

Sports-for-development gender equality impacts from a basketball programme: Shifts in attitudes and stereotyping in Senegalese youth and coaches

Katherine L. Meyer¹, Kathleen M. Roche¹

¹ The George Washington University, Milken Institute School of Public Health

Corresponding author email: klmeyer@gwmail.gwu.edu

ABSTRACT

Despite the increasing popularity of sports-for-development programmes worldwide, little research has examined how these programmes shape gender attitudes, a key component of positive youth development. This study examines how participation in a sports-for-development programme in Senegal is associated with the gender equality attitudes of youth and coaches. A repeated cross-sectional design is utilized to examine how measures of gender equity and stereotypes among 87 youth and 32 coaches with no experience in the programme (Time 1) differ from the same measures among youth and coaches with at least one year of programme participation (Time 2). Findings indicated that youth endorsements of gender equity and non-traditional gender roles were significantly higher for some participants at Time 2 compared to the reported attitudes at Time 1. When compared to female youth, male youth reported greater endorsement of non-traditional gender roles at Time 1, with lower levels of endorsement reported at Time 2. Coaches' gender equity attitudes did not differ significantly between Time 1 and Time 2. With minimal programme exposure, the LLP programme may potentially increase gender equity attitudes and decrease gender stereotyping among youth, particularly females in southern Senegal. Future sports-for-development programmes should increase programming prioritization of coaches, a group that appeared to show no benefit from the programme.

BACKGROUND

Since the United Nations first included sports as a development tool in the Millennium Development Goals in 2003,¹ organizations and agencies throughout the developing world have implemented “sports-for-development” programmes targeting a range of youth development and peace goals.¹ Sports-for-development, referring to the use of sports to foster occasions for positive development at the individual- and community-level, are believed to have benefits extending beyond physical health and athletic skills.¹ For example, sports-for-development programmes have been correlated with higher levels of youth engagement in community activities and education and improved health outcomes, which includes higher self-efficacy, increased sense of purpose and autonomy, and fewer symptoms of depression.^{1,2,3,4} The documented benefits of participation in these programmes include physical activity growth, educational gains, poverty reduction, and decreases in gender inequity.^{5,6,7}

A central focus of many sports-for-development programmes is the advancement of positive health, economic, and societal outcomes among girls and women.^{8,9} Examples of these positive advancements for girls and women include improved mental health status⁸ and increased citizenship skills such as respect, self-control, and discipline.⁹ Despite political and theoretical attention to the use of sports-for-development to advance the well-being of girls and women, little research has examined how these programmes may impact gender norms and attitudes within developing countries. The purpose of the present

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study is to demonstrate how a sports-for-development programme may impact gender equity, stereotypes, and norms among youth and coaches in southern Senegal where gender inequities in education strongly disadvantage females.

As in many African countries, Senegal's population is young and characterized by high levels of educational disadvantage.¹⁰ Sixty-two percent of Senegal's population is under the age of 24, and the median age of males and females, respectively, is 17.7 and 19.4 years.¹⁰ Although Senegal's primary school enrolment increased significantly from 1999 to 2014, secondary school enrolment remains low, and the country's illiteracy rate is 40%.¹⁰ Females in Senegal face significant educational disadvantages. Although 24% of males in Senegal are enrolled in secondary school, just 18% of girls are enrolled.¹¹ Relatedly, almost three-quarters of males (74%) aged 15 to 24 were literate in 2012, compared to 56% of their female counterparts.¹² This gender inequity is demonstrated on a national level; Senegal's gender gap index score of 0.69 places the country 77 out of 142 countries for the World Economic Forum's Global Gender Gap Rankings.¹³ These data underscore the need for increased academic promotion as well as gender equality programming in Senegal.

Although many organizations in developing countries have implemented activities to discourage harmful gender norms and promote the empowerment of girls,^{2,3} little research within an African context has demonstrated how such activities change harmful beliefs using validated and reliable scales previously used in Africa. The United States Agency for International Development (USAID) awarded the Live, Learn and Play (LLP) project to John Snow Research and Training Institute, Inc. (JSI) with the charge to build the capacity of a local non-governmental organization (NGO) in Senegal to implement a sports-for-development programme. The project is a public-private partnership between USAID and the National Basketball Association (NBA) with the aim of increasing citizenship, self-efficacy, leadership and other positive behaviours for youth and coaches through a basketball programme. The three-year long project started in 2013 and trains coaches using a training of trainers model to equip Senegal with a team of coaches that can educate youth and market the programme nationwide. The project collected three annual time points of qualitative and quantitative data to examine how programme participation may improve factors (e.g., conflict resolution skills, academic excellence) important to youth's positive development and social responsibility. The present study seeks to identify how the programme may influence factors related to gender attitudes and beliefs.

Specifically, this study will investigate how gender equality attitudes among youth and coaches differ from before exposure to the programme (May 2014, baseline or Time 1) and after at least one year of programme involvement (November 2015, Time 2). Using sports as a tool to change development and peace indicators is a relatively new programmatic approach; thus, peer-reviewed and rigorous evaluation literature on this topic is limited.^{14,15} Increasingly, evaluators have recognized the paucity of research in this area and aimed to contribute more substantiated evidence to support sports-for-development programmes. Educators and activists are progressively using sports as a platform to engage youth in community activities, build relationships, increase healthy behaviours, and improve academic performance.^{16,17,18,19,20,21,22} Programmes utilizing sports to positively change behaviours have ranged in activities, target populations, specific aims, and overall intended impact.

Programmes looking to affect overall development and peace and strengthening communities using the sports-for-development platform included a broad range of curricula and activities. Much of the community strengthening programming and movement towards sports-for-development and peace originated from using sports to impact HIV transmission and education. Kicking-Aids-Out! was one of the first sports-for-development organizations that used sports to impact development indicators and increase attention for HIV programming.¹ Several other sports programmes followed suit with implementing sports programmes to tackle HIV/AIDS, as funding for HIV/AIDS increased with support of global campaigns like the Global Fund to Fight AIDS, Tuberculosis and Malaria.²³ Other community strategies using sports included Football United's programme, which used football to positively influence prosocial relationships for youth as a way to positively impact the larger-scale school and community environments.²

Focusing on specific development or peace themes in sports-for-development, some programmes have examined the ways in which sports can influence health, social support, and behaviour change.^{1,2,5} A study in South Africa evaluated sports participation among young black adults to show positive correlations between participation and psychosocial well-being and psychological development.⁵ Australia utilized sports programming to engage homeless youth in a sporting programme to improve mental health and reduce exposure to crime and drug and alcohol abuse.²⁴ Additional health promotion activities using sports include healthy living education²⁵ and overall physical activity promotion.¹⁷ As well, other sports-for-development

programmes have included peer support and relationship building,² risk reduction,² and, more recently, gender-equality education and girls' empowerment.^{9,15,25}

Sports-for-development interventions have been implemented in developed and developing countries, low-income and high-income states, and in nearly every region across the world.^{1,2,16,17} However, many of the projects using sports programmes for development are located in Africa and Asia.²⁶ Interventions have chosen to examine specific minorities or underperforming populations in choosing sports programming to impact their intended objectives.^{5,14,15,24} Evaluators have overwhelmingly directed these activities at youth and young adults.^{1,2,25} This is largely due to the unique opportunity of adolescence and young adulthood in shaping cognitive, social, and moral development.⁵ During this time period, many young individuals cultivate their sense of self, self-efficacy, and identity.⁵ While aimed at changing youth and young adults' development, the programmes expend a large proportion of resources for training coaches and mentors to model and train youth to produce the anticipated growth. However, no programmes to date have evaluated the trained coaches for similar changes in self-efficacy, gender, or any of the development indicators examined for youth.

The target population of focus for many sports-for-development interventions has been boys and young men.^{1,2,9,15} Programmes that have included both sexes have noted limitations in having too small of a sample size of girls to evaluate the data at a rigorous level.² With the United Nation's push to focus on adolescent girls through their creation of The Girl Fund, the Coalition for Adolescent Girls, and Girl Up, many more organizations are starting to invest funds into girls empowerment and adolescent girl-specific sports-for-development programming.^{20,25,27} This movement has been termed the "Girl Effect" by many agencies and organizations and has reminded implementers and donor agencies of the importance and inclusion of gender equality in the Sports-for-Development and Peace Mandate launched in 2005.^{1,25} However, much of the increased attention to girls and gender equality in sports-for-development activities has simply meant including girls in programmes to increase visibility of girls in sports.²¹ Other programmes focusing on gender have looked at changing boys and young men's views on girls and women's roles.¹⁶ These programmes aiming to change gender perceptions, roles, and stereotypes have routinely been limited to post-conflict settings where females are disproportionately exposed to and victims of violence.²⁶

Summary

Among the sports-for-development interventions focused on gender equality and that have been evaluated, most utilize qualitative research methods and only a small number have used survey tools validated for use with populations in Africa.^{2,15} Virtually no sports-for-development programmes have examined both male and female youth, as well as male and female coaches, in evaluating programme impacts on gender equality. Addressing these gaps, this study will advance knowledge about sports-for-development programmes by providing a more comprehensive understanding of how this kind of programme may affect gender attitudes and beliefs across different age groups and sexes. The first study aim is to assess changes in gender attitudes and beliefs among youth and coaches involved in the LLP programme for at least 12 months. Informed by the programmatic activities aimed at endorsing gender equity, it is hypothesized that youth involved in the programme for at least one year will report higher positive gender equity and higher rejection of harmful gender attitudes compared to a sample of youth assessed at baseline. The study's second aim is to identify variations in levels of, and changes in, gender attitudes and beliefs between male and female youth and between male and female coaches involved in the LLP programme for at least 12 months. Based on the supposition that programmatic activities endorsing gender equity will resonate with females more strongly than for males, it is hypothesized that (1) female youth will report higher positive gender equity than male youth and (2) female youth will report higher rejection of harmful gender attitudes than will male youth. This study examined independent samples t-tests for youth by sex; gender-specific models were not run for coaches due to the small number of female coaches included in the sample.

METHODS

Study Design

Using a repeated cross-sectional evaluation, this study examines how gender equality attitudes for 87 male and female youth (aged 13-18) and 32 coaches (aged 18-56) surveyed in May 2014 (Time 1) compare to gender equality attitudes among the same numbers of youth and coaches in November 2015, after at least one year of involvement in the Live, Learn, and Play (LLP) Programme in Senegal. The ages and gender composition of Time 1 and Time 2 samples were identical. The LLP Programme developed two survey tools with questions adapted from validated scales used in Africa, including the Attitudes towards

Women Scale for Adolescents²⁸ and the Gender-Equitable Men (GEM) Scale.²⁹ The present study's sample comprised larger proportions of female youth and coaches compared to the entire LLP population (gender differences likely stemmed from the fact that an all-girls school was included in the study sample at baseline). Attendance at LLP, which was tracked quarterly, increased through the study period.

Designing and Adapting the Survey Tools

The youth and coach survey tools assessed demographics as well as several attitude and behaviour change components, including citizenship, self-efficacy, personal aspirations, and gender equity and culture. For coaches, the survey also asked the number of years the coach had played basketball and/or coached basketball to assess their level of experience with basketball. No personal identification information was requested or recorded from the respondents to allow for anonymity and privacy.

The survey was translated into French before distributing to youth and coaches at Time 1 in May 2014 and at Time 2 in November 2015. Translation was performed by a certified professional translator with more than 10 years of experience translating into French that is suitable for Senegalese. Following prior work conducted successfully in this country context, the native-French speaking translator, who is fluent in English, began by translating our English-language study materials into French. Next, we combined this translation with a review team approach where native-French speaking Senegalese youth reviewed the documents for accuracy, comprehension, and clarity. Subsequent to this review, the bilingual project staff reviewed documents and consulted with the translator on discrepancies to come to an agreement around translations that ensure semantic meaningfulness for the study population.

Study Sample Selection and Recruitment

Youth and coaches involved in the LLP Programme were asked to participate in a voluntary survey to share their attitudes, beliefs, and behaviours related to citizenship, self-efficacy, and gender. Prior to programme launch, 87 youth and 32 coaches with no prior experience with a sports-for-development programme completed the voluntary surveys. At Time 2 assessment, 87 youth and 32 coaches with at least 12 months of programme involvement were randomly selected and matched based on sex and school affiliation. Lists of each school's LLP participants with at least one year of involvement were matched to baseline participants' sex and school affiliation data. At each school, the research

team chose every third person that matched the criteria from baseline to randomize the Time 2 selection and avoid threats to selection bias. The project's budget limitations coupled with challenges of locating participants who graduated from school after the initial time point of data collection prohibited our ability to follow baseline participants throughout the time period of the study. Youth from Time 1 and Time 2 included 62 girls and 25 boys. Time 1 and Time 2 coaches included 24 males and 8 females. Youth ranged in ages from 12 to 19 years old with a mean age of 15 years old. Coaches ranged in age from 18 to 57, with 32% under age 28, 33% between 28 and 37, 19% between 38 and 47, and 16% over age 47.

Data Collection Process

Beginning in May 2014, the research team collected information on the age, school or youth centre site, and sex of youth and coaches. No confidential information was collected that could link youth or coaches to the data results collected. For all youth, parent consent forms were required before starting the programme, which included consent to participate in research activities. All of the surveys and consent forms were collected and kept in secure locations for the entirety of the research study. The information collected to match the Time 1 and Time 2 participants' data included sex and school site. School site location was recorded on the first page of each survey. Other identifying information collected, which included sex, grade, and age, which were coded in SPSS 22.0³⁰ to run frequencies and descriptive data analyses. In order to qualify for the Time 2 data collection sample in November 2015, youth and coaches had to have at least one year of programme involvement.

Measures

Youth's gender attitudes were assessed by 13 items from the Attitudes Towards Women Scale for Adolescents, a tool tested and validated in African contexts.^{28,31} Five items assessed positive gender attitudes and eight items assessed harmful gender attitudes (responses ranged from 1 = *strongly disagree* to 4 = *strongly agree*; the eight harmful gender attitude statements were reverse coded). Principal component analysis with Varimax rotation was used to examine construct validity for items at Time 1 and at Time 2 and for males and females. Results identified two dimensions valid at both time points and across genders: (1) a five-item measure of harmful gender attitudes and (2) a two-item measure of gender equity. Remaining items were distributed across other dimensions differently by gender and time and, thus, were not retained for the measurement

of youth's gender attitudes. The five-item non-traditional gender roles measure was assessed by the following items: "Men make better political leaders than women and should be elected;" "It is more important for boys than girls to do well in school;" "When jobs are few, men should have more right to a job than women;" "Boys are better leaders than girls;" and "Girls should be more concerned with being good wives versus focusing on a professional career" ($\alpha = .79$ at both Times 1 and 2). Thus, the non-traditional gender roles measure assesses rejection of harmful gender norms and stereotypes. The two-item gender equity measure was assessed by youth responses to: "Women and girls should have equal rights with men and receive the same treatment" and "Girls should have the freedom as boys" ($r = .26, p < .05$ at Time 1; $r = .55, p < .001$ at Time 2).

For the coach survey, we used 14 items from the Gender-Equitable Men Scale,²⁹ which had been tested and validated in African contexts. The 14 items were evenly divided into positive and harmful gender attitudes (four responses ranged from 1 = *strongly disagree* to 4 = *strongly agree*; remaining ten responses ranged from 1 = *do not agree*, to 3 = *strongly agree*). Harmful gender attitude items were reverse coded. Due to differences in results from principal components analysis from Time 1 to Time 2, a single two-item measure of non-traditional gender authority was identified as valid across time. Items that were summed and averaged included: "Men should have more right to jobs than women when jobs are few" and "Men make better political leaders than women and should be elected" ($r = .67, p < .001$ at Time 1; $r = .74, p < .001$ at Time 2).

Analysis Plans

Although the study design included matching by age and gender, analyses were not conducted on matched pairs due

to insufficient level of matching rigor. To address the first study aim, we used independent samples t-tests to examine differences in Time 1 and Time 2 scores of youth and coach gender attitudes. Similarly, for the second study aim, we ran independent samples t-test to examine gender differences in gender equity and non-traditional gender roles scores at both time points.

RESULTS

Youth Results Comparing Gender Equity and Non-Traditional Gender Roles

Youth's gender equity and non-traditional gender roles scores were significantly higher at Time 2 as compared to Time 1 (T2: $M = 2.93, SD = .93$; T1: $M = 2.62, SD = .88$; $t(171) = -2.20, p < .05$ for gender equity; T2: $M = 3.02, SD = .73$; T1: $M = 2.34, SD = .84$; $t(172) = -5.69, p < .001$ for non-traditional gender roles). These findings are consistent with our hypothesis that one year of involvement in the LLP programme would be associated with a higher non-traditional gender roles score for youth. Results for the independent samples t-tests for youth variables are shown in Table 1.

Youth Results Comparing Gender Equity and Non-Traditional Gender Roles by Sex

As shown in Table 2, there were no significant differences in gender equity scores between male and female youth at either time point (Male T1: $M = 2.48, SD = .77$; Female T1: $M = 2.68, SD = .93$; $t(84) = -.95, n.s.$; Male T2: $M = 2.78, SD = .86$; Female T2: $M = 2.98, SD = .96$; $t(85) = -.93, n.s.$). However, we did find significant gender differences with respect to scores for non-traditional gender roles. Findings in this regard differed at each time point. At Time 1, results for non-traditional gender roles were significantly

Table 1 – Youth Gender Equity and Non-Traditional Gender Roles Independent Samples T-Test Results

Variable	Mean	Standard Deviation	95% Confidence Interval (lower, upper)	t-score	df	Significance (2-tailed)
Gender Equity Score Results						
Time 1	2.62	0.884	-0.575, -.031	-2.20	171	0.029
Time 2	2.93	0.929				
Non-Traditonal Gender Roles Scale Results						
Time 1	2.34	0.839	-0.915, -.444	-4.28	172	<0.001
Time 2	3.02	0.733				

Table 2 – Youth Gender Equity and Non-Traditional Gender Roles Independent T-Test Results by Sex

Variable	Mean	Standard Deviation	95% Confidence Interval (lower, upper)	t-score	df	Significance (2-tailed)
Gender Equity Time 1 Results						
Males	2.48	0.77	-0.618, 0.218	-0.953	84	0.343
Females	2.68	0.927				
Gender Equity Time 2 Results						
Males	2.78	0.855	-.642, 0.234	-0.925	85	0.357
Females	2.98	0.958				
Non-Traditional Gender Roles Time 1 Results						
Males	3.15	0.719	0.823, 1.449	7.215	85	<0.001
Females	2.02	0.642				
Non-Traditional Gender Roles Time 2 Results						
Males	2.47	0.78	-1.076, -0.466	-5.03	85	<0.001
Females	3.25	0.587				

Table 3 – Youth Gender Equity and Non-Traditional Gender Roles Independent Samples T-Test Results by Sex

Variable	Mean	Standard Deviation	95% Confidence Interval (lower, upper)	t-score	df	Significance (2-tailed)
Gender Equity Female Results						
Time 1	2.68	0.927	-0.640, 0.033	-1.786	121	0.77
Time 2	2.98	0.958				
Gender Equity Male Results						
Time 1	2.48	0.77	-0.763, -.163	-1.304	48	0.199
Time 2	2.78	0.855				
Non-Traditional Gender Roles Female Results						
Time 1	2.02	0.642	-1.45, -1.009	-11.112	122	<0.001
Time 2	3.25	0.587				
Non-Traditional Gender Roles Male Results						
Time 1	3.15	0.719	0.253, 1.107	3.205	48	0.002
Time 2	2.47	0.78				

higher among males compared to females (Males: $M = 3.15$, $SD = .72$; Females: $M = 2.02$, $SD = .64$; $t(85) = 7.22$, $p < .001$). At Time 2, in contrast, results for non-traditional gender roles were significantly higher for females compared to males (Males: $M = 2.47$, $SD = .78$; Females: $M = 3.25$, $SD = .59$; $t(85) = -5.03$, $p < .01$).

Time 1 to Time 2 changes in non-traditional gender roles differed between females and males (see Table 3). Among females, scores for non-traditional gender roles increased from Time 1 to Time 2 (T1: $M = 2.02$, $SD = .64$; T2: $M =$

3.25 , $SD = .59$; $t(122) = -11.11$, $p < .001$); whereas, among males these scores decreased from Time 1 to Time 2 (T1: $M = 3.15$, $SD = .72$; T2: $M = 2.47$, $SD = .78$; $t(48) = 3.21$, $p < .01$).

Coach Results Comparing Non-Traditional Gender Authority

Among coaches, results indicated no statistically significant difference in Time 1 to Time 2 scores over time for non-traditional gender authority (T1: $M = 3.31$, $SD = .70$; T2:

$M = 3.04$, $SD = .78$; $t(62) = 1.43$, n.s.). Thus, there was no support for the hypothesis that Time 2 coaches would report higher non-traditional gender authority scores compared to Time 1.

DISCUSSION

Results from this cross-sectional study indicate potential promise for sports-for-development programmes potentially changing gender attitudes within a relatively short amount of time for female youth. The results from our study mirror the outcomes produced from the limited number of prior sports-for-development programmes that focused on gender equity.^{2,7-9,15,16,26} This handful of studies utilized predominantly qualitative measures to evaluate the impact of sports-for-development in decreasing harmful gender norms and promoting female empowerment;^{2,15} their results showed a positive effect in minimizing destructive gender attitudes and encouraging positive gender beliefs and empowerment of girls.^{2,15} The results from the Live, Learn & Play project provide further evidence of the positive influence of sports-for-development upon gender equity.

Youth results showed increased positive gender attitudes and decreased harmful gender stereotyping at Time 2, compared to Time 1. Gender equity and empowerment represent just one of several components taught to youth throughout the LLP programme year. Focusing specifically on reducing harmful gender attitudes for youth, the non-traditional gender roles variable showed statistically significant results in a favourable direction for the Time 2 sample compared to the results at Time 1. Females' non-traditional gender roles results were nearly 40% greater at Time 2 compared to Time 1. Many of the variables used for these two scales were looking not only at gender beliefs, but also at culturally embedded practices and roles within society. Changing these beliefs within a short time frame is difficult. Thus, the higher non-traditional gender roles scores for youth after one year of programme engagement shows that changing cultural gender beliefs for female youth may be feasible.

Some of the differences in gender attitudes shown for male versus female youth and for coaches did not support study hypotheses. For example, unlike at Time 2, Time 1 findings showed that males reported a higher mean score for non-traditional gender roles than did females. Although results indicate that the programme may have had a positive effect on empowering females, it is unclear why non-traditional gender roles among males were over 20% lower than for females at Time 1. These results suggest the need to adjust programme content and approach to more effectively reach males. Specifically, the programme brought in several

female basketball leaders to speak about female empowerment and the importance of women in sports. While the programme also brought in male basketball leaders, the male leaders focused on the importance of education, citizenship, and other life skills development components. The programme may need to refocus the content of male guest speakers to highlight the importance of increasing gender equity and decreasing harmful gender stereotypes. Additionally, programmes should add youth workshops that provide smaller, more personal atmospheres to discuss controversial questions and topics of gender equity and gender norms with gender specialists, outside of coach discussions and weekly trainings. Finally, we speculate that the lack of significant results for the coaches' non-traditional gender authority variable may be due to the fact that coaches received only one session on gender equity and empowerment during the training year. A dedicated programme is needed for coaches, beyond the currently adopted once-a-year session.

Limitations

Some of the differences in gender attitudes shown for male versus female youth and for coaches did not support study hypotheses. For example, unlike at Time 2, Time 1 findings showed that males reported a higher mean score for non-traditional gender roles than did females. Although results indicate that the programme may have had a positive effect on empowering females, it is unclear why non-traditional gender roles among males were over 20% lower than for females at Time 1. These results suggest the need to adjust programme content and approach to more effectively reach males. Specifically, the programme brought in several female basketball leaders to speak about female empowerment and the importance of women in sports. While the programme also brought in male basketball leaders, the male leaders focused on the importance of education, citizenship, and other life skills development components. The programme may need to refocus the content of male guest speakers to highlight the importance of increasing gender equity and decreasing harmful gender stereotypes. Additionally, programmes should add youth workshops that provide smaller, more personal atmospheres to discuss controversial questions and topics of gender equity and gender norms with gender specialists, outside of coach discussions and weekly trainings. Finally, we speculate that the lack of significant results for the coaches' non-traditional gender authority variable may be due to the fact that coaches received only one session on gender equity and empowerment during the training year. A dedicated programme is needed for coaches, beyond the currently adopted once-a-year session.

The limitations identified do not discount the value of results from this assessment. Much of the previous literature looking at sports-for-development programmes have not focused on gender equity and empowerment.^{16,25-27} The few published studies on this topic have had much smaller sample sizes than this study² and have targeted young men and boys.^{2,9,15,16} This study is also one of the few interventions to employ and evaluate validated tools tested in Africa.^{1,2,15} Furthermore, no sports-for-development programmes have looked at the instructors or coaches of the programme in addition to the youth participants. Thus, the results from this study provide more evidence for sports-for-development and gender programming integration for both youth and adults. The youth data results show significant improvements in equity, empowerment, and reversal of harmful gender stereotypes and roles. The results from this study will add to the paucity of research available for sports-for-development and provide future areas to explore, such as gender equity attitudes amongst coaches, differences between male and female gender attitudes, and the level of programme involvement required to influence significant changes in gender attitudes.

Future Research Directions

Implementation research often lacks significant results due to difficulties in planning, pressures from donor reporting, and abrupt changes in the programme. These barriers are the realities evaluators must acknowledge when working in low-resource settings and implementing new programmes. Fortunately, all of the limitations addressed in this study can be eliminated with proper planning and supervised execution. With the significant results observed in the youth data using larger sample sizes compared to previous studies, future interventions can use this study as a barometer for minimum adequate sample size. Though the coaches' data did not produce significant results, future studies could increase coach sample sizes to observe whether there is a positive effect on gender attitudes among the trainers (i.e. coaches) after receiving LLP or a similar sports-for-development training. Future implementers could also prioritize matching the sample sizes more comprehensively to avoid threats to selection bias and use the same instrument tool for Time 1 to Time 2 to avoid instrumentation bias. As well, future studies should examine the gender measurement tools in the African context to provide further evidence of causality. Results from our analyses examining construct validity also point to the need for developing more valid measures of gender attitudes in this context. Overall, these research directions provide ample evidence that sports-for-development interventions seeking to change gender attitudes deserve more attention and require additional evaluation to inform implementers and the sports-for-development field.

CONCLUSION

Sports-for-development programmes provide a tremendous opportunity for engaging an often-neglected population of gender and health development programming – adolescents. Adolescents comprise the majority of the population around the world and specifically in Africa.¹² Exploring interventions that can integrate gender into attractive and meaningful opportunities for youth should be promoted and supported, especially given the unique and opportune period of development adolescence presents.⁵ The data from LLP's repeated cross-sectional study provides evidence for investing in sports-for-development programmes as a means to change gender attitudes and beliefs. With minimal exposure, the LLP programme has already achieved higher gender equity attitudes and reduced the perpetuation of destructive gender stereotypes and roles for female youth in southern Senegal.

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