

A study on the impact of sports participation on the Sustainable Development Goals.

ABSTRACT:

The primary purpose of this study is to measure the contribution of sporting activities to specific Sustainable Development Goals (SDG's) within the context of the HCLF – “Sport for Change” initiative. To ascertain the objective, a survey design was employed to a select number of middle and high school students from each of the schools as part of the program in Noida and Lucknow. In accordance with their engagement levels within the initiative, the study used a cohort of 120 students from both locations. To present and test the plausible link that active participation in sport shows a discernible progress towards SDG goals, the study captured student engagement metrics from our program, ranging from low levels of participation and high levels of engagement. From the data gathered, the study revealed that there is a positive correlation in engaging in sporting activities on the targeted SDG goals of students involved in the “Sport for Change” program.

Sport and the Sustainable Development Goals

The *2030 Agenda for Sustainable Development*, adopted by the United Nations General Assembly in September 2015, sets out a ‘supremely ambitious and transformational vision’(UNGA 2015, preamble, 3) for global development. The 17 Sustainable Development Goals (SDGs) and their associated targets are comprehensive and far-reaching in scope and ‘balance the three dimensions of sustainable development: the economic, social and environmental’ (UNGA 2015, preamble, 1).

The ‘growing contribution of sport to the realization of development and peace’ (UNGA 2015, 10) is explicitly established in the *2030 Agenda for Sustainable Development*. Sport has a unparalleled ability to unify and inspire diverse audiences across the globe. With its universal appeal and cultural value, sport has the potential to act as a catalyst to fulfilling the Sustainable Development Goals (SDGs). Links can be established between each of the SDGs and sports. Among the most intricately connected are Goals 3 (Good Health and Wellbeing), 4 (Quality Education), 5 (Gender Equality), 8 (Decent Work and Economic Growth), 10 (Reduced Inequalities), 11 (Sustainable Cities and Communities), 16 (Peace, Justice and Strong Institutions) and 17 (Partnerships).

Research Background:

There is a consensus among researchers on the positive effects of sports engagement and the role it has on being catalytic to achieving the 2030 Agenda. By employing indicators, benchmarks and assessment tools, this study aims to test this narrative by measuring the contribution that sport has had among children participating within the HCLF – “Sport for Change” initiative. The purpose of this paper is to build on this

narrative by looking closely and specifically at three of the SDG goals. Namely, goal 3 (Good Health and Wellbeing), 4 (Quality Education) and 5 (Gender Equality) to adjudge if there are discernible differences or improvement among children who actively participate vis a vis children who remain inactive in the *sport for change* initiative. Active students constitute those engaged in the sports for change program for a minimum of once every week whilst inactive students represent those who have not participated in the initiative for consecutive weeks.

HCLF – “*Sport for Change*” Program:

HCL Foundation’s flagship initiative, ‘*Sports for Change*’, acknowledges the contribution of sports towards personal and social development. It works towards harnessing the positive transformative potential of sports by increasing access and participation in sport at the grassroots. As part of this initiative, HCL Foundation empowers young leaders from disadvantaged communities by channelizing their energy towards play and sports. It is an approach based on the belief that play or sport is not just an end in itself but also an effective way to help achieve larger development goals. Over the years, the initiative has been able to successfully train more than 6500 students in various sports such as athletics, karate, chess, carom, badminton, volleyball, football, kabaddi and cricket. Students have represented and won accolades at the District, State and National Level Tournaments.

As part of this initiative, Sportz Village Foundation, an organisation engaged in public charitable activities including providing sports education and sports management programs to schools, communities and corporates to drive change in terms of health, education and empowerment of children, has partnered with HCLF as an implementation agency. The specific aim of this partnership is to identify, train, and nurture talent in sports while making opportunities for play and physical education accessible to children and youth in middle and high school from underserved communities from districts in Noida and Lucknow.

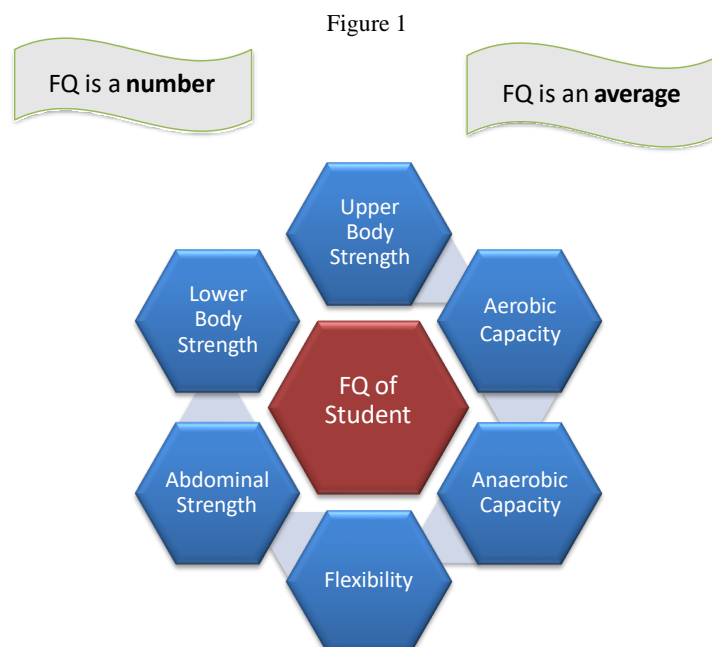
Methodology: design and instrumentation

In order to evaluate the efficacy of the impact that sports participation has on the three selected SDG goals, the study purposefully selected a target group of 60 students from each location, totaling to a cohort of 120 students, from schools in Noida and Lucknow. Among these students, 50% accounted for students who are active participants in the “*Sport for Change*” initiative, vis a vis 50% who are inactive in the program. The following section indicates the breakup of three separate survey design tests that were conducted and mapped to the respective SDG goals, the methods employed to capture the relevant findings and the number of students involved in each test:

- **Goal 3 – Good Health and Well-being through Fitness Quotient scores**

Universal and holistic conceptions of health and well-being are at the forefront of the *2030 Agenda for Sustainable Development*. Evidence strongly suggests that regular physical activity reduces the risks of several non-communicable diseases (WHO 2014) and indicates further benefits for psychological and social health. (Dudfield and Dingwall-Smith, 2015) There is a robust evidence base underscoring the health benefits of sport and physical activity. Regular physical activity is fundamental to weight control and prevention of obesity and reduces the risk of cardiovascular disease, stroke, diabetes and breast and colon cancer. (Warburton, Nicol and Bredin, 2006)

To demonstrate a positive correlation between higher levels of sports participation and better health, a proprietary model for measuring fitness called *Fitness Quotient* was used. *Fitness quotient* (FQ) is a numerical fitness score of a student which is assessed by a battery of six tests that aims to measure endurance, speed, upper body strength, lower body strength, flexibility and abdominal strength. The overall FQ of a student is an average of his or her fitness quotients across all fitness tests.



20 students from each location were selected with a 50/50 or balanced split between inactive participants and active participants. Data findings are represented in bar graphs in the results section to demonstrate any variance in fitness levels among the two groups of students.

- **Goal 4 – Quality Education through Academic proficiency levels and attendance**

Research broadly postulates that there is a positive effect of sports engagement on mental health, self-perception, concentration and memory. This has led to a debate on the common misconception that devoting time to physical activity could divert students' attention away from their studies. Early research however, indicates that an involvement in sports and its corollary benefits of social, mental and cognitive development can in-turn lead to better academic performance. (Qurban et al., 2018) (McPherson et al., 2018)

To analyse the extent to which sports participation can affect students' academic performance, a survey design was employed to identify the proficiency levels of 40 respondents (20 students from Lucknow and 20 students from Noida) in three core subjects, i.e. **Maths, Science and Social studies** along with their **attendance levels** at school, specifying whether such attendance is online or physical, for a period of 30 days. The average percentage obtained amongst the active participants and inactive participants were then calculated to discern any differences in academic performance and school attendance.

The data used for analysis in this study was acquired through the use of surveys which captured the latest exam percentages obtained within these core subjects along with attendance levels from the month of July. Following permissions and discussions on the purpose of the research, these surveys were subsequently circulated among the heads of the schools involved in the study. Data was analyzed and discussed quantitatively using bar graphs to test the hypothesis put forward in this study.

- **Goal 5 - Gender Equality**

Gender equality and women's empowerment are fundamental components of sustainable development and universally recognised as fundamental human rights. The international community has put these issues at the centre of the SDG Agenda, acknowledging that 'the empowerment of women and girls will make a crucial contribution to progress across all goals and targets'. (UNGA 2015, preamble, 6) A growing body of evidence has begun to establish sport as a practicable tool to propel women and girls' empowerment. Findings suggests that sport can benefit girls and

women as a wide-ranging development criterion. Sport teaches women and girls the values of teamwork, self-reliance and resilience; has a multiplier effect on their health, education and leadership development; contributes to self-esteem, forms social connections and challenges harmful gender norms. (Huggins and Randell, 2007) (Punzoo, 2017) (Sandys, 2007) In addition, it mobilizes the global community and speaks to youth while uniting across national barriers and cultural differences.

This study has incorporated a tool called Social Emotional Learnings (SEL) to measure the extent to which sport has had an influence on promoting women's empowerment. SEL is the process of developing self-awareness, self-control, and interpersonal skills that are vital for school, work, and life success. The SEL test measures five different, most observable, skills to gauge the relative strengths in a student (as shown in the diagram below).

Figure 2



Figure 3

Description	Score
Does not perform	1
Does with a lot of help	2
Does with some help	3
Does with a little help	4
Does independently	5

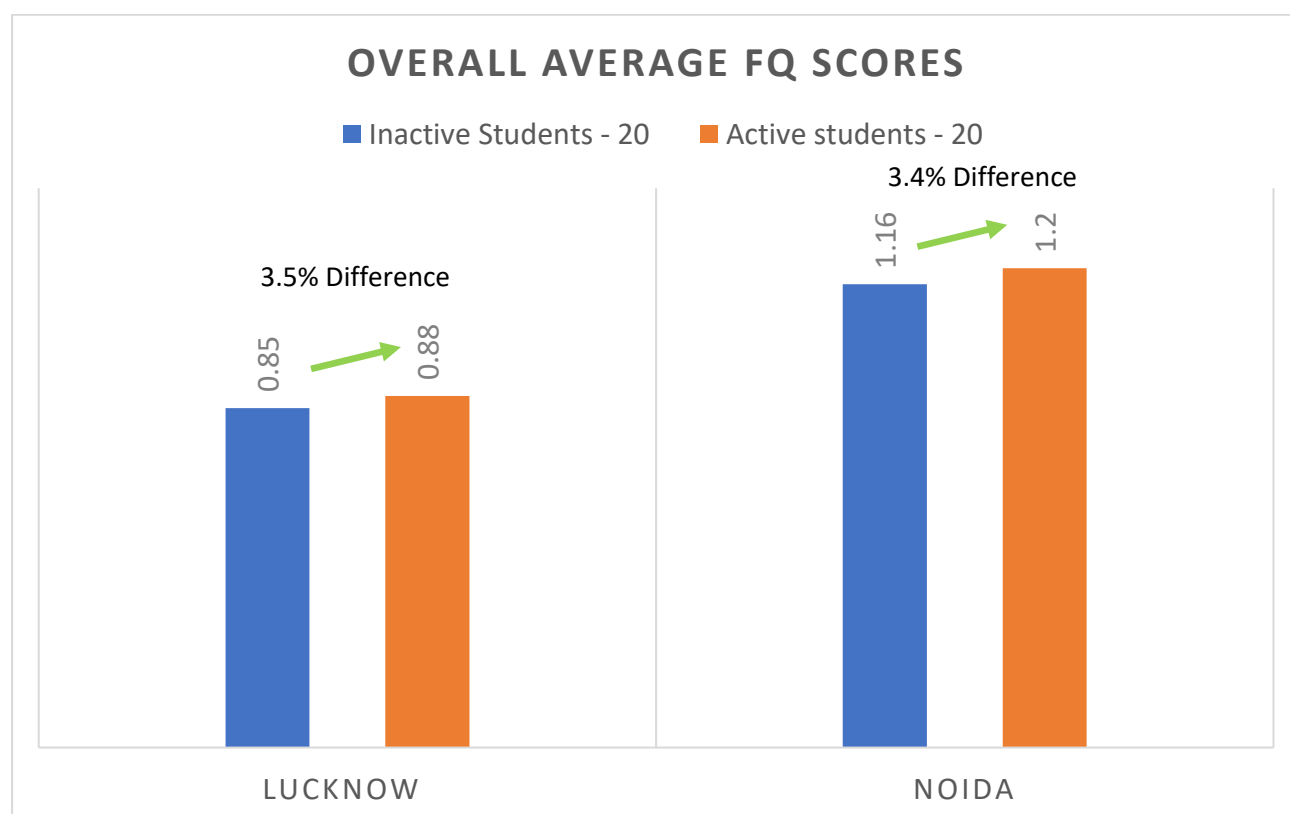
As displayed in figure 3, each observable skill is captured by a sports trainer and graded within a spectrum of 1 to 5, with 1 equating to 'does not perform' and 5 to the child performing the skill 'independently'. To ascertain a perceptible impact that sports has

had on the empowerment of girls within the context of the *Sports for Change* program, the SEL test was conducted among 20 girls from both locations with a proportionate split in participation levels.

Following the collection of data, the average scores for each skill was calculated from both active participants and inactive participants to judge any progress or contrast.

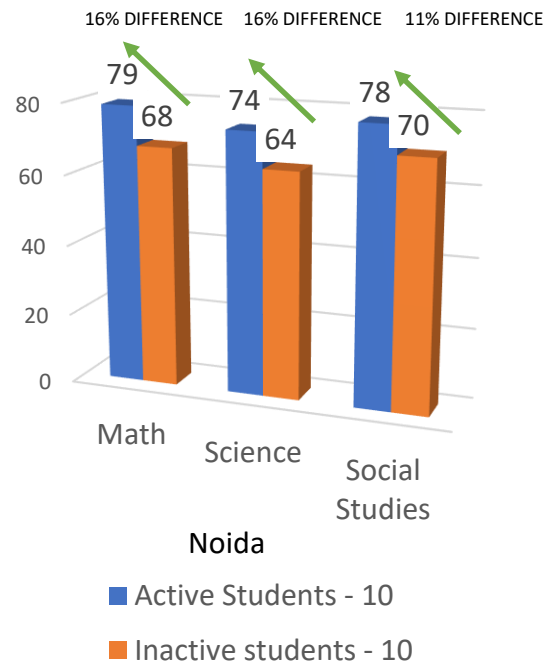
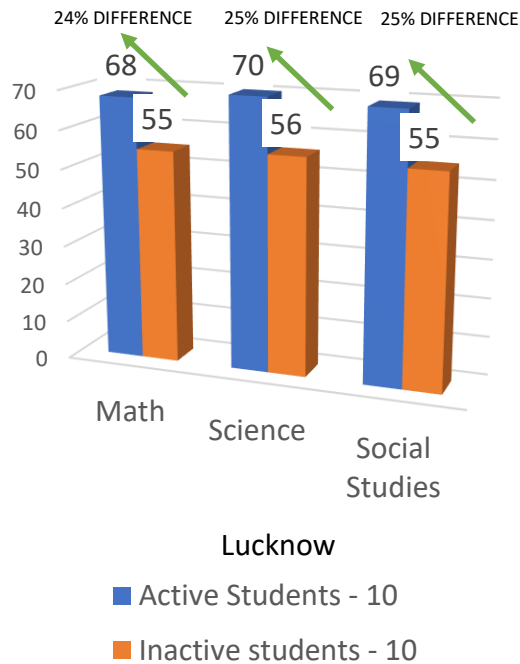
Results:

1. Good Health and Well-being

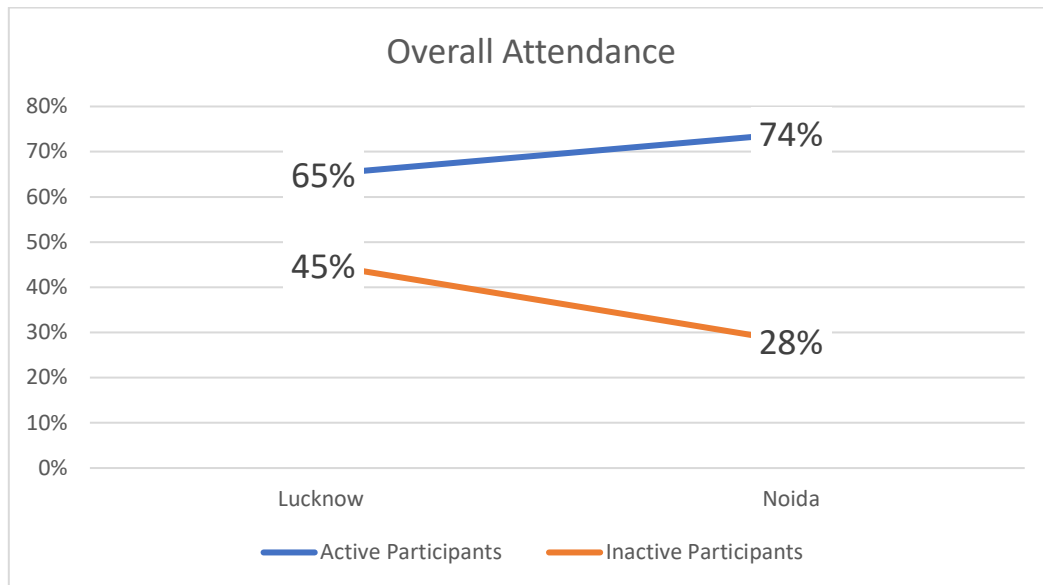


The accumulated *Fitness Quotient* scores among the two sets of students from both regions have shown a marked divergence. The overall FQ scores (measured over the cumulative score of six fitness parameters: upper body strength, anaerobic capacity, aerobic capacity, lower body strength, flexibility & abdominal strength) of students with active sports participation levels show a 3.5% and 3.4% increase in their fitness levels respectively.

2. Quality Education

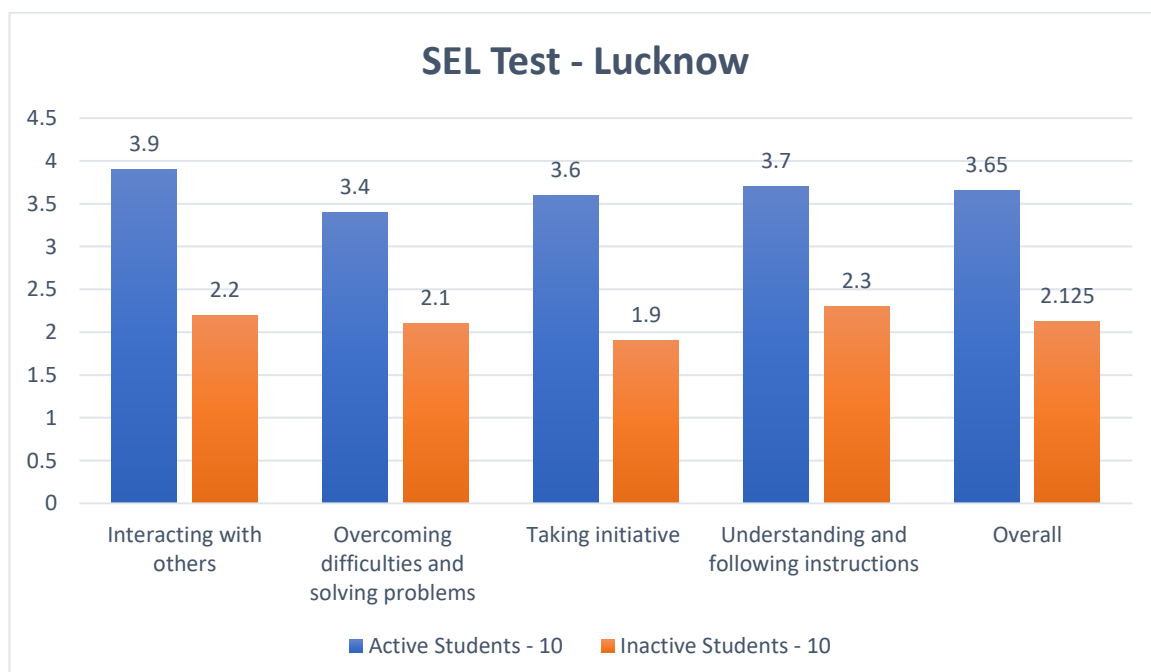


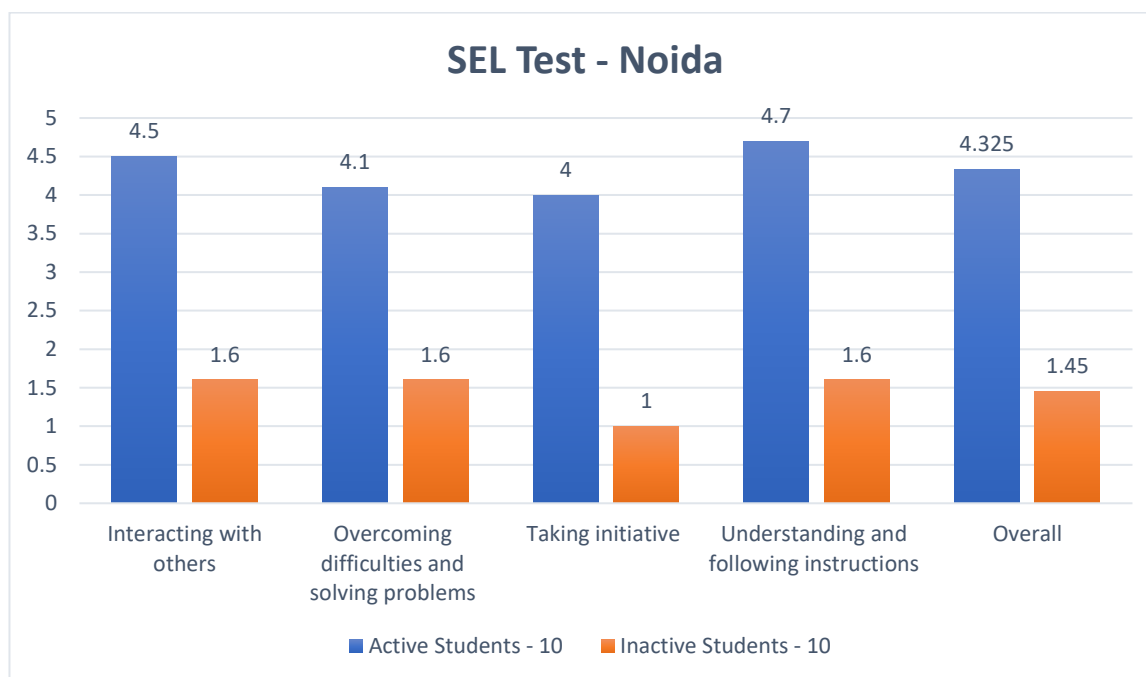
Considering the sample on the whole, the findings of our research indicate that there are incrementally higher grades amongst the students who partake in physical activity frequently. While the students from Noida show a lesser degree of variance in grades, there is a visible divergence in marks obtained among the cohort of students from Lucknow. Specifically, a 24% increase in Math scores from an average score of 55 amongst the inactive students and 68 amongst the active students. Likewise, a 25% increase in science grades from 56 to 70 and similarly a 25% increase in Social Studies scores.



Attendance levels also indicate an insight towards a consistent causal effect of active sports participation on school absenteeism. There is a notably higher attendance percentage among active students from both regions.

3. Gender Equality and Women Empowerment.





Girls who are active participants in the program have consistently demonstrated higher socio-emotional learning skills in all of the four parameters.

Limitations

While this study has attempted to display the corollary benefits of active sports participation on health, education and women's empowerment, the main methodological limitation has been a selection bias. A relatively small cohort of students with a binary centric focus on active versus inactive participants restricts the field and makes the findings less comprehensive. To overcome this limitation for future studies on the topic, firstly, a more substantial definition of what constitutes as active or inactive participants must be cited. Apart from measuring participation on a weekly basis, the study could include a percentage derived from the data collected that can be impartially measured. Furthermore, rather than matching each SDG goals' findings to separate groups of students, a pool of students with varying engagement levels ought to be mapped to all three goals. This will allow for a more comprehensive comparison.

Future research on this topic can gain further insights by including a variation in the focus groups' age and standards. This can potentially uncover additional findings and extend the scope of the analysis to include certain age groups performing better than others when it comes to sports and related SDG goals.

The proposed targets for SDG 3 point to a broader, all-encompassing concept of health and well-being. Whilst the study addressed health in terms of physical fitness, it overlooks the mental health aspect of the development agenda.

Limitations also include fundamental challenges in measuring sport's contributions to development. For instance, there are few unified international data capturing methods specific to sport. This has hampered the adoption of common models because policymakers often have to use various sources to make an informed judgement. The process of developing standardised model indicators to measure the contribution of sport to the SDGs and other relevant priorities helps to address this challenge.

The structures responsible for sport, physical activity and PE within countries are also complex. It must be recognised that sport can result in harm or negative experiences and may reinforce existing inequities related to privilege, gender and other dimensions.

Conclusion

The scope and breadth of sport to positively impact across multiple sustainable development goals (SDGs) and targets for the betterment of people and the holistic development of the planet as a whole, needs to be brought to the attention of key decision makers across government, intergovernmental organisations and non-governmental organisations. To achieve this, sports as a sector must be in a position to relay its magnitude and effect, which extends well beyond sport into education, health and gender equity. This report has aimed to systematically collate and present evidence that reiterates this claim.

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