

RIISING TO THE CHALLENGE: SOUTH AFRICAN LIFE SCIENCES TEACHERS SHOWING CREATIVITY AND RESILIENCE DURING COVID-19

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ABSTRACT

The outbreak of the Coronavirus Disease (COVID-19) brought many changes and perspectives to the world of education. Some areas experienced a complete halt in academic activities, especially when complete shutdowns were pronounced, losing some weeks or months out of their academic years. However, factors that empower those who thrive during this adversity are worthy of note. This paper explores how South African Life Sciences teachers demonstrated resilience and creativity during the COVID-19 pandemic. This is a descriptive qualitative study underpinned by a sociocultural framework. The data were collected from eight teachers in four under-resourced public schools using semi-structured interviews. A thematic data analysis was conducted after transcribing the recorded interviews. The findings revealed that teachers in rural schools were fearful at the inception of the outbreak. However, some teachers could continue teaching during the lockdown period despite requiring more sophisticated Information and Communication Technologies (ICT). Teachers' dispositions, such as a sense of responsibility, resilience, relationships, determination, and creativity, were the emerging concepts that ensured their ability to continue during difficult times. Therefore, the implication is that although technology is essential in teaching and learning, we should not underrate teachers' persistence and creative power in ensuring successful teaching in dire times. We recommend improving teachers' professional ability and creativity through in-service and pre-service teacher training.

Keywords: *COVID-19, creativity, resilience, socio-ecological approach, South African teachers.*

INTRODUCTION

COVID-19 hit the globe in 2019 and was declared a pandemic worldwide. Due to this pandemic, many organizations were closed to curb the spread of the disease (United Nations, 2020). As an institution, the school was also affected (Joshi et al., 2021). As a result, the transition to remote learning became the only way to ensure the continuity of learners' education. The pandemic may have come unexpectedly, but switching to remote learning quickly became the alternative solution. However, this was not without its own set of challenges. It could be argued that implementing remote learning in schools is a smoother process in developed countries than in developing countries. Having gone through the crises brought about by the pandemic, the world is now on its way to recovery (UNESCO, 2023). Nonetheless, we must be retrospective and examine the question posed by this research: How did South African teachers navigate their teaching challenges during the COVID-19 pandemic?

This singular event has, doubtless, impacted our lives in general. Still, in particular, it has influenced teachers' pedagogical approaches as they have had to turn to technology to prevent the loss of one to two academic years. Teachers' attitudes and dispositions are central to the effectiveness of using such technologies and the inherent challenges. It is thus essential to understand this adaptation process, its

challenges, and how teachers navigate it. Understanding this process will also inform teachers as the world embraces the possible escalation of the use of technology in the classroom.

Teachers' Resilience

Studying teachers' resilience and creativity during adversity is crucial. Resilience refers to the capacity of a dynamic system to adapt successfully to disturbances threatening system function, viability, or development (Morettini, 2020). Lytle and Shin (2023), including Develos-Sacdan and Bozkus (2018) share the same view that resilience connotes the ability to progress during challenging situations or to bounce back after an experience. Teachers face many adverse conditions as they perform their duties within or outside the classroom. The pandemic presented its peculiar challenges alongside the usual day-to-day challenges that teachers faced (Hamad, 2022). These challenges impacted teachers' performance negatively (Goldhaber & Theobald, 2021). This impact ranged from depression to leaving the teaching profession outright (Linos et al., 2022). One prominent challenge that researchers highlight is the motivational challenges that teachers face (Corres Gallardo & Ruiz-Mallén, 2023). According to Trigueros (2020), resilience comes into play as it bolsters interest and motivation. Even though motivation has been widely researched, resilience is the bedrock on which motivation is based (Mansfield et al., 2012). Self-motivation is a protective factor when there is a critical need to demonstrate resilience in adversity (Beltman et al., 2019). In line with this, Ergün and Dewaele (2021) argue that resilience is central to teachers' ability to fight back and thrive.

Besides the usual day-to-day stress that teachers face, COVID-19 brought another dimension of pressure. The reaction of individual teachers to this condition varied, and thus, their coping strategies to ensure survival differed. Buchanan et al. (2013) suggest that understanding why teachers persist in their profession despite their challenges can provide valuable insights into factors that could influence teacher retention. Studying teachers' resilience during adversity thus engenders an understanding of how teachers could adapt and navigate tough times, serving as guidance during interventions for teachers in similar situations who may be at risk (Morettini, 2020).

Teachers' Creativity in Adversity

Teachers should engage with their learners. Bakkene et al. (2010) argue that learners' engagements can be facilitated based on their teachers' creativity. According to Skrbinjek et al. (2024), creativity, which is described as "putting new ideas into practice", is critical in ensuring quality education. Maxwell (2024) explains that the pedagogical creativity of teachers stands to fuel their resilience and continuity in adverse educational conditions, especially in times of uncertainty. It was argued by Rahayuningsih et al. (2024) that the proof that creativity is when teachers can improve on their practice, consequently engendering improved learners' performances. The improved performance of learners is never in isolation of teachers taking it upon themselves to creatively apply unique approaches that will promote the desired improvement (Schermerhorn et al., 2012). Naturally, to achieve creativity in the classroom, conscious, concerted effort is demanded. However, when this is achieved, Yuhertiana et al. (2022) concede that it will lessen the stress experienced by both the teachers and students.

The Socio-Ecological Framework

The Socio-Ecological framework claims that individuals develop, live, and act within multiple overlapping systems. The framework emphasizes multi-systemic factors, such as student-teacher relationships, collegial relationships, school leadership and policies, and the complexity of human behaviors, such as temperance and resilience, as influenced by various factors and interactions influencing behaviors. According to Lee et al. (2017), these factors are referred to as systems. Ungar and Theron (2020, p. 441) summarize resilience "as the process of multiple biological, psychological, social, and ecological systems interacting in ways that help individuals to regain, sustain, or improve their mental well-being when challenged by one or more risk factors." Resilience occurs when individuals thrive within multi-systemic circumstances that overlap (Mesman et al., 2021). Teachers work within the framework of many systems that impact their teaching. These systems are located within and outside of the teacher as an entity. According to Lee et al. (2017), the multiple systems teachers face could be issues within themselves, their families, those in their organization (i.e. the school), their communities, and the governmental policies guiding their profession.

The Context

This study was carried out after the COVID-19 pandemic restrictions were lifted. In South Africa, restriction of movement was carried out in levels depending on the infection statistics at a particular time. At the pandemic's beginning in 2020, the government pronounced Level 5 lockdown. Later, this was eased to Level 4. Schools were reopened at Levels 3 and 2, however, the COVID-19 protocols such as social distancing, wearing of masks, and sanitization of hands were strictly observed. This study was carried out when the restriction was at Level 1. South African schools operate a rotational attendance system for social distancing (Ogbonnaya & Awuah, 2019). In South Africa, teachers fell into the group known as frontline workers (Linos et al., 2022) since they were mandated to work with the final year of learners in Grades 7 (primary schools) and 12 (high schools) after the first two months of the pandemic (Spaull & Van der Berg, 2020). As frontline workers during the pandemic, teachers were more stressed than regular citizens (Beames et al., 2021).

This study aimed to investigate how South African Life Sciences teachers demonstrated resilience and creativity during the COVID-19 pandemic. Overcoming challenging circumstances is crucial to achieving academic success, and the stress induced by COVID-19 only emphasizes this. Hence, this study will provide information in the field of education on ways to promote resilience in teachers during challenging times.

METHODOLOGY

This was a descriptive, qualitative, multiple-case study. Qualitative research is widely used in exploring complex phenomena that require deep inner reflection (Elliott & Timulak, 2021). It systematically investigates a phenomenon studied in its natural setting (Chai et al., 2021). A descriptive qualitative approach is considered the most appropriate for studying participants' experiences and their ability to demonstrate resilience since its methods facilitate the gathering of rich data, aiding in answering the research question (Doyle et al., 2019). It further enables the flexibility of commitment to a particular theoretical or conceptual framework in research (Sandelowski, 2010).

The Site and Participants

Due to the lack of preparation for the pandemic, public schools were the most severely affected. The schools under study were mainstream schools from rural and semi-urban areas in the Tshwane metropolitan area. Four high schools participated in this study: two rural and two semi-urban area schools. The participants (teachers) were residents of the Tshwane metropolis. They were carefully selected through non-probability purposive sampling, with the researcher relying on their extensive expertise to identify the most suitable candidates based on specific criteria (Thomas, 2022). The schools chosen were selected purposefully, as they are public schools in the Tshwane metropolitan district that offer Life Sciences as a subject. The schools were denoted as A, B, C, and D, where schools A and B are the rural schools, and schools C and D are the urban schools (see Table 1). Purposive criteria were applied to identify eight Life Sciences teachers in four schools (two teachers from each). The selection criterion for the teachers was that they had to teach Life Sciences (Grades 10-12) in the selected schools. Pseudo-names are used for the participants.

Table 1. *Participants and Schools*

School pseudonym	Socio-economic status of the school	Teacher pseudonym	Years of teaching experience
School A	Rural	Olivia	6
		Emma	6
School B	Rural	Charlotte	5
		Liam	3
School C	Urban	Amelia	3
		Isabella	5

School D	Urban	Ava	8
		Noah	2

Data Collection and Analysis

Ethical permission was obtained from the University where this study was conducted. Permission to conduct research in the schools was also obtained from the Department of Education. Once permission was granted, we approached the schools and discussed the purpose of the study with the principal, who permitted us to speak to the teachers. The participants were informed about the purpose of the study and provided their voluntary consent to participate. Before collecting the data, we discussed the principles of confidentiality, anonymity, trust, and safety with the participants. We adhered to these ethical principles throughout the study.

Being qualitative research, the data collection procedure focused on exploring the teachers' experiences during the pandemic. Therefore, the data collection tool in this study was open-ended, individual, face-to-face, and semi-structured interviews. The duration of the interviews was between 45 minutes to an hour. Some key interview questions included how the teachers taught during the pandemic, their positive and negative teaching experiences, and what lessons they learned during the pandemic. Protocols were observed by reminding the participants that confidentiality would be ensured (Lambert & Lambert, 2012).

The data gathered from the interview were audio recorded using a phone and transcribed. An external transcriber was engaged to increase the reliability of the study. The audio-recorded interviews were given a pseudonym to uphold the confidentiality pledge and were sent to the transcriber through email. All the interviews were passworded with code only known to the transcriber. This is to ensure that only the transcriber has access to the recordings. The researcher reviewed the transcriptions repeatedly to ensure correlation with the audio-recorded version. The transcribed data were coded, and from the codes assigned using the AtlasTi software, four themes and nine sub-themes were generated.

It is important to establish the trustworthiness and reliability of a study. According to Stahl and King (2020), trustworthiness gives the audience, or reader, of a research report confidence in what they read. The findings were generated based on the analyzed data of the participants' lived experiences without bias to ensure adherence to the confirmability principle. The emerging themes were directly obtained from the data gathered through the semi-structured interviews. The data were then coded, categories generated from the codes, and themes from the categories. The thick, rich description of the research process promotes the transferability of the findings of this study. Through the pilot study, the interview questions and the process were ensured to produce quality data that will address the research problem.

FINDINGS AND DISCUSSION

The four themes that describe the teachers' resilience from the data include a sense of responsibility, communal relationships, creativity in teaching, and teachers' support system. The theme "sense of responsibility," which will be described in the next paragraphs, has two sub-themes, namely, "obligation to teach" and "locus of control." These were derived from coding the data.

Theme 1: Sense of Responsibility

The concept of responsibility refers to the moral duty of teachers to uphold their professional integrity and to fulfil their commitments voluntarily to achieve certain results (Bhowmik et al., 2021). Teachers encounter numerous challenges in their work, which may hinder achieving these results. These challenges, often referred to as stressors, were exacerbated by the pandemic. These stressors span from fear of uncertainty to stress imposed on them due to the changes in structure and system due to the pandemic. All the participants interviewed were fearful at first. Isabella said: "*It was scary, you don't know what you should touch and what you cannot touch and all those things... We really worked under fear,*" and Liam explained: "*...So that week was very scary. But it became easier every day as we learned how to navigate through the new norm that was.*"

Subtheme 1A: Obligation to Teach. The participants admitted that the fear of the pandemic hurt their teaching and time management. In a study conducted in Northern Italy, the participating teachers were subjected to more emotional distress than the general population (Keim et al., 2022). In the United States, a study by Pressley and Learn (2021) shows that teachers' anxiety levels increased as they were informed about school resumption during the pandemic. One of the core reasons for teachers' fear and anxiety, as discovered by Williams et al. (2022), is concern about personal safety during that time. Apart from taking care of themselves, teachers were entrusted to ensure the safety of their students. Isabella commented, "*It [the pandemic] did affect us a lot because you'll spend half of the lesson trying to show learners how serious this [pandemic] was and trying to ensure their safety.*" This agrees with Kirshner (2021), who found that the pandemic forged teachers' transformation. Teachers were subjected to the pressures and heat of the situation, making them find a way to cope during difficult times. Charlotte mentioned that she was not coping emotionally, asserting, "*... I was here [teaching] because I had no other choice. If I had an option to get a job somewhere during COVID, I would have resigned and left my job because it was too much to bear.*" Olivia reiterated, "*I can't say I really know how I dealt with it [the pandemic]. I think it's because you just have to do what you have to do. You did not have the option to say I can't do this anymore.*"

Teachers assumed the dual role of teaching and caring during the pandemic (Yildiz et al., 2023). In the current study, Charlotte explained that "*sometimes, because you want to educate the students on how to be safe, one will end up unable to teach whatever you plan to teach.*" This tension between managing the time provided to teach the subject content and ensuring the safety of the students constituted a stressor for the teachers. This time was unduly shortened by the lockdown restrictions (Maree, 2022), and due to the rotation scheme established by the government. The rotation system comprised teachers teaching the same topic or concept to two sets of students of the same grade. Teachers were also challenged to teach the same topic repeatedly, not only because of the rotation system but also due to absenteeism or lack of fluidity in the learning process. Olivia stated: "*You can't say that I taught this over the phone or due to online lessons; I can't go back, you will certainly repeat it until they understand the topic.*" The teachers used WhatsApp voice notes to explain some written notes through the same medium. However, the challenge was that only some students had smartphones, and in some cases, not even the children's parents had phones. In semi-urban schools, at least one of the parents had a smartphone to communicate with the learners to ease the learning process. Unfortunately, this meant that those who did not have access to the teacher's voice notes due to a lack of phones or data were left out of classroom discussions. This necessitated teachers to go through what had already been explained on the phone earlier. The positive side of this was that this provided an opportunity to consolidate the knowledge of those who could listen to the voice notes before the class, but this process strained the already strained time allotted to the subject.

Teachers' commitment to their duty towards their learners was challenged by the pandemic. A survey conducted by Moreno et al. (2024) in one of the institutions in the Philippines reveals the commitment of the teachers to educate their students regardless of the pandemic, switching to online classes and searching for a way to make online classes more engaging. In this current study, despite the fear and uncertainties experienced, the teachers were determined to go as far as they could to assist learners, especially those in their final class so that they could pass their final examinations.

Subtheme 1B: Locus of Control. According to Georgescu et al. (2019), the locus of control determines how a stressful situation may affect an individual. Individuals have varying levels of stress tolerance, which, in this context, implies that teachers working in the same environment and encountering the same stressors may react differently. An individual's resilience determines their ability to manage stressful situations (Rutter, 2013). Moreover, anticipation and determination are intricately linked with locus of control. Concerning this, Ava stated, "*I'd like to anticipate problems before they even come so that I can try and deal with them before they even arise. So that's where I sat down.*" She had an element of determination: "*I was like there is no way that this pandemic is going to just let that the year just goes to waste. So I knew and then that's where I took the decision to say, I need to teach these learners. So, for me, it was just like being a mother fighting for the success of her children.*"

Theme 2: Communal Relationships

King et al. (2021) argue that taking up responsibility is a powerful tool for enhancing resilience and showcasing strength in the face of adversity. According to Kruger (2021), enhancing resilience is directly linked to establishing robust relationships between two or more entities. This study established that one key factor that promoted resilience during the pandemic was the relationships built before and during the pandemic - the teacher-student relationship and the relationship between the Department of Education and the teacher.

Since the development of resilience is inextricably tied to creating sturdy connections between multiple entities (Kruger, 2021), the socio-ecological approach was deemed appropriate for this study. The socio-ecological approach in this study implies that multiple ecologies and relationships impact teacher resilience and creativity. The selected rural and semi-urban secondary school teachers indicated that their strong relationship with the visiting Department of Education delegates after the lockdown period helped them pull through the hard times. Noah explained: *"Yes, our facilitator was very much resourceful. We received so much more instructional material during COVID-19 than ever before... previous question papers, small booklets for learners and teachers as well... so then they we had so much support."* The environment in which professionals operate contributes to promoting workplace resilience (Mullen et al., 2021). The authors argue that context is central to understanding human resilience. Looking at the context of this study, which is the school environment, various factors constitute the environment. This is what Kangas-Dick and O'Shaughnessy (2020) refer to as the biological systemic levels. All of these systemic levels, as identified by Lee et al. (2017), were observed to impact the teachers in this study. From the theme "communal relationships", two sub-themes, namely, "Passion for work" and "Love for students", were derived from coding the data.

Subtheme 2A: Love for Students. It was found that the solid relationships and bonds teachers developed with their students over the years were fundamental to their unwillingness to let them down, especially the Grade 12 students. Per Ava, the bond between her and her students had gone beyond a mere teacher-student relationship as she compared the relationship to a mother-child relationship. She commented: *"...for me, it was just like being a mother fighting for the success of her children."* She passionately spoke in favor of teachers, making a generalized assumption that: *"I believe every teacher would like to see all the kids passing and no one left behind."* This statement shows how much she believed in the relationship that should exist between teachers and their students.

Subtheme 2B: Passion for Work. Olivia clarified that she was motivated by a love and passion for her students. She commented: *"I am not unwilling to see them fail their final papers. I have been teaching them Life Sciences since Grade 10 ... I have put much work into the students before the pandemic."* These teachers' passion and love for their profession and students underlay their motivation and resilience. It can thus be said that meaningful working conditions are an influencer of resilience. Meaningful work includes types of professions that give inner satisfaction and fulfilment, not necessarily income (Rosso et al., 2010). In the same vein, Ryan (2020) argues that school leadership can improve resilience in the teachers working at their schools. In addition, Ava affirmed her love for teaching students; she explained: *"I am passionate about teaching, and I would not like that my students fail. At this point, I am so concerned about my Grade 12 learners. I will only be fulfilled if they all have 100% pass rate in my subject."* This, therefore, motivated them to stay committed to work during the pandemic. Ellison and Walton-Fisette (2022) agree, asserting that a positive teacher-student relationship can foster teachers' resilience.

A study by Zhu et al. (2022) reveals that peer relationships enhance resilience and mental well-being in adverse conditions, such as victimization. In addition, Ava indicated: *"So, I was teaching through WhatsApp during the pandemic, even before the ease of the lockdown. I was giving the question papers. I was giving homework, and then they would write, and each had to send me their individual answers after they finished writing."* Even though her colleagues did not prioritize teaching, she remained confident and dared to make it her top priority.

Alternatively, Charlotte from School B persevered through the pandemic because she felt obligated to fulfil her duties: *"If I have an alternative job, I will quit this one because there is no job out there, so I cannot quit; I have to go and teach."* Charlotte simply did her job. She taught her students, but not passionately, which may arguably lowered the effectiveness of her teaching as it was out of necessity and not due to a passion for the work. Olivia concurred, stating: *"...it's because you just had to do what you have to do... you did not have option to say I can't do this anymore, there is no job out there."* It appears that these two teachers' motivation stemmed primarily from the necessity to earn an income rather than from a meaningful teaching work experience. Mullen et al. (2021) agree that the factor that leads to teachers' attrition is school context relationships. Similarly, Morettini et al. (2020) indicate that losing beginner teachers can be curtailed when surrounded by a good school community.

Theme 3: Creativity in Teaching

The complex nature of our world demands the ability to be creative (Robinson, 2011). Creativity is essential for individuals to succeed in any field (Kettler et al., 2021). Creativity in the classroom is essential for teachers as they navigate the diverse challenges in their daily engagement with students. It has been found that teachers' employers viewed creativity during the pandemic as related to teachers' performance (Tabieh et al., 2021). From the third theme, "Creativity in teaching", three sub-themes, namely, "Self-motivation," "Seeking improvement," and "Subject expertise" were derived from coding the data.

Subtheme 3A: Self-motivation. In the current study, the marked difference between teachers who could continue teaching despite challenges and those who were not was the ability to take the initiative and visualize opportunities. Therefore, this comprises teachers motivating themselves to make the best of the opportunity. For example, Ava said: *"Even when other teachers were not teaching during the hard lockdown, my friend and I were teaching."* Although they taught different subjects, some participating teachers took the initiative to use the WhatsApp group they had created before the pandemic, which was not in use before then, as a tool to teach students during the lockdown period. She affirmed: *"For me, as soon as they said lockdown and started to notice that it might be extended ...we shifted to the WhatsApp group we already had with the learners before lockdown that we did not use."* The shift was using what they had, although only to overcome their immediate challenge to teach and get the students learning. Van Wingerden and Poell (2022) argue that teachers who enjoy meaningful work experiences are prone to being creative in the workplace. According to Pazin et al. (2022), creativity is imperative for effective teaching. In relation to this, Conradt et al. (2020) argue that teachers' intrinsic motivation is the bedrock of their classroom creativity.

Subtheme 3B: Seeking Improvement. With the globalization of the world, the inception of the 4th IR, and ensuring 21st-century education, Nurtanto et al. (2020) argue that it is important to improve the quality of learning. Technology-assisted learning improves student learning and motivation (Kirkwood et al., 2011). Regrettably, our education system faces limitations in implementing technology (Tejedor et al., 2020). Some of the teachers in this study (Ava, Olivia, and Emma) endeavored to use WhatsApp, which was the only technology available to teach in their vicinity. With the additional challenge of conducting experiments as the lockdown lingered, teachers' creativity was tested as students were to be prepared for their final exams.

Learners were supposed to conduct the osmosis experiment in a laboratory setting. However, due to the pandemic, they were at home. Ava thought of using bread since bread is a staple food and can be afforded in almost all homes. She sent them voice notes on what to do and things to observe and explained the concepts. Many of these initiatives saved the learners from idling at home and wasting the academic year. This is where adaptation in times of adversity comes into play. According to Gratacós et al. (2023), adaptive skills during adversity are strongly linked to teachers' resilience. Wabule (2020) explains that teachers' adaptive skills are individualized. Adaptive skills are a form of creativity employed in new situations. Unfortunately, this type of creativity was not exhibited by the other teachers. The other seven teachers waited until the government eased the lockdown before teaching their learners. From the insights gained in a study conducted among Dutch teachers, Van Wingerden and Poell (2022) find that the level of resilience in teachers is related to their creativity in the workplace. In this study,

Charlotte emphasized: "... *I am scared of going to work, even when the lockdown is eased.*" It is completely understandable that anyone should be afraid of and have concerns related to COVID-19. However, inactivity is inexcusable in the presence of creativity. Personality, motivation, and environmental differences could also have impacted teachers' initiative and creativity. While Emma was contemplating leaving her job, Ava was researching creative ways to make teaching her learners happen with what was available. Although she admitted that some students could not access those voice notes, they could catch up as soon as the lockdown eased since there were fewer in the population.

Subtheme 3C: Subject Expertise. Teachers must be models for creativity. It is, however, impossible to be creative without being an expert in the subject (Corfman, 2019). A teacher with limited viewpoints arguably could not apply their partial knowledge to create an effective learning environment during adverse conditions. Ava, motivated by her love for the profession and expertise in the subject area, improvised during the pandemic. She created alternative ways to ensure that her students still got involved in practical sessions, regardless of the situation. She used simple, common household items instead of laboratory chemicals and apparatus.

Theme 4: Teachers' Support System

The data revealed a degree of innate ability to persevere in all teachers. However, some factors impacted their perseverance and resilience capabilities. From this theme, two sub-themes, namely, "External support" and "Family support", were derived from coding the data.

Subtheme 4A: External Support. Teacher resilience is anchored in the partnerships within the school environment (Drew & Sosnowski, 2019). The teachers in this study expressed their frustration with the situation, highlighting the difficulty of managing the students and the overwhelming nature of the experience. In her own words, Charlotte explained that: "... *emotional support is not there, the kids are frustrating, it was all too much.*" Notably is the collegial support that Ava experienced while engaging with her colleagues. They both supported each other in ensuring that they continued to teach during the complete lockdown. The socio-ecological approach claims that the multi-system could impact practitioners due to internal factors, colleagues or governmental policies. The impact thereof, of course, may at times be positive or negative. Ava is an example of a positive experience. Ava's experience of collegial relationships and collaboration among colleagues enhanced her resilience during difficult times (Sainio et al., 2022).

Motivation requires that teachers are supported emotionally and socially by school authorities. Zhang et al. (2021) contend that support from colleagues and the school's leadership impact teachers' motivation and resilience. Similarly, most teachers in the current study admitted that the support and encouragement from the Department of Education delegates after the lockdown helped make the teaching process easy. Structural support from the school played a huge role in teachers' resilience and ability to pull through the pandemic. For instance, Liam attested that: "...*the school aided us with photocopies, they made sure that our photocopy is always there, is ready to print can do that when you see. So, our work was made easy and possible by both the department and the school.*" However, some teachers were not emotionally supported. As to their fears, they dealt with issues personally. Olivia lamented: "*I would say you need to prepare yourself emotionally because you come to a point where you feel like no this is too much. Some sort of like, you need some sort of emotional support, psychological support which was not given.*" Charlotte shared that she and her colleagues had to navigate the challenges of teaching during the pandemic without emotional support. Emotional support is crucial to developing resilience in difficult times (Härkänen, 2023; Lobo, 2023). Lobo (2023), in his quantitative study conducted amongst higher education students, asserts that resilience in students is developed as they receive emotional support from their teachers. In a longitudinal qualitative study conducted by Walter and Fox (2021), the role taken by school leadership was perceived to be a vital contributor to teachers' feelings of well-being.

Subtheme 4B: Family Support. In the same vein as collegial support, family support was an encouraging mediation for teachers during the pandemic. Those motivated to teach explained that family was the only thing they had, so they had to stay strong. Ana explained: "*I call my family from*

time to time even though they were not staying with me... my mom, in particular, encourages me that we shall see the light at the end of the tunnel." Fear was a huge emotion that teachers had to deal with during the pandemic. However, for Ava, this fear was cushioned by the support she obtained from her mom. According to Mullen et al. (2021), teachers' support system impacts their ability to cope with adversity. It is interesting to know that, in return, individual teachers' resilience impacts the overall resilience of the school system, affecting how effectively the school will bounce back from disruption like the pandemic as they (teachers) unanimously bring to the table their creativity with the use of diverse teaching strategies.

CONCLUSION

This exploratory study discussed a few challenges and the importance of environment and support systems in encouraging teachers to rise to challenges. It explicated what teachers' resilience comprised, especially during the COVID-19 pandemic. Encouraging resilience among teachers is necessary to ensure that effective teaching and learning environments are maintained, particularly in adverse situations. Positive workplace relationships and strong leadership support are crucial to teachers' well-being, enabling them to navigate challenging situations creatively.

Since resilience is the ability to progress in adversity (Lytle & Shin, 2023), it thus serves as a vital quality for teachers to cultivate. At such stressful moments and in these conditions, resilience is a protective factor. Factors such as self-determination, a positive or negative work environment, and support systems have been highlighted to promote resilience in teachers. Consequently, teachers' resilience impacts their workplace effectiveness. It was also discovered that their relationships with learners and their passion for the profession were key to keeping them motivated and committed, thus allowing them to become more creative in their respective teaching practices.

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