



UNMASKING THE TENETS OF TEACHER PROFESSIONAL SUPPORT DURING THE COVID-19 PANDEMIC: THE KENYAN EXPERIENCE

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Abstract:

The COVID-19 pandemic presented a dual challenge in Kenya's education sector. This necessitated the need to train teachers for remote teaching at the same time as the country was implementing a new Competency-Based Education (CBE). While teacher professional support, invariably referred to as the "trinity pillars" (teacher retooling, resource provision and psycho-social support), was helpful in preparing teachers in readiness for transition to online teaching and effective implementation of CBC, this paper documents the inadequacies in teacher professional support during the COVID-19 disruption in Kenya. This study employed a cross-sectional research design. Two-stage stratified cluster sampling was used to select the schools and teachers as well as the principals. It was based on the Responses to Educational Disruption Survey (REDS) data from the national centre, school principals and teachers' self-administered questionnaires. Data was collected during the second wave of the COVID-19 pandemic. Frequencies and percentages were used to present the data, while the Chi-Square test was used to explore relationships. The data on teacher professional support exposes several inadequacies that compounded teachers' inability to implement CBC and transition to remote teaching effectively. The changes in the education system occasioned by COVID-19 demanded immediate attention, some of which had to be supported by plans and policies to govern the new dispensation in the education sector. In line with these, the Ministry of Education developed a response plan to address COVID-19 educational disruption. In the teacher re-tooling pillar, there was low or no training on online safety, use of ICT and working with underprivileged groups. These gaps in teacher professional support during the COVID-19 disruption need government intervention.

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1. Introduction

The global sudden disruption of schooling by the COVID-19 pandemic in 2020 saw over 370 million children stay away from school. Most countries put in place measures which ensured that learning continued out of school despite the closure (Belay, 2020; UKAID, 2020; UNESCO, 2021). For instance, in Finland, the shift to remote teaching was gradual and well organized (Lavonen & Salmela-Aro, 2022). Similarly, in Singapore, policies were reformulated that addressed health and well-being for all students to ensure continuity of learning during the pandemic (Tan & Chua, 2022). Evidently, the use of online learning portals enabled all the students to have equal access to quality curriculum resources. In addition, retooling of teachers was done in order to facilitate the new modes of learning. The Singaporean government ensured equitable access and holistic well-being for the vulnerable groups of students. The transition in France, Ireland, the United Kingdom and the United States was swiftly implemented, although it was viewed as an imperfect substitution to face-to-face learning (Thorn & Vincent-Lancrin, 2022). The transition to online teaching thus did not improve on learners' academic progress nor reduce pre-existing inequalities in access to education.

The response modalities due to COVID-19 disruption varied by country. In Costa Rica, schools were closed down following a declaration of a national emergency in March 2020 and transitioned to online and distance learning modes through their virtual school program (Reimers, 2022; Reimers *et al.*, n.d.). While in Mexico, the Ministry of Education adopted a television-based strategy because it was already in existence. However, for the Mexican transition to online learning, it was noted that over half of the students lacked access to computers and cell phones during the pandemic (Aut & Tabasco, 2022).

In South Africa, technological solutions for communicating with parents and learners were employed, as well as the provision of physical work packs and books for learners to enhance learning while at home (Soudien *et al.*, 2021; Vale & Graven, 2022). The strategies applied in South African schools, however, varied depending on school type and resources available at schools, with private schools having a better support system for their learners' continued study during the COVID-19 pandemic.

The call for remote learning, which was the most immediate remedy, necessitated an overhaul in teaching approaches, channels, resources, the nature of content and new ways of interacting with learners. The shift to remote learning exposed the inequality gaps that existed in resource provision between private and public schools (Belay, 2020; Wolf *et al.*, 2022; World Bank, 2020). In most African countries, technological lag still exists, with glaring differences in digital technology resource endowment between schools in rural and urban centres during the prolonged school closure as a result of the COVID-19 pandemic (Faturoti, 2022; Reimers, 2022). In addition, the pandemic widened the gap in quality of learning between the rich and the poor, since economic well-being

has implications for access to technological resources required for remote learning. According to Maree (2022), COVID-19 increased the gaps in the highly unequal schooling system in South Africa. Learners from the underprivileged backgrounds suffered most during remote learning due to a lack of digital devices, internet connectivity and high poverty levels that did not allow education to merit as a priority at the time. It should be noted that little information exists on how teachers fared during distance learning.

In Ghana, the shift to remote learning laid bare the equity gaps in access to technology, materials and social resources (Wolf *et al.*, 2022). In Cameroon, palliative methods were developed and implemented to support online teaching. These methods include the use of digital platforms like the WhatsApp social network, which was widely used by several schools, teachers or groups of teachers (Kouakep, 2020). In Morocco, the transition to online teaching presented inequality in the availability, accessibility and utilization of distance education tools and platforms between private and public schools. The situations presented were replicated in most East African countries, where access to technology and the internet for online learning continues to widen the digital divide (Meinck, 2022; Muftahu, 2020).

The COVID-19 pandemic presented a dual challenge in Kenya, as it erupted when the country was transitioning from the 8-4-4 to the Competency-Based Education (CBE) education system. The 8-4-4 education system was introduced in Kenya in 1984 with the aim of widening the curriculum and preparing learners for opportunities in formal and informal post-education employment (Milligan, 2018; Sifuna, 1990). Since the pandemic came in the midst of this transition, it led to the need to retool teachers for remote teaching alongside CBC implementation. Teacher retraining in Kenya was critical since CBC implementation required that digital technology be infused in all learning areas (KICD, 2017). Additionally, the COVID-19 pandemic exacerbated the need for teachers to be digitally literate for remote teaching. Teachers were therefore to be equipped with the requisite skills and competencies in the use of innovative digital technology and resources.

The paradigm shift from face-to-face to remote teaching required teachers to be given professional support. The professional support is often referred to as the trinity pillars: teacher training, resource provision and psycho-social support. These pillars were selected by the authors as they constituted the fundamental elements of teacher professional support, which would address the dual challenge that faced the education sector in Kenya during the COVID-19 pandemic. Teaching online required teachers to retool, as the majority of them were familiar with face-to-face teaching.

Thus, teacher training entailed capacity building in pedagogical and digital skills and online classroom management (UN, 2020; UNESCO, 2021). Measures were taken by the Kenyan government to ensure teaching and learning continued across the country. The measures included the development of a plan and policies to guide the operations of learning institutions during the COVID-19 disruption, mobilising resources and facilitating training (GoK, 2020). However, the government's effort in providing teacher professional support has not been documented. Analysis of the REDS data revealed

inadequacies in teacher retooling (UNESCO, 2022). This paper, therefore, sought to document the inadequacies in teacher professional support during the COVID-19 disruption in Kenya.

1.2 Aims of the Inquiry

The study was guided by one central research question: What were the inadequacies in Teacher retooling for effective remote teaching during the COVID-19 pandemic?

1.3 Justification of the Inquiry

Teachers familiar with face-to-face teaching and learning encountered technical challenges in conducting remote teaching during the COVID-19 pandemic, as well as implementing CBC. The paradigm shift required that teachers be trained on the use of relevant digital tools, preparation of content for remote learning, resources to use in remote teaching, online classroom management and the mechanisms for online assessment.

It is imperative to note that teachers had no prior training or preparedness to cope with these emerging challenges. The government put in place mechanisms for teacher retooling, resource provision and psycho-social well-being. However, despite the government's efforts, there were still glaring inadequacies regarding teacher professional support. These inadequacies have not been documented, hence the need for this inquiry.

2. Summary of Related Literature

Effective remote learning requires a teacher who is proficient in online teaching, digitally literate and competent in the use of online tools. Teacher professional support was a necessity for CBC implementation and in response to remote teaching during the COVID-19 pandemic.

2.1 Teacher Training for Effective Remote Teaching

Teacher training is deemed to be a continuous process for better recovery of the quality of education and time lost in most education systems during the pandemic period, according to a study by UNESCO (2021b). The study also indicates that most teachers in Low and Middle-income countries received limited training, thus leaving them inadequately prepared to effectively facilitate remote learning. Jelińska and Paradowski (2021) found out that teachers who had prior experience with online teaching had the best and fastest compliance mechanism to remote teaching. Even so, the quality of remote teaching was found to be compromised due to limitations in their abilities to use online tools, hence the need for teacher retraining. Similar challenges were experienced in Kenya. Educational institutions attempted to build the capacity of their staff through training (Wekullo *et al.*, 2021). However, the content was wide, and the time allocated to cover the content was limited (one-day workshop). In addition, the technical staff who conducted the training on online teaching were few with limited skills. Further, the

trainings were conducted remotely, posing a challenge to most teachers who were digitally illiterate (Shaturaev, 2021). The training was deemed insufficient to adequately empower teachers to transition to remote teaching and implement CBC effectively.

2.2 Context

The COVID-19 pandemic caused unprecedented disruptions in the education sector, whose magnitude the country was not prepared for. To minimize losses in the education sector, Kenya put in place plans and policies to guide its operations during the COVID-19 disruption (GoK, 2020; UNESCO, 2022). The measures taken aimed at controlling the coronavirus transmission, strengthening resource mobilization for education, building resilience within the education systems and accelerating change in teaching and learning. Specific plans and policies were developed to provide directions and guidance for teaching and learning in schools during the COVID-19 disruption at both national and county levels (https://www.education.go.ke/images/Kenya_basic_Education_COVID-19_Emergency_Response_Plan-compressed.pdf). This was so because most components of Kenya's education system are managed centrally, while a few are decentralised, like the Pre-primary education and the vocational training, which are in the jurisdiction of the counties. Although in Kenya, the National government and County governments worked symbiotically, the case was different in Brazil, where the National government seemed to have abdicated its responsibility to Mayoral leadership and the civil society (Costin & Coutinho, 2022). The inquiry focused on teacher training, which is a regular practice in any education system. Teacher professional support was more critical at the advent of the COVID-19 pandemic, which coincided with the introduction of the CBE system in Kenya. The GoK was responding to a dual unique situation of teacher professional support for CBC implementation as well as compliance with the changing realities in teaching and learning, as occasioned by COVID-19.

3. Methodology

The data utilized in this inquiry were from REDS. It was an observational, non-experimental study that collected cross-sectional data from 11 countries straddling four continents, Africa, Asia, Europe and Latin America. The target population comprised of an official from the national center and teachers who taught Grade 8 or equivalent students during the COVID-19 disruption period and were still teaching at the same schools during survey administration. In addition, principals in the schools where the Grade 8 or equivalent students were found were also targeted. In the Kenya context, Grade 7 students were involved because the academic year had been extended to cover the lost time; therefore, these students had not progressed to grade 8 as was anticipated in the study planning.

A two-stage stratified cluster sampling design was adopted, with the first stage sampling schools while the second stage sampled teachers and principals. The samples

were drawn from one private and 101 public schools and comprised one official from the national centre, 785 teachers and 102 principals.

Data was collected using three questionnaires: schools (principals), teachers and the national center. These instruments had items for gathering data on plans and policies on teacher training during the COVID-19 disruption period. The period to the first time in a country after the beginning of the pandemic, during which most schools were closed for the majority of students and teaching and learning took place remotely (Meinck *et al.*, 2022). In Kenya, this period was between mid-March 2020 and late October 2020 (Ministry of Health [MoH], 2021). Data was collected in Kenya during the second wave, which was between December 2020 and July 2021 (UNESCO, 2021a).

The collected data was inspected, cleaned, edited, and data files were prepared by the REDS team that gathered it. During preparation of the data files, outliers, implausible (invalid) responses and missing variables were given unique codes (UNESCO, 2021a). These codes were used to filter out such responses during data analysis. This explains the slight variations in sample sizes (n) of the analyzed data. The data was analysed with the aid of the International Database (IDB) Analyser. Frequencies and percentages were used to present data. Relationships between teacher characteristics' gender, age, teaching experience and their professional training were explored using the Chi-Square test. The non-parametric test was selected because the data were categorical (nominal, ordinal).

4. Results and Discussion

As guided by the central question, the aim of the inquiry was the presentation of the results on the characteristics of the respondents, plans and policies on which the new undertakings in the education sector were anchored during the COVID-19 disruptions.

4.1 Characteristics of the Respondents

The demographic characteristics of the teachers and principals who provided the inquiry data were analysed. The results of the analysis in Table 1 reveal that the principals who participated in the inquiry had different attributes, which implies that the research sample was diverse.

The demographic characteristics of the principals in Table 1 indicate that nearly all (99.0%) of them were from public schools. The majority (64.7%) of the participants were males, while the rest were females (34.3%) and others (1.0%). With regard to age, principals aged 50 to 59 years had the highest percentage (65.7%), followed by those in the 40 to 49 years bracket. The findings also indicated that the highest percentages were recorded by principals who had been heads of their schools for 3 to 5 (27.5%) and 6 – 10 (20.6%) years. When organized by experience as a principal, the highest percentages were recorded by those who had been school heads for 11 to 20 (37.4%) and 6 to 10 (25.5%) years.

Table 1: Characteristics of the Principals

Scale	Characteristic	Frequency	Percentage
School Type (n = 100)	Public School	99	99.0
	Private School	1	1.0
Gender (n = 102)	Female	35	34.3
	Male	66	64.7
	Other	1	1.0
Age (n = 102)	Less than 30	1	1.0
	30–39	3	2.9
	40–49	30	29.4
	50–59	67	65.7
	60 or over	1	1.0
Duration as principal of this school (n = 102)	2 years or less	44	43.1
	3–5 years	28	27.5
	6–10 years	21	20.6
	11–20 years	6	5.9
	21–30 years	1	1.0
	31 years or more	2	2.0
Experience as a principal (n = 99)	2 years or less	12	12.1
	3–5 years	16	16.2
	6–10 years	25	25.3
	11–20 years	37	37.4
	21–30 years	8	8.1
	31 years or more	1	1.0

The demographic characteristics of the teachers were also analyzed. The results showed that female participants were the majority (54.5%) as they outnumbered their male (45.5%) counterparts. With regard to age, over two-thirds (68.5%) of the teachers were aged between 30 and 49 years. The results further showed that more than half (59.8%) of the participants had teaching experience of 11 years and above.

4.2 Teacher Training Support

The plans and policies in Kenya attempted to address the teacher training support as highlighted in the aim of this inquiry.

4.2.1 Plans and Policies on Teacher Training

The Kenyan Government was cognizant of the need for teachers to be retrained in readiness for the paradigm shift from face-to-face to online teaching. Hence, when asked about the extent to which plans and policies developed addressed COVID-19 disruptions in line with professional development of teachers' general use of ICT, teachers' pedagogical use of ICT and collaboration among teaching staff, the National Centre indicated the need to have these aspects implicit in the plans and policies without being explicitly stated.

4.2.2 Teacher Retooling Pillar for Effective Remote Teaching

Teacher re-training is an important component in the provision of quality education. To attain quality education, there should be continuous retraining of teachers, taking into cognizance the global changes and dynamic realities within the education sector.

Retraining of teachers to empower them with the necessary skills for online teaching during the COVID-19 pandemic could not be overemphasised. The expectation was that there would be a significant increase in teachers' engagement in self-learning and that they would acquire the necessary pedagogical skills. Analysis of data provided by school principals showed the changes in teachers' engagement in training activities during the COVID-19 disruptions in comparison with the time before the pandemic. The results showed that 26.2% of the principals indicated an increase in teachers' access to and use of online platforms and tools for self-directed or collaborative learning, while 30.5% reported that there was a decline. The findings presented a worrying state in Kenya during the COVID-19 pandemic. These observations are a reflection of the findings by Kathula (2020), which indicated that most teachers lacked digital skills for online teaching and access to internet connectivity. These deficiencies were attributed to the government's failure to provide enough resources for online teaching and the lack of electricity in some areas. The findings are also in congruence with those of Kisirkoi (2022), who found out that over half of the teachers did not have remote teaching skills.

With regard to teachers' engagement in professional development activities that focused on delivering remote teaching, 29.1% of the principals indicated it increased, 29.5% were of the view that it declined, while 37.1% of the respondents reported no engagement at all. The low percentages of teachers who engaged in professional development are a pointer to Kenya's unpreparedness for digital teaching and learning, and agree with the findings of UNICEF (2021). The principals also indicated the changes in peer collaboration among teachers; 26.0% reported that there was an increase, 38.9% were of the view that it decreased, while 27.8% were of the opinion that teachers did not engage in any peer collaboration activities. The low interaction among teachers could have been occasioned by the restrictions imposed on face-to-face meetings due to COVID-19 disruption. Online collaboration was also minimal due to the cost implication, lack of digital devices and digital skills for collaborating online (Khlaif *et al.*, 2021; Mhlanga & Moloi, 2020; Ngwacho, 2020b; UNESCO, 2021b).

In teacher retooling, the professional learning areas are key and should address the fundamental changes in the education sector. Therefore, as per the REDS data, teachers had been trained in different professional learning areas as indicated in Table 2.

Table 2: Professional Learning Areas Undertaken by Teachers

Item	n	Before COVID-19	During or after	Never
Working with vulnerable students (e.g. students with emotional or behavioural problems or unstable home environments)	729	33.6	35.3	31.1
Using ICT in teaching	746	35.2	35.4	29.4
Professional learning specific to the subject(s) you teach	727	52.7	36.2	11.1
Teaching classes in which the students have a wide range of achievement	727	46.5	35.3	18.2
Online safety	730	22.6	31.1	46.3
Developing student resilience	725	27.0	43.3	29.7
Student well-being	738	42.7	44.0	13.3
Teacher well-being	741	42.1	42.1	15.8
Students with special needs	740	34.5	26.6	38.9

Over 40% of the teachers indicated they have re-trained on developing student resilience, student well-being and teacher well-being, respectively, during and after the COVID disruption. This could be attributed to the need for preparation in readiness for COVID-19 response initiatives as articulated in various government frameworks (Guthrie *et al.*, 2020; United Nations, 2020; UNICEF, 2021; USA, 2021). Professional training on working with vulnerable students recorded a 1.7% increment only. The low increment was realised at a time when re-training on vulnerable groups of learners would have been critical. However, re-training on students with special needs declined by 7.9% indicating a widening gap in the access and equity of quality education. Similar observations were made by UKAID (2020). The decline in training for the underprivileged in society presents a case of failure to support those in dire need.

In addition, the use of ICT in teaching and online safety recorded a 0.2% and an 8.5% increase, respectively. Although the use of ICT recorded a negligible increase in training, there was more emphasis on online safety, as most of the teaching and learning activities were remotely offered. Training on professional learning specific to the subject(s) that teachers taught declined by 16.5% which could be attributed to training focusing on general areas of online teaching since they were expected to transition from face-to-face teaching. Similarly, training on teaching classes with students having a wide range of achievement also declined by 11.2% which may be attributable to the shift to online teaching where access was limited to students from privileged backgrounds (Pietro *et al.*, 2020; Schleicher, 2020; UNICEF, 2021).

Besides the efforts that had been undertaken by the Government and other non-state actors, there was a need to address the glaring inadequacies in teacher professional learning areas as portrayed by the REDS data. For instance, on online safety and students with special needs, 46.3% and 38.9% of the teachers indicated that they had never been trained on. Additionally, other areas that require attention include working with vulnerable students, using ICT in teaching and developing student resilience. The

Kenyan context is a replica of the inadequacies faced by most countries in an effort to retool teachers to transition to online teaching (USA, 2021).

Participation in professional learning activities not only offered teachers the opportunity to practice but also equipped them with the relevant competencies for quality teaching. The extent to which teachers engaged in different professional learning activities during the COVID-19 disruption is summarised in Table 3.

Table 3: The Extent to which Teachers engaged in Professional Learning Activities during the COVID-19 Disruption

Item	n	ALE	SE	ASE	NO
Participation in a mentoring program with other teaching staff	698	8.7	36.0	27.1	28.2
Participation in training run by teachers or other staff in your school	694	7.5	27.1	24.1	41.3
Participation in courses provided by your school's education system	689	11.2	26.3	20.9	41.6
Self-teaching using publicly available materials from the internet	693	18.0	37.4	17.5	27.1
Participation in courses provided by a university or college	698	4.5	12.3	14.0	69.2
Participation in courses provided by a subject association	691	5.1	21.0	21.7	52.2
Participation in courses provided by education experts/consultants	693	9.1	27.6	21.8	41.5

Legend: A large Extent (ALE), Some Extent (SE), A Small Extent (ASE), Not at All (NO).

The findings indicate that over half (55.4%) of the teachers were able to self-teach using publicly available materials from the internet, thus taking responsibility for learning on their own. Participation was least in courses offered by the University and those offered by a subject association at 16.8% and 26.1% respectively. However, the extent of participation in most of the professional learning activities was extremely low with 83.2%, lacking participation in courses offered in universities or colleges, while 73.9% registered a small extent or no participation in courses offered by the subject association. The low participation in courses offered by universities was attributable to the fact that all universities were closed down during the COVID-19 crisis, and just like all the other training levels, they were also putting up mechanisms to transit their programmes and courses to suit online teaching (Kathula, 2020; Ngwacho, 2020a; Sharp *et al.*, 2020). Despite the strength in peer and collaborative learning, 65.5% of the respondents indicated low or no participation in training run by teachers or other staff in their schools. Further, 62.6% did not participate in courses provided by their schools' education system and over 55% recorded little or no participation in a mentoring program with other teaching staff.

The results in Table 3 revealed a number of inadequacies in teachers' professional learning which need to be addressed. Other than self-teaching, the GoK through the Ministry of Education (MoE) needs to put in deliberate measures to promote all professional learning activities for the teachers to effectively respond to the online teaching demands escalated by COVID-19 and the implementation of the CBC.

Further analysis was conducted by exploring the relationships between teachers' demographic characteristics and engagement in self-teaching using internet resources. Self-teaching using internet resources was selected because the results indicated that the majority of the teachers engaged in it. The chi-square test for independence was used to establish the relationships. The results of the test indicated that the proportion of the male

teachers (77.5%) who engaged in self-teaching was higher than that of their female counterparts (69.5%). This implies that the probability of males engaging in self-teaching is higher compared to that of females. The results further indicated that the relationship between gender and engagement in self-teaching was statistically significant, $\chi^2 (3, N = 670) = 8.287, p < .05$.

With regard to age, the percentages of teachers in the 25 to 29 (81.6%) and 30 to 39 (78.2%) years age bracket who engaged in self-teaching were higher than those of their colleagues aged 50 to 59 (60.7%) and 60 years and above (0.0%). This means that the older teachers were reluctant to interact with ICT, yet it was a key component of remote teaching during the COVID-19 disruptions. The results also showed that the relationship between age and engagement in self-teaching was statistically significant, $\chi^2 (15, N = 669) = 50.750, p < .05$.

The results further revealed that the highest percentages of teachers who engaged in self-teaching had teaching experiences of 3- 5 (88.5%), and 6 to 10 years (77.9%), which decreased with the number of years in service. It means that those with less teaching experience engaged more in self-teaching. A statistically significant relationship was observed between teaching experience and engagement in self-teaching, $\chi^2 (15, N = 669) = 46.349, p < .05$.

Collaboration among teachers of the same or different subject areas in a school setting is essential in promoting their professional development (European Commission, 2020). The level of interaction among teachers during the COVID-19 disruption was also analysed. It involved examining changes in the time teachers spend meeting (remotely or in person) with colleagues. The majority of the teachers indicated that there was a decrease in meeting with their subject teachers (73.1%), meeting or working with teachers of their subjects (74.6%) and school teaching staff (75.7%). A few indicated there was an increase in meeting with their subject teachers (17.3%), meeting or working with teachers of their subjects (14.9%) and school teaching staff (14.8%). The inability of teachers to meet despite peer collaboration and learning being a powerful tool in teacher training support has compounded explanations, ranging from the COVID-19 restrictions on physical distancing to the termination of face-to-face teacher interaction. In addition, the inadequacies in digital skills, lack of digital devices and internet connectivity limited the time teachers participated in remote meetings (Bozkurt *et al.*, 2020; Kathula, 2020; Pietro *et al.*, 2020).

5. Conclusions

From the findings documented, the following conclusions were made:

The plans and policies that attempted to address the teacher professional support were implied, as they did not give detailed directions on how they were to be implemented. There was low or no training on online safety, use of ICT and working with underprivileged groups. In addition, the level of participation in the training activities offered by various stakeholders was low, except for self-teaching using publicly available

resources from the internet. Further, there was a decline in the use of the internet for self-teaching with teachers' advancement in age. Additionally, all teachers, regardless of their age, were concerned about contracting COVID-19 at their place of work. Thus, the inadequacies in the re-teacher training with regard to the plans and policies should be prioritized for better teacher professional development, as well as in readiness to implement CBC and shift to remote teaching.

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Conflict of Interest Statement

The authors declare no conflicts of interest.

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