the Rights of the Child, which states: “Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts.” Athletes and parents described the feeling of being held hostage in their own homes due to the dangers right outside their houses. The only place where many athletes were allowed to go previously was to school and then straight back to their house. Once at home, they were not allowed to go outside due to the dangers on the streets. However, with the addition of the Hoodlinks programme in their communities, it became a place where the children and youth of the community were allowed to go by their parents. Athletes described these experiences as being a form of liberation from their homes where they often felt locked up when they were not at school. These results provide further support for the importance of running life-skills based programming directly in the areas where it is most needed. Similar findings from a study with the South African Buffalo City Soccer School (BCSS) located in the Buffalo Flats community in the East London area have also been reported.⁵⁰ The Buffalo Flats community is reported to have a high level of unemployment and inadequate access to basic infrastructure such as health facilities, law enforcement and basic necessities. The BCSS programme focuses upon the development of life skills through soccer. Participants who were interviewed in the programme described the BCSS as a safe place where they can go to get off the streets and hence stay away from getting into trouble.

CONCLUSION

The results from this study support the importance of embedding sport programs directly in neighbourhoods at high risk of violence. As many of the parents in this study commented, the streets outside of their homes are dangerous. Before Hoodlinks arrived in their community, the children and youth in the community were either “locked inside their homes” when not at school or were outside on the streets either participating in or being subjected to delinquent behaviour. With the arrival of the Hoodlinks programme, the children and youth now had a safe and welcoming place where they could go during their leisure time. While at the Hoodlinks programme, athletes developed a positive social support network with their

coaches and their peers and reported positive experiences throughout the duration of the study. Through sporting activities, they also had opportunities to learn, develop, practice, and apply numerous personal and interpersonal life skills. Coaches noticed significant improvements after six months of their athletes’ use of life skills such as interacting with others, overcoming difficulty, taking initiative, managing conflict, and listening to and following instructions. The athletes themselves reported significantly higher levels of communication skills six months after their baseline assessments. While further efforts are needed to help the athletes make the connections between the life skills learned in Hoodlinks and the application of these skills in their day-to-day lives, parents and coaches had started to notice changes within the home and within community. Parents in particular noticed that their children had started to develop good study habits at home for their schoolwork and were taking their academic responsibilities more seriously. This was incentivised through the use of a scholarship that families could access should the athletes maintain participation in the programme and continue to perform well academically and maintain a 95% attendance record in school. Athletes were also more helpful at home and were getting along better with their siblings. Parents also felt that their communities had become more peaceful with the arrival of the Hoodlinks programme and feared that if the programme were discontinued, violence levels would escalate. Overall, the results over a six-month period are quite encouraging with respect to the development of life skills of athletes in the programme. Exploring the potential for programme expansion to serve more youth and more communities using similar programme structures to encourage regular participation appears warranted given the positive results from this study.

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