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Gender ratings of social behaviour functioning levels among children with intellectual disability in a sport socialization intervention programme in Kenya

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Abstract
Research consistently document sport socialization as promising for the social skill learning in children with intellectual disability (ID).However, there exists limited evidenced based intervention research to confirm this research proposition. This study investigated the effectiveness of social skill training in a sport socialization intervention programme by gender in children with intellectual disabilities in Kenya. Objectives that guided the study was to compare rating of social behaviour levels across gender before and after the sport socialization intervention programme.
Methodology: Intervention mode involved instructing, prompting, and cuing each child with ID into action and individualized guidance as supported by peers without disability. Single Subject (SSD) quasi-experimental research design was used. Data was collected at three weeks interval during baseline, Treatment and reversal treatment. Data collection instruments were 3-5 minute video capture, peer social task rating scale checklists Data analysis: Data was analyzed by visual analysis, time series analysis, video coding and Null hypotheses tested by Statistical Descriptive statistics was used in the discussion. Results**:** both boys and girls improved in all social tasks assessed after intervention. On social skill rating boys had an improvement range of 50%-62.3%, compared to the girls 56%-60%. Improvement was observed in all children irrespective of gender.
Conclusion: the study concluded that the intervention programme was effective in enhancing social skill learning of Children with ID irrespective of gender. Gender did not affect social behavior responses at posttest. Sport socialization intervention programme affected the rate of social behavior functioning levels and should be enhanced in all children and Youth with ID in and out of school. The null hypothesis was neither retained nor rejected, since time series analysis test was not possible based on study design and mutual exclusivity of data points.
Recommendations: the study recommended that boys and girls should be given equal opportunities to participate in sports and develop their social abilities. Finally the study recommended further research to be conducted on gender rating involving statistical analysis for confirmation of gender differences in social behavior functioning levels amongst children with intellectual disability.

Keywords: intellectual disability, socialization, gender, sport, intervention

1. Introduction
In recent years there is an increase in research examining social skill training in children with intellectual disabilities. Sport participation has been identified as promising for the promotion of social inclusion and social skill training in children with disabilities [1, 2, 3]. Despite this, there is limited evidence based intervention to confirm this proposition. It is reported in Healthy people, 2020 that 56% of children with Intellectual disability (ID) engage in no leisure activities, compared to 36% of children without Disabilities. Disability sport socialization is concerned with how individuals with Intellectual disabilities acquire their social identities [5, 6]. Socialization is an interactive process of communication on social influence based upon social learning mechanism used in assimilating various social experiences. Cues to Socialization may include among others: Verbalization, response to name calling, passing ball to team mate, ball contact, joining other children in play, holding hands, interaction with peers, and duration of contact in play [7]. Research continuously documents that female children with disabilities are more at risk of physical and sexual violence, exploitation, harassment and discrimination compared to their male counterparts [8]. The right to participate in exercise and sports is proclaimed in the United Nations Convention of Rights of persons with disabilities (CRPWD) [9], and Convention of the rights of the child (CRC) [10]. These policy frameworks continuously advocate against charitable approaches that treat children with disabilities as passive recipients in desperate need of care and protection [11]. Similarly, these conventions have created structural opportunities for recognition of each child as a full functioning member of his or her family, community and Society. Thus the focus should be on investment in removing the physical, environmental, economic, social and attitudinal barriers. The need for intervention is therefore a necessity in gender mainstreaming in social skill training through sport based interventions.
The United nations general assembly has recognized the important role that sport can play in helping in achievement of Eleven [11] of the sustainable development goals and has partnered with the international Olympic Committee (IOC) and International Paralympic Committee (IPC) to help drive the youth agenda of the SDG [12]. This study is significant as it addresses itself to SDG 4 on inclusion and SDG 5 on

gender equity and access. Persons with disabilities, particularly children with disabilities do not have equal opportunities and equal access to most aspects of life. This lack of access includes basic services such as education and health; this limits their opportunity for social integration, and hence lack social skills. Female children are more at risk of physical and sexual violence, exploitation, harassment and discrimination compared to their male counter parts. This limits their opportunities for social interaction and development of appropriate social skills [13]. Most countries still enter fewer women in the Paralympics [14]. Even the Special Olympics has not been able to achieve equalization of participation by gender to date as reported by Special Olympics International (SOI), [15]. This study was significant as there is no documentation on socialization by with ID by gender in Kenya. This research had particular relevance for policy formulation by recommending to stakeholders in disability studies the role sport involvement and adapted physical activity participation can play in areas of disability mainstreaming and behavior change at all levels. Study further gave insight on prospective programme design for child with ID as well as workable intervention programmes towards the attainment of the Kenyan inclusive policy framework [16] and achievement of SDG no.4 on inclusion as outlined in social development goals [17].

Researchers consistently document that Sport can have a social impact on people with disabilities irrespective of gender and age [18]. Despite this declarations, women with disabilities often experience double discrimination on the basis of their gender and disability. Studies show that 93% of women with disabilities do not participate in sport or physical activities. In developing countries, the combined interaction of traditional, cultural, gender norms and poverty often result in girls and women's isolation from public life and sport [19]. This is compounded by the fact that parents tend to restrict girls mobility than boys to protect their reputation and safety, this significantly narrows their public life appearances including opportunities for sport engagement and socialization [20]. A related study [21] which investigated on Classification of athletes' with physical disabilities in Kenya, reported that only 35% of female athletes with CP indicated to have been participating only with similar athletes with disabilities. This could have meant limited opportunities for them in mixed setting. Parents also appear to protect their girls for fear of molestation and intimidation. Although this study was on learners with physical disabilities, it has implications for all children with disabilities globally. This underscores the need to open up space for socialization by gender, hence this research study.

This research study was guided by social cognitive Theory of learning (SCT). This theory was first developed by Bandura [22]. This theory is based on vicarious learning and is a social learning theory which states that behaviour is learnt by observation, imitation and positive reinforcements. It has been used previously to design behaviour change intervention programmes. This theoretical model states that role models facilitate learning since individual re-enact behaviour they see in others. The framework suggests that people learn by noticing the benefits of action that they may observe other people performing. According to SCT, change in behaviour and attitude is determined by Environmental, social, personal and behavioural elements. Each of these influence the other as guided by expected out comes.

Aspects of this theory was relevant to this study due to its strength of learned behaviour through imitation and environmental influence which the researcher manipulated to suit the condition of the Child with intellectual disability in this study; hence facilitated changes in the desired parameters. Peers facilitate learning by providing corrective feedback during play and act as role models, hence enable a child with ID to know the socially acceptable behaviour and acquire the ability to manage stereotypic behavioural deficits they could be having [1]. Sport socialization intervention programme focused more on equal status mode, thus reinforcing social behaviour displays when interacting with peers.

However, few studies focus on comparing social skill learning between boys and girls, hence paucity of literature necessitating this research study. This Study therefore investigated social skill functioning levels between boys and girls before and after the intervention. The null hypothesis tested in this study was: $H0_1$: There is no significant difference in social Behaviour functioning levels by gender of children with ID between pretest and posttest in Kakamega County, Kenya.

2. Methods and Materials

The study was designed during 2017/2018 school year second term of the Kenyan school calendar. We conducted before, after and withdrawal of treatment in Kakamega county, Kenya. This study used simple ABA single subject quasi- experimental research design replicated in 8 subjects. This research methodology has been used previously by other researchers in other countries as evidence based intervention on social skill learning among children with disabilities [1, 24, 25, 26]. The most compelling advantage of this design is that they are easily more frequently implemented than their randomized trials [26]. The choice of the study design was formed by the fact that intellectual disabilities are not the same and that learning for each one of them cannot be based on norms, hence not comparable. Learning for children with disability is guided by the concept of Individualized Education Programme (IEP), and progresses at each learners level. Any research that compares children with disability's performance against each other is not relevant and falls short of internationally recognized methodology in instructing/learning for participants with disabilities in regular and inclusive setting, hence its relevance for use in this Study.

Participants

Probability sampling was not feasible in this study due to the nature of study participants, therefore purposive sampling was used. This was informed by the re searchers judgement and knowledge of the population as well as issues involved in the problem. This may make the study not generalizable, however intellectual disability is the same the world over and their social skill deficits is a consequence of the condition which may be relevant to all children with ID. The design was used to select eight children with Mild to moderate ID aged between 8-14 years four of whom were Girls and the other Four were Boys and 24 typically developing peers enrolled in public day schools in Kakamega County, Kenya. Parents/gurdians of the study participants were fully informed in advance regarding the objectives of the study. Inclusion criteria was used to recruit the study sample of 8 children from 8-14 years old with mild to moderate ID, who were diagnosed and registered in

special units for 14 weeks. Range of participant's recruitment period was between 12/12.2017-10/01/2018.All the children were observed and video recorded for 14 weeks. Assessment on social behaviours was done at 3weeks interval until September 2018. Exclusion criteria was also used to guide in the study sample selection. The study did not enroll children below 8 years and above 14 years. Children enrolled in special schools were also excluded. We also excluded children who were non-ambulatory and those who use assistive devices. The study methods involved no risks to the participants, and written informed consent was obtained from each participant's parent /guardian. Assent was obtained from the children before commencement of study and all agreed to take part in the study. Authorization to carry out this research study was granted by the National Commission for Science, Technology and Innovation (NACOSTI) Kenya. This is the research coordinating agency in Kenya.

Sample size

The study sample size was identified from the Education Assessment Resource Coordinator's (EARC) office records in Kakamega County, Kenya. These records indicated the names, location and the schools where these children were placed after assessment. The researcher then got in touch with head teachers of the schools for permission to include their schools in the study. Special education teachers in charge of special units helped in the identification of the study sample. The researcher organized with the teachers to meet the parents in each school with their children. During the meeting the researcher administered The Activity Index tool (AI) and the Multiple Indicator Cluster Survey (MICS) to determine presence of mild to moderate ID. Based on this, the maximum sample size of Eight (8) was selected for inclusion in this study. The sample size was guided by the study design (SSD) which places the minimum number at three (3) and maximum eight (8) in single subject design, [16]. The researcher used the maximum threshold to cater for natural attrition if any during the duration of the study.

Data collection procedure

The pretest and posttest data of the case group was done in three stages: pretest (baseline) for two weeks with non-intervention,, participation in the sport socialization intervention programme (treatment) for Ten weeks(two hours of instruction and observation across 28 sessions) and Two weeks of reversal treatment /termination of treatment. Study duration lasted fourteen (14) weeks. Observation checklists and Video Capture were used to collect data on social behavior levels conducted at three weeks interval. The typically developing peers were part of the intervention and not subjects in the study. This experimental research involved training these children in social skills through practical skill demonstrations, cueing, prompting, verbal instructions and manual kinesthetic guidance using an adapted protocol of soccer skills, fun and recreational games supported by peers under the guidance of a volunteer coach. The study was guided by the theoretical framework of Social Cognitive theory [22]. The theory is guided by the thematic principle of interactive ness of personal, environmental and behavioral factors and specifically emphasize the importance of learning through behavior modeling. The semi-structured intervention programme in cooperated an informal training of the children in hygiene (hand washing) during snack breaks and parent educational component to acquire skills and be contracted to teach their children at home as well as support their child with ID.The researcher determined the social Behaviour functioning levels of the subjects prior to sport socialization intervention programme exposure.

Study setting

This Study was carried out in Kakamega County. Kenya. Kakamega County is one of the 47 devolved units in Kenya under the new constitution (2010). This project involved Children from three primary Schools coded appropriately for purposes of data collection as follows: Roster man (YARO), Mayiakalo (YAMY) and Kakamega (YAKS) with Special Units catering for children with intellectual disabilities. The study was restricted to children who had been assessed and confirmed as having mild to Moderate intellectual disabilities aged between 8-14 years old accompanied by their parents/guardians/caregivers. The study was confined to public day Primary Schools with Special Units for children with intellectual disabilities (ID) in Kakamega County, and the intervention program lasted for a duration of Fourteen weeks only. Each School is located at opposite borders of rural setting in Kakamega, County of western Kenya. They were impacted by many of the barriers to socialization and education highlighted in this Study.

The county lies within an altitude of between 1,240 meters and 2000 meters above sea level within the equatorial rain forest in western Kenya. Study site was based at Masinde Muliro University of Science and Technology, where. Participants converged for the programme implementation. This was done to ensure reliability of the measurement procedures and to expose them to the same environment with standardized training and instruction while performing activities in the social skill rating checklist, this necessitated centralization need. This was also done to ensure ease of logistics in coordinating the research assistants, facilitation for parents/gurdians and programme implementation. The choice was also necessitated by its central location with regard to participant's locations and ease of accessibility by study participants. Site selection choice was necessitated by it having highest distribution of special schools (8.8%) in comparison to other counties out of the 21 where the survey was carried out in Kenya [28]. Distribution of special schools per county is presented in table 1.

Table 1: Distribution of Special Schools per County as adopted by the researcher from Ministry of Education, Kenya (2017)

	Count	% of Total
Nairobi	2	3.5%
Kakamega	5	8.8%
Bungoma	3	5.3%
Mombasa	5	8.8%
Kwale	2	3.5%
Siaya	3	5.3%

Kisumu	2	3.5%
Kisii	4	7.0%
Nakuru	3	5.3%
UasinGishu	2	3.5%
Nandi	1	1.8%
Nyeri	3	5.3%
Muranga	5	8.8%
Meru	4	7.0%
Garissa	4	7.0%
Lamu	2	3.5%
Turkana	1	1.8%
Wajir	2	3.5%
Kitui	4	7.0%
Total	57	100.0%

According to the ministry of education special needs education survey report [28] which surveyed 21 out of 47 devolved units on distribution of special schools per county reported that, Kakamega, Mombasa and Muranga had the highest representation of 8.8% followed by Kisii, Meru, Garissa and Kitui at 7.0% while Bungoma, Siaya, Nakuru and Nyeri had 5.3% and Nairobi, Kwale, Kisumu, Uasin Gishu, Lamu and Wajir had 3.5%. A few, Nandi and Turkana had 1.8%. Regarding disability type, the prevalence rate of disabilities among children aged 0-21 was reported to be 13.5% which is comparable to the global estimate of 15% as of [28]. Kakamega has a high prevalence rate of children with disabilities of 14.7 %, this is higher than the national prevalence rate estimate 13.5 % [28].

Data collection instruments

Data collection instruments used in this study borrowed heavily from validated international instruments so as to make the Methodology and findings of this study comparable to those of other Countries. In order to achieve the objectives of this study, a 5-minute video capture adapted from the work of Faith *et al*. [31] was used to capture images and voices, Peer Social Task Rating Scale (PSTRS) by Gresham &Elliot [32] was used to rate skillful and unskillful strategies in behaviour responses in social skills by participants with ID.

(a) Video capture and Coding

Video capture and multi-modal dyadic video analysis [31] was adapted by the researcher and used to record and decode participant's social behavior, their voices and body languages. This comprised of data sets containing 28 sessions of 3-5 minute participant-participants involvement during key moments of interactions in play. In each session, the research assistant examined an adapted semi-structured soccer training and fun games protocol which was designed to elicit abroad range of social behaviors and methods to decode the interractions. Study recorded 28 sessions through multi-modal data sets which contained high interactions based on behavioral cues under investigation.

These cues were recorded by research assistants during the sport socialization intervention programme in play fields. An associated scoring sheet was used by research assistant to note whether a child engaged in a social behavior following verbal prompts including eye contact, smiling, holding hands, kicking ball back, picking social cues, asking for help and smiling during key moments of child to child interactions. Immediately following completion for each sub- stage, child's effort to engage was rated using a 3 point Likert scale as follows as :0=easily engaged,1=little effort required to engage,3=significant effort required to engage, eventually collapsing 1 and 2 into one category. Scores closer to 0 is equivalent to high social skill rating, while score closer to 2 is poor social skill (refer to table below) showing video coding checklist rating. This was then cross-referenced with scores on PSTRS to get the raw scores for each participant in social skill functioning rating scale.

(b) Peer Social Task Rating Scale (PSTRS).

This tool was adapted from Social Skill Rating Scale [32] and used with modifications by the research team to measure social skill functioning levels of children with ID during the study for purposes of triangulation. It measured how often a child attempted various social tasks and child's success at each task using a 5 point Likert scale ranging from 1=rarely,5=very often,research assistants rated the child with ID in seven social tasks(joining other children in play, responding to other children in play, responding to name calling,passing ball to team mate, playing games with other children and having conversations with other children). Total scores were created by summing the frequencies of skillful strategy use with reverse coded unskillful strategy use -5to -1). Higher frequency / positive scores=skillful strategy, low frequency/negative score=unskillful strategy. Sample peer social task rating scale is presented in table 2.

Table 2: Peer social task rating scale (PSTRS) checklist. Child's Name/Code-Age-Gender-Ability

Social Task	Social Strategy	Comments/Score
Joining group of children in play	When child joins group he/she: -watch and wait to be invited +wait and try to join without being disruptive to group. - ignores playmates	
Responding to other children	When a peer approaches, child with ID: -ignores or withdraw from him/her +respond in a warm and friendly way-child appears awkward or uncomfortable	
Name calling	When peer calls child with ID by name he/she: -withdraws and walks away +responds in affirmative and moves toward the caller -does not respond at all	
Passing ball to teammate	When team mate signals for ball to be passed to him/her, child with ID: -ignores and doesn't pass ball + responds in a warm manner, smiles and passes ball to target	

Play games with others	When child play games with others they: +play fair and follow rules +wait to take turns -Act like sore looser +lose and win graciously	
Having conversations with other children	When child with ID has conversation children they: -Fail to stay on topic Talk about themselves/focus on their interest—fail to understand what other child is saying +communicate clearly +listen well to what others are saying	

Key: +=Skillful strategy (5-1) - =Unskillful strategy (1-5)

Validity and reliability of the test instrument

In this Study face and construct validity of test items were assessed by experts from the department of health promotion and Sport Science at Masinde Muliro University of Science and Technology and comments from the experts were incorporated in the final tools to enhance their validity for use in this Study. Further, to ensure construct validity the PSTRS was drawn from previous literature that identified measurements with a strong relationship to social skill functioning levels. It emphasizes impairment, type of ID, speech, reciprocity and responding to peers prompts. This tool had been tested and found valid and reliable in a sample of Children with intellectual and developmental disabilities and typically developing peers (TD) in the United States of America [1]. To further confirm the efficacy of data collection in this study, the checklists were given to the supervisors and two lecturers in the Department of Health Promotion and Sport Science at Masinde Muliro University of science and Technology, to critique and make suggestions to ensure clarity and adequacy of the research tools. Based on the feedback, the researcher revised the checklists in the tools and in this way content validity was achieved. Video capture and coding supplemented and confirmed the findings and helped strengthen the visual analysis of the data gathered during the Study. These tools were pre-tested at mululu primary special unit which was not involved in the main study. This was done in order to assess the suitability of test items on the intended sample. This process helped the researcher to establish content validity.. Test-retest reliability results during pre-testing in Vihiga County, were highly reliable with PSTRS and video capture at r=0.85 to 0.97.This is well above Cronbach's alpha acceptable reliability index of r=.70. Consequently, the social skill rating items had been adapted from internationally acceptable instruments, whose validity and reliability have been established globally, hence their relevance in this study.

Data analysis and presentation

Data collected was cleaned, coded and subjected to SAS/ETS version 9.0 in a computer. Study did not use inferential statistics due to; limited data points, limited generalizability since data was gathered on single subject and in disability studies concept of individualization is key in implementing interventions [26], this is because each disability may present different clinical manifestations requiring specific and special adaptations in the programme to meet each individual child's need and finally serial dependency of data points.

3. Results

Fidelity of implementation

Attendance records indicated that seven children attended 90% of the programmed intervention activities. In addition the research assistant attended all the 28 sessions. Each of intervention sessions lasted for Ninety (90) minutes intermittent participation for each session. Collectively these three measures of Child attendance, number of activities completed and duration of programme was an indication that the sport socialization intervention programme was implemented with high fidelity, cumulatively programmed activities and sessions were all covered.

Out of the 8 children selected for the study, only seven attended all session. Data was therefore analyzed for the seven children with ID who completed the programmed sessions for the whole duration of the study. Seven (7) Children took participated fully in this study, four of whom were (4) Girls (57%) and the other Three (3) (43%). Boys with intellectual disabilities (ID). Gender was important as it explained interest and social skill learning between boys and girls. There was near equity in gender representation in this study. Both boys and girls had equal chance of participating in this Study. However, girls were slightly more than boys, this was occasioned by one Child dropping out due to family problems which necessitated the mother to relocate with the child to different county which was not targeted by the Study. Results on gender distribution is presented in figure 1.

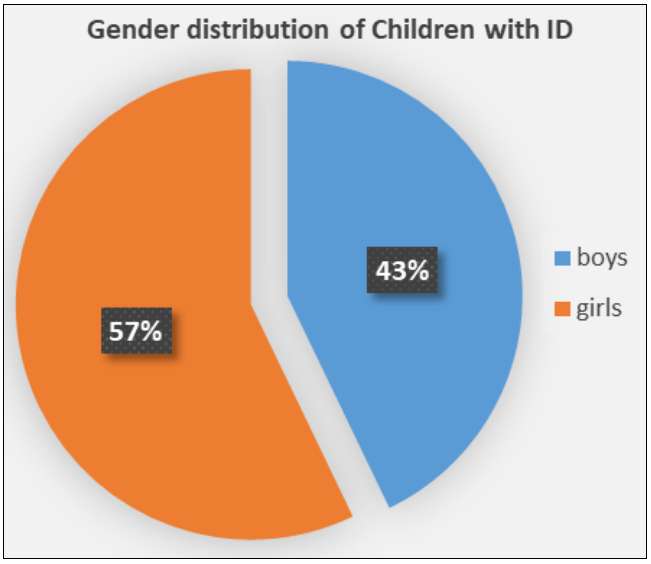

Fig 1: Gender distribution of children with ID

However, it important to note that this gender representation is not a reflection of normal gender distribution and that this was a single subject study and data was mutually exclusive for each individual case. Data analysis on Demographic characteristics of the Children with ID illustrated that 43% were Boys while Girls constituted 57% as presented in the figure above. This illustrated near equity in gender representation in this Study. These findings disagrees with research findings by [23, 24, and 25] which established that more boys than girls participate in Sports. This could be true, but in this study the researcher made deliberate effort to have near equity in gender representation so as to validate research findings due to limited data points and study design.

Children with ID were trained in social behaviour

functioning tasks as they played alongside typically developing children. The specific tasks were: joining groups of other children in play, responding to other children, response to name calling, passing ball to team mate, playing games with others and having conversation with other children. Results are presented per each individual social task for each of the seven children in Fig 3.

	PRETEST							TREATMENT							POST-TREATMENT						
	A							B							A						
PHASE	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
JGP Task 1	-2	-3	-2	0	-1	1	0	6	6	7	8	6	6	7	4	5	8	6	4	3	4
ROC Task 2	-2	-5	-3	-3	-3	-2	-3	4	3	2	2	2	3	3	4	3	1	2	2	3	3
NC Task 3	-7	-5	-6	-6	-7	-6	-6	-4	-1	-3	-2	1	3	2	1	1	2	0	2	3	2
PBT Task 4	-4	-3	-3	-3	-3	-3	-3	3	2	3	2	3	2	2	3	1	3	2	2	2	1
PGO Task 5	-1	-2	-2	-2	-4	-1	-3	3	2	2	3	2	3	2	3	1	3	2	2	2	1
HCO Task 6	-1	-3	-2	-3	-4	-3	-2	4	2	2	2	2	3	2	3	1	2	2	2	2	1
TOTAL PSTRS	-17	-20	-18	-17	-22	-14	-17	16	14	13	15	16	20	18	18	12	19	14	14	15	12

Fig 3: Individual social task scores by children with ID between pre-test and post-test

Footnote: JGP: Joining Groups of children in play. ROC: Responding to Other Children NC: Name Calling_PBT: Passing Ball to Team mate_PGO: Playing game HCC: Having Conversation.

The study has shown that sport socialization intervention programme improved social skill learning of all children in the programme irrespective of their gender. This improvement primarily affected their social behaviour functioning levels. Results of individual performance social behaviour levels are presented in table 4.

Table 4: Total peer social task rating score for each participant in the programme.

Child	Pretest	Posttest	Reversal	% Improv.
YAMY3	-16	18	14	56.7 %
YAKS 4	-21	15	15	60%
YAKS 5	-18	20	20	63.3%
YAKS 6	-17	15	15	51.6%
YARO 7	-14	14	14	56.7%
YARO 8		16	16	48.3%
YARO 9	-18	12	11	50%

The magnitude of improvement between pretest and posttest were: yaro3 (56.7%), yaks 4(60%), yaks 5(635%), yaks6 (516%), yaro7 (56.7%, yaro 8 (48.3% and yaro 9 (50%) respectively.

Similarly analysis results demonstrated percentage improvement range of 50% to 63.3% for boys, compared to girls' improvement range of 56% to 60%.the intervention had effect on both gender on social skill learning, as improvement ranges were above 50% on total PSTRS scores. Results on magnitude of improvement by gender between pretest and posttest on peer social skill rating levels are presented in figure 2.

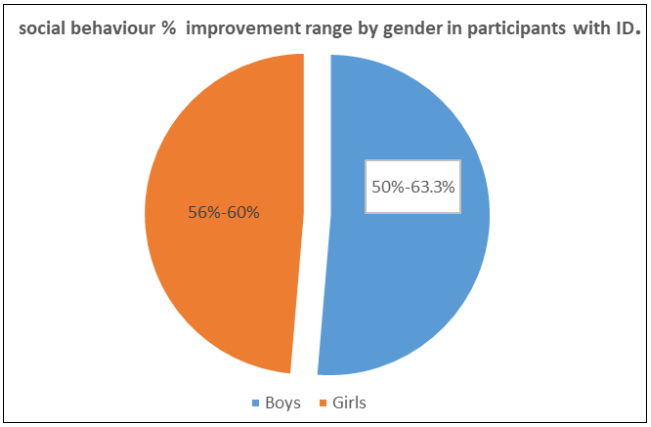

Fig 2: Social behaviour % improvement range by gender in participants with ID.

The slight differences in the results on social skill rating between boys and girls could be attributed individual disability characteristics and influence of significant others. These results demonstrated that the Sport Socialization intervention programme can improve social skill learning of Children of ID irrespective of gender, hence necessity for more effort to be geared towards inclusive Sport socialization that enhances peer learning approach for children with intellectual disability irrespective of gender. Results of percentage improvement for each individual participant in the programme is presented in figure 3.

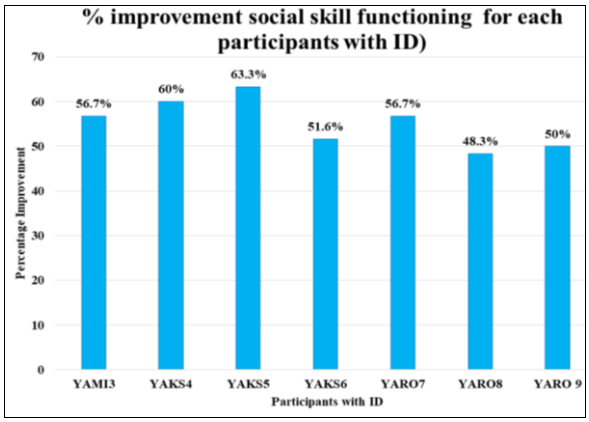

Fig 3: % Improvement on social skill functioning for participants with ID.

4. Discussion

Regarding Participants ID level, data analysis demonstrated that child's response at baseline was affected by ID level as they were deficient in social skill functioning before intervention. This finding agrees with previous research studies [23, 24, 25, 26], which reported that they lag behind in delayed language development, restricted movements and sensory processing problems. The challenge of this type of

study was that it was not possible to compare performance between Boys and Girls statistically due to limited generalizability of the study design of single subject Study, data was mutually exclusive per individual; and finally serial dependency of the data points.

However, the performances were measured at baseline, treatment phases and post intervention by comparing percentage improvement Analysis results demonstrated special effect of programme on each of the children between pretest and posttest. Being male of female did not affect social skill learning of the child with ID in this study. These finding agrees with those of [17] which documented that when boys and girls are given same opportunities in sport, it can have asocial impact on them irrespective of gender. However, some researchers [18, 23] are not in agreement with this finding, when they documented that social interaction and social skill has no serious interractions, these researchers also reported that females with disabilities are more at risk of physical violence, exploitation and harassment which limits their opportunities for social interaction and development of appropriate social skills. Despite these research documentation, large body of literature has documented that cultural and traditional beliefs and gender norms result in girl's isolation from Sports [11]. It is suggested in this study that both boys and girls should be given equal opportunities to participate in sports and develop their potentialities in social skill functioning levels. This socialization programmes could also be applied in other settings like games time, lunch time and outside school activities to sustain the benefits accrued.

5. Conclusion and Recommendations

Gender did not affect social skill learning of the children. The study concluded that the intervention programme was effective in enhancing social skill learning of Children with ID irrespective of gender.. Disability type and intervention programme affected the rate of social behavior functioning levels and should be enhanced in all children and youth with ID in and out of school. The null hypothesis was neither retained nor rejected since time series analysis test was not possible based on study design and mutual exclusivity of data points. This study concluded that social skills learnt are generalizable, however these results should be verified in a specific study to assess the long-term maintenance of acquired skills. Comparison would also be interesting, as it would show the strengths and weaknesses of these groups in target populations. It would be interesting to combine sport intervention with implicit social skills and peer mediated intervention which are both based on support of typically developing peers (TD).

The study recommended that boys and girls should be given equal opportunities to participate in sports and develop their social abilities. Study further recommended the ministries of sports, culture and heritage and non-governmental organizations should heighten campaigns and advocate for both boys and girls with ID to be given opportunities to participate in sports at school and community level. Finally the study recommended further research to be conducted on gender rating involving a different design to enable statistical analysis confirmation of gender differences in social behavior functioning levels amongst children with intellectual disability.

6. Statement of conflict of interest*:* The researchers declare no competing conflict of interest in this study.

7. Acknowledgement

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8. References

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