Towards Positive Behaviours: An evaluation of a teachers' training on Classroom-based Interventions for Managing Problem Behaviours in Preschoolers in Nigeria

Abstract

Aim: This study was a cluster randomized trial, designed to evaluate the effect of a teachers' training on Classroom-based Interventions for Managing Problem Behaviours in Preschoolers in Nigeria.

Methodology: A total of 110 preschool teachers participated in the study. Fifty-five were randomly assigned to each of the intervention and the wait-list groups. Participants in the intervention group received two training sessions on child behaviour problems and management. Data was collected in 3 phases; baseline, immediate post-intervention and one-month post-intervention.

Results: The proportion of participants in the intervention group who felt frustrated about managing challenging behaviours, reduced significantly ($p=0.045$) at follow up (14.5%) compared to baseline (32.7%). There was a statistically significant ($p<0.001$) increase in the proportion of those who documented problem behaviours occurring at school (72.7%) at follow up, compared to baseline (38.2%). Participants in the intervention group reported increased confidence and competence to manage problem behaviours in their classroom settings.

Conclusion: This study showed that training interventions can improve the perception, competence and skills of teachers in managing problem behaviours among preschoolers. It is recommended that preschool teachers receive training that will improve their classroom management of children with problem behaviours, even in low-income settings.

Key words: Preschoolers, Problem Behaviour, Teachers' Training, Classroom Strategies

Introduction

Children undergo behavioural changes as a part of their normal development, and they commonly have problem behaviours in the process of adapting to changes in their environment. These behaviours are expected to decrease during the pre-primary school years, when language, social and emotional regulation, and cognitive problem-solving skills increase [1, 2]. Persisting problem behaviours in pre-primary school children may significantly compromise their chances for later success in school [3, 4] and are major predictors of serious mental health problems like conduct disorders or antisocial behaviours in adolescence and adulthood [5].

One of the key methods to addressing the mental health needs of children in pre-primary schools is working with their teachers [6]. This is because children spend a significant part of the day in the pre-primary school settings and are frequently interacting with their teachers. This teacher-child relationship is critical to the social and emotional development of pre-primary school children [7] and has been shown to be more predictive of children's positive outcomes than factors such as school programme policies and quality of the classroom environment [8]. Also, the teachers are faced with a variety of problem behaviours exhibited by the pre-primary school children, and ineffective behaviour management by teachers may further aggravate adjustment difficulties among the children and worsen the problem behaviours [8]. Thus, pre-primary school teachers need to be properly informed and adequately prepared to meet the challenges of handling these problem behaviours.

Prevalence of Problem Behaviours among Pre-school Children

Recent reviews of the literature indicate that the prevalence rates of challenging behaviour in pre-primary school settings are between 14% and 34% [9, 10]. In Nigeria, a study found an overall prevalence rate of problem behaviours among school children according to parents' scale

to be 18.6% and according to teachers' scale as 23.1% [11]. This study showed high prevalence of behavioural problems despite exclusion of children with sickle cell anaemia and other chronic illnesses. Conduct problems were more prevalent among boys and emotional problems among girls. Behaviour problems were also noted to be more common in pupils from government primary schools than in those from private primary schools. Studies have found that poverty, unstable caregivers, maternal depression, family or parenting stress and poor family relationships place children at a greater risk for developing behaviour problems [12. 13]. These are factors that commonly affect children in the developing countries like Nigeria.

Current Classroom Strategies for Managing Problem Behaviours

The literature have reported both classroom and school-wide behaviours management strategies that can be explored and adopted to effectively manage behaviour problems and improve the outcome of students. Horner et al described three levels of intervention to reduce the problem behaviours of young children in the school setting. These included primary, secondary and tertiary interventions. The primary and secondary interventions are at the level of the entire school and includes all students whereas the tertiary interventions are tailored to meet the needs of individual child with identified problem behaviours. Some of the strategies in tertiary intervention include functional behavioural assessment, alterations in the child's social and physical environment, interventions implemention over time and across multiple and relevant environments, and family involvement in the planning and implementation of interventions. Others include positive reinforcement and praise, time out, classroom management, all developed into an individualized behaviour plan.

Dearth of Training in Classroom Strategies in Sub-Saharan Africa

There are very few interventional studies on behavioural problems among children in sub-Saharan Africa. And it has been established that the early use of behavioural interventions could

result in reductions of problem behaviours [14, 15 & 16]. One of the few intervention study carried out in primary schools in Nigeria, for children with aggressive behaviour showed that a group-based problem-solving intervention was effective for reducing aggressive behaviours among primary school pupils [17]. There is still a great paucity of research on school-based intervention programs for pre-primary school children and their teachers in Nigeria and most Sub-Saharan African countries. This work was thus designed to address the effect of educational intervention strategies on the perception and self-reported practices of pre-primary school teachers in managing problem behaviours among pre-primary school children. A path towards bridging this gap, and hence providing a framework for future interventional studies within the school settings in Nigeria and other parts of Africa.

Methods

The study was a cluster randomized trial; with schools as clusters and individual teachers as participants. The cluster design was necessary because it was not feasible to assign individual teachers who were working in the same school into different groups without contamination of information provided across groups within the same school. Schools were randomly assigned to either intervention or the wait-list.

Participants and Setting

Individual participants were teachers of pre-schoolers (ages 2-5 years), while cluster participants were 26 schools Benin City, South-South Nigeria.

A total of 110 preschool teachers participated in the study. Fifty-five were randomly assigned to each of the intervention and the wait-list groups. The eligible participants were selected in a multistage random sampling technique from all schools within the city.

Data collection

Data was collected in 3 phases; baseline, immediate post-intervention and one-month post-intervention. The data was obtained from participants using self-administered questionnaires adapted from 2 instruments – 'Socio-demographic questionnaire', 'Questionnaire to Practitioners on Challenging Behaviours'.

The formats of the scale assessing perception and self-reported practice of participants were 'yes', 'no' or multiple choices, as well as likert scale-based and open-ended questions.

The intervention

Participants in the intervention group received two training sessions on child behaviour problems and management. The training was organized into two parts of 3 hours each. The training manual was designed by the researchers and built on the WHO Mental Health Gap Action Programme, Classroom Management Strategies, the principles of functional behavioural analysis and Operant conditioning. The first part of the training covered definition and types of problem behaviours, Perception of teachers on managing problem behaviours and attitudes of teachers to pre-primary children's mental health. The second part covered the use of behaviour modification strategies and their effects in managing problem behaviours.

Outcomes

Knowledge about problem behaviours in preschoolers

'What are the perceived major causes of problem behaviour in pre-primary school children'? 'What are the types of problem behaviours? 'Have you experienced frustration while handling a child with problem behaviour'? and 'should teachers solely deal with problem behaviours occurring at school'?.

Perception of teachers about problem behaviours

‘Is dealing with problem behaviour is a major concern for the teacher’, ‘What are the perceived major causes of problem behaviour in pre-primary school children’?

Recognition of problem behaviour through vignettes

Participants were given a vignette of ‘Eseosa’ a 4 year old boy with attention deficit hyperactivity disorder (ADHD). They were asked an open-ended question about what they thought was wrong with the person. Responses which mentioned "ADHD, hyperactivity and restless disorder" were scored as correct.

Confidence in managing problem behaviour

Teachers were asked "Are you confident in managing problem behaviour in the classroom?" (Yes or No).

School practices policies for handling children with problem behaviours

- Reporting incidents of problem behaviour to the school head,
- Documenting incidents of problem behaviour at school,
- Participant’s source(s) of developing their skills to deal with problem behaviours at school
- Method(s) employed to manage recently encountered problem behaviours

Outcomes were assessed at immediate post-intervention and at 1-month post-intervention as a way to ensure that the data acquired through the sessions was maintained. Re-evaluation was carried out using the same self-administered questionnaire.

Data analysis

The teachers’ responses to the likert scale-based and open-ended questions were coded into themes and manually entered into a computer. The variables collected at baseline and at post-intervention were entered and analyzed using the Statistical Package for Social Sciences (SPSS),

version 20 software. Data was presented as frequencies and percentages and differences in proportion between the intervention and control groups were analysed using the Chi-square test or Fisher's exact test where appropriate. The level of significance for all statistical analysis was set at 5%.

Results

A total of 110 pre-school teachers participated in the study. Almost all (95.5%) the participants were females with age ranged from 19 to 60 years. Sixty-nine (62.7%) participants taught in public schools and almost all the participants (98.2%) reported that they had not received any special training in early childcare education before starting work as a pre-primary school teacher. There was no statistically significant difference between the two groups in any of the socio-demographic variables as shown in Tables 1a and 1b.

Table 1a: Socio-demographic profile of participants: Personal information N=110

Variable	Intervention group N = 55	Control group N = 55	Total N = 110	p-value
	n (%)	n (%)	n (%)	

Sex				
Male	2 (3.6)	3 (5.5)	5 (4.5)	χ^2=0.210
Female	53 (96.4)	52 (94.5)	105 (95.5)	p = 1.000
				df =1
Age group (years)				
19 - 29	5 (9.1)	10 (18.2)	15 (13.6)	**χ^2=4.552**
30 – 39	17 (30.9)	22 (40.0)	39 (35.5)	**p = 0.208**
40 – 49	13 (23.6)	7 (12.7)	20 (18.2)	df = 3
50 - 60	20 (36.4)	16 (29.1)	36 (32.7)	
Level of education				
Secondary & below	8 (14.5)	4 (7.3)	12 (10.9)	χ^2=1.544
Postsecondary non university	25 (45.5)	26 (47.3)	51 (46.4)	p = 0.462
University degree & above	22 (40.0)	25 (45.5)	47 (42.7)	df = 2
Marital status				
Not married	13 (23.6)	8 (14.5)	21 (19.1)	χ^2=1.471
Married	42(76.4)	47 (85.5)	89 (80.9)	p = 0.225
Ethnic groups				df = 1
Benin	37 (67.3)	42 (76.4)	79 (71.8)	χ^2=1.123
Others	18 (32.7)	13 (23.6)	31 (28.2)	p = 0.289
Form of religion				df = 1
Islam	0 (0.0)	1 (1.8)	1 (0.9)	χ^2=4.167
Orthodox	6 (10.9)	13 (23.6)	19 (17.3)	p = 0.082
Pentecostal	49 (89.1)	41 (74.5)	90 (81.8)	df = 2
How much religion guides your behaviour				
Very much	48 (87.3)	49 (89.1)	97 (88.2)	χ^2=0.087
Much & below	7 (12.7)	6 (10.9)	13 (11.8)	p = 0.768
				df = 1

Table 1b: Socio-demographic profile of participants: Teaching information

N = 110

Variable	Intervention group N = 55	Control group N = 55	Total N = 110	p-value
	n (%)	**n (%)**	**n (%)**	
Age of pupils taught (years)				
2 - 3	19 (34.5)	21 (38.2)	40 (36.4)	χ^2=0.218
3 - 4	18 (32.7)	16 (29.1)	34 (30.9)	p=0.897
4 - 5	18 (32.7)	18 (32.7)	36 (32.7)	df = 2
Type of school				
Public	34 (61.8)	35 (63.6)	69 (62.7)	χ^2=0.039
Private	21 (38.2)	20 (36.4)	41 (37.3)	p=0.844
				df = 1
Had early child care training before starting work as a pre-primary teacher				
Yes	2 (3.6)	0 (0.0)	2 (1.8)	χ^2=2.037
No	53 (96.4)	55 (100.0)	108 (98.2)	p=0.495
				df = 1
Pre-primary school teaching experience (years)	25 (45.5)	22 (40.0)	47 (42.7)	
< 5 years	17 (30.9)	20 (36.4)	37 (33.6)	χ^2=0.435
5-10 years	13 (23.6)	13 (23.6)	26 (23.6)	p=0.805
> 10 years				df = 2

*Statistically significant value (p< 0.05)

A total of 110 participants, comprising of 55 participants each in the intervention and control groups participants in the study, all the participants were present at all the stages of the study. All 110 participants (100%) indicated that they had encountered problem behaviours during their work experience in pre-primary school settings. Overall, about an equal number of the

participants reported aggression (44.5%) and disruptive behaviour (43.6%) as the most commonly observed behaviour problems. There was no statistically significant difference (χ^2=3.418; p=0.337) in the pattern of problem behaviours encountered by the participants in the intervention and control groups as shown in Table 2.

Table 2: Pattern of problem behaviours encountered by participants

N = 110

Variable	**Intervention group N = 55**	**Control group N = 55**	**Total N = 110**	**p-value**
	n (%)	**n (%)**	**n (%)**	
Occurrence of problem behaviours				
Everyday	44 (80.0)	40 (72.7)	84 (76.4)	χ^2=0.806
Every other day and below	11 (20.0)	15 (27.3)	21 (23.6)	p = 0.369
				df = 1
Commonly observed problem behaviours				
Aggression	20 (36.4)	29 (52.7)	49 (44.5)	χ^2=3.418
Disruptive behaviour	28 (50.9)	20 (36.4)	48 (43.6)	p=0.337
Tantrums	5 (9.1)	5 (9.1)	10 (9.1)	df = 3
Other behaviours (withdrawal, noncompliance)	2 (3.6)	1 (1.8)	3 (2.7)	

*Statistically significant value (p<0.05)

Impact of intervention on participants' perception about problem behaviours

The impact of intervention on the perception about problem behaviours that was assessed at baseline is shown in Table 3. The proportion of participants that perceived that managing problem behaviour was a major concern for them as teachers increased significantly among the intervention group from 37 (67.3%) of the 55 participants at baseline phase to 53 (96.4%) of them at immediate post-intervention and 48 (87.3%) participants at 1-month follow up. These

differences were statistically significant ($p<0.001$). Majority of the participants (92.7%) at immediate post-intervention & 83.6% at follow up answered 'no' when asked if their sole responsibility to manage problem behaviours was reasonable, compared to 20.0% at baseline and this difference was statistically significant ($p<0.001$). Also, statistically significant decrease ($p=0.045$) was observed in the proportion of participants who felt frustrated at follow up (14.5%) compared to baseline (32.7%) and immediate post-intervention (32.7%). Statistically significant differences ($p=0.002$) were observed in the proportion of participants' responses after reflecting on their management of the recently encountered problem behaviours. More participants (58.2% at immediate post-intervention and 38.2% at follow up) perceived that they had managed the behaviour wrongly compared to 25.5% at baseline.

The participants in the control group reported similar responses to baseline at immediate post-intervention and at 1-month post-intervention. The observed differences in proportions were not statistically significant (p-values ranging from 0.124 to 0.975).

Table 3: Impact of intervention on participants' perception of managing problem behaviours among pre-primary school children N=110

	Intervention group N = 55				Control group N = 55			
Variable	**Baseline n (%)**	**Immediate post-intervention n (%)**	**Follow up n (%)**	**p-value**	**Baseline n (%)**	**Immediate post interventio n (%)**	**Follow up n (%)**	**p-value**
Problem behaviour is a concern for the pre-primary teacher								
Yes	37 (67.3)	53 (96.4)	48 (87.3)	χ^2= 17.802	40 (72.7)	37 (67.3)	38 (69.1)	χ^2= 0.402
No	18 (32.7)	2 (3.6)	7 (12.7)	p<0.001*	15 (27.3)	18 (32.7)	17 (30.9)	p=0.818
experienced frustration while handling problem behaviours								
Frequently or more	18 (32.7)	18 (32.7)	8 (14.5)	χ^2= 6.198	20 (36.4)	23 (41.8)	23 (41.8)	χ^2= 0.455
Occasionally or less	37 (67.3)	37 (67.3)	47 (85.5)	p=0.045	35 (63.6)	32 (58.2)	32 (58.2)	p=0.797
Teachers should solely deal with problem behaviours in school								
Yes	44 (80.0)	4 (7.3)	9 (16.4)	χ^2= 76.389	42 (76.4)	38 (69.1)	47 (85.5)	χ^2= 4.171
No	11 (20.0)	51(92.7)	46 (83.6)	p<0.001*	13 (23.6)	17 (30.9)	8 (14.5)	p=0.124
I am confident and competent to manage problem behaviours in my school								
Yes	23 (41.8)	50 (90.9)	35 (63.6)	χ^2= 29.430	23 (41.8)	23 (41.8)	22 (40.0)	χ^2= 0.050
No	32 (58.2)	5 (9.1)	20 (36.4)	p<0.001*	32 (58.2)	32 (58.2)	33 (60.0)	p=0.975
Include courses on emotional development of young children in teacher training								
Yes	13 (23.6)	42 (76.4)	39 (70.9)	χ^2= 37.727	18 (32.7)	17 (30.9)	22 (40.0)	χ^2= 1.126
No	42 (76.4)	13 (23.6)	16 (29.1)	p<0.001*	37 (67.3)	38 (69.1)	33 (60.0)	p=0.570
Perceived poor management of recent problem behaviour								
Yes	14 (25.5)	32 (58.2)	21 (38.2)	χ^2= 12.414	18 (32.7)	18 (32.7)	12 (21.8)	χ^2= 2.115
No	41 (74.5)	23 (41.8)	34 (61.8)	p=0.002*	37 (67.3)	37 (67.3)	43 (78.2)	p=0.347

Impact of intervention on participants' self-reported practices for managing problem behaviours

The proportions of participants' responses were compared within the intervention and control groups at baseline, at immediate post-intervention and at 1-month post-intervention (follow up) as shown in Table 4.

Among the intervention group participants, there was a statistically significant ($p<0.001$) increase of about 35% in the proportion of those who documented incidents of problem behaviours occurring at school (72.7%) at follow up, compared to baseline (38.2%) and immediate post-intervention (38.2%). Also, there was an increase in the proportion of those who utilized appropriate management strategies for problem behaviours from 9.1% at baseline to 30.9% at follow up. This difference in proportion was statistically significant ($p=0.007$) for the control group participants). There were no statistically significant changes in the proportion of responses on self-reported practice obtained from the control group at baseline compared to immediate post-intervention and follow up (p-values ranging from 0.359 – 0.805).

Table 4: Impact of intervention on participants' self-reported practices for managing problem behaviours N=110

	Intervention Group N = 55				Control Group N = 55			
Variable	Baseline n (%)	Immediate post-intervention n (%)	Follow up n (%)	p-value	Baseline n (%)	Immediate post-intervention n (%)	Follow up n (%)	p-value
I report incidents of problem behaviour to the head of my school								
All the time	7 (12.7)	10 (18.2)	7 (12.7)	χ^2= 0.876	5 (9.1)	9 (16.4)	10 (18.2)	χ^2= 2.048
Sometimes or less	48(87.3)	45 (81.8)	48(87.3)	p=0.645	50 (90.9)	46 (83.6)	45 (81.8)	p=0.359
I have sought for expert advice when faced with problem behaviour(s) at school								
Yes	8 (14.5)	8 (14.5)	8 (14.5)	χ^2= 0.000	4 (7.3)	7 (12.7)	4 (7.3)	χ^2= 1.320
No	47(85.5)	47 (85.5)	47(85.5)	p=1.000	51 (92.7)	48 (87.3)	51 (92.7)	p=0.517
I have attended seminars/trainings regarding managing problem behaviour in young children?								
Yes	14(25.5)	13 (23.6)	14(25.5)	χ^2= 0.065	14 (25.5)	14 (25.5)	14 (25.5)	χ^2= 0.000
No	41(74.5)	42(76.4)	41(74.5)	p=0.968	41 (74.5)	41 (74.5)	41 (74.5)	p=1.000
I document incidents of problem behaviour in my school								
Yes	21(38.2)	21 (38.2)	40(72.7)	χ^2= 17.504	14 (25.5)	14 (25.5)	14 (25.5)	χ^2= 0.000
No	34(61.8)	34 (61.8)	15(27.3)	p<0.001*	41 (74.5)	41 (74.5)	41 (74.5)	p=1.000
I consult colleagues when having difficulty handling problem behaviour								
Often	12(21.8)	14 (25.5)	48(87.3)	χ^2= 60.178	15 (27.3)	16 (29.1)	13 (23.6)	χ^2= 0.434
Occasionally or less	43(78.2)	41(74.5)	7 (12.7)	p<0.001*	40 (72.7)	39 (70.9)	42 (76.4)	p=0.805
Management for recent problem behaviour encountered								
Corporal punishment	32(58.2)	30 (54.5)	29 52.7)		35 (63.6)	33 (60.0)	29 (52.7)	
Sought help only	12(21.8)	15 (27.3)	3 (5.5)	χ^2= 17.706	13 (23.6)	13 (23.6)	12 (21.8)	χ^2= 6.370
Threats	6 (10.9)	3 (5.5)	6 (10.9)	p=0.007*	6 (10.9)	5 (9.1)	6 (10.9)	p=0.382
Appropriate management	5 (9.1)	7 (12.7)	17 30.9)		1 (1.8)	4 (7.3)	8 (14.5)	

* - statistically significant value (p ≤ 0.05

Discussion

Majority of the participants in this study reported that managing problem behaviours was a major concern to them and elaborated their responses as concerns that problem behaviour makes teaching and learning ineffective. Some of the teachers in this study expressed concerns that they are faced with stress when handling problem behaviours, and concerns that problem behaviours can result in negative outcomes. It has been documented that concern for dealing with problem behaviours is dependent on the individual teacher's perception [18]. Young children with significant behaviour problems are those whose conduct surpassed the teacher's standard measure of child behaviour problems. Within the pre-primary school setting, what may be considered as a behaviour problem is affected by the teachers' attitudes, perceptions, feelings and degree of tolerance [19]. Several studies [10, 20] carried out among pre-primary school teachers have consistently identified addressing the needs of children with problem behaviours as one of the major challenges of their job and thus as a primary training need. Helmsmen *et al.*, 2012 found that problem behaviours interrupt the teaching and learning process. Hawkins and Heskett in 2014 [21] alluded to the fact that externalising behaviours like aggression tend to have a serious impact on a child's overall development, interferes with the learning process, and impedes the child's capacity to maximize their fullest capabilities.

The findings that most of the participants (65.5%) were "occasionally frustrated" when dealing with problem behaviours in their setting suggests that some of the participants may have found a way of coping and dealing with problem behaviours in their school settings thus reducing the frustration that results when dealing with the problem behaviours. The reduction in the proportion of those who were frequently frustrated (from 32.7% at immediate post-intervention to 14.5% at follow up) suggests that with the aid of appropriate management strategies, participants may have developed even better ways of dealing with the problem

behaviours. This concurs with Sugai and Horner's, 2009 [22] report that understanding problem behaviours and having a plan or set of behavioural strategies will aid the teachers to determine the best course of action to take whenever it arises and reduce the frustration that may result from handling such behaviours.

This study showed that teachers learn and implement the practices of their colleagues in managing problem behaviours as well as from their own experience. The theories of Bandura and Bronfenbrenner may explain this finding. The sources of the participants' skills are an indication of the social learning theory which was postulated by Bandura. The teachers are a part of an interrelated ecological systems and the way they respond to children with problem behaviour is influenced by what they have learned from their own experience as a good approach to deal with the behaviour (this is based on the self-efficacy theory).

The management strategies employed by the participants for problem behaviours included the use of corporal punishment like flogging and disgrace, seeking help by reporting to the head teacher or involving parents and praying for the child. Most participants (60.9%) employed corporal punishment for managing problem behaviours. This is not unusual as corporal punishment is used quite freely on school children in the Nigerian society both for minor infractions and serious offences [23, 24]. Only six (5.5%) of the participants employed evidence-based management strategies for problem behaviours such as teaching the expected behaviour, giving appropriate rewards and praise for good behaviour, and use of classroom rules and routines. A study by Tillery *et al.* in 2010 [25] reported that most times, the interactions between the teacher and the students that exhibit problem behaviours are usually negative and their management strategies are usually punitive ranging from reprimands, restraint, to removal of privileges. Teachers are inclined to delivering a lower rate of praise than punishment [25].

Evidence also seems to suggest that interventions are selected in a haphazard fashion with little or no direct connection to the individual child with no apparent standard for monitoring progress. Although teachers have been employing positive behaviour modification strategies to encourage positive behaviours and minimize negative behaviours, they usually resort to applying them in a one-size-fit-all manner [25]. Other management strategies that were reported by participants in this study included giving threats, caution with bible verses, and praying for the child.

After the teaching intervention in this study, more participants reported the use of appropriate management strategies like positive reinforcement, teaching expected behaviour and use of classroom rules and rewards. This concurs with the general finding that education and training of pre-primary school teachers have been associated with positive impact on attitudes and practices [26, 27].

Limitations

The shortcomings of the study lie in the interval between the immediate post-assessment and the next assessment time which was 4 weeks. This period may not have been long enough to determine whether the effects of the training were sustained. Also, self-reported practices cannot be generalised for teachers within the study location. Observed practises may provide more objective and in-depth information that can be generalised for the parent population.

Conclusion

The pre-primary school age represents a particularly important period to target behaviour problems in children and the teachers have a vital role to play in the management of these problem behaviours as they spend the major part of the day with the children. This study showed that teaching intervention can improve the perception, competence and skills of the teachers in managing problem behaviours among pre-primary school children and this was

sustained at 1-month follow up. More importantly, the findings of this study is the first step in exploring the feasibility of including management of problem behaviours in the training curriculum of elementary teachers. Formulation of clear policies and procedures on children's behaviours, provision in teacher education programs for specialization in early education learning, as well as providing specific in-service trainings for teachers on managing problem behaviours seems mandatory as teachers would implement appropriate and consistent procedures to address problem behaviours. This should help to reduce the negative outcomes of problem behaviours such as school dropout rates and contribute towards attainment of the sustainable development goal of achieving quality education and promoting lifelong learning opportunities for all (SDG 4). More research should be carried out on school-based intervention programs for pre-primary school children and subsequent studies should explore the possible effectiveness of training teachers to deliver these interventions.

Consent and Ethical Approval

The study protocol and the informed written consent were approved by the State Ethics Committee and the Ministry of Education. Also, written informed consent was obtained from the participants. The researchers provided a covering letter inviting the teachers to participate in the study with an explanation of the purpose of the study prior to the training.

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