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¹Cape Peninsula University of Technology, South AfricaDOI: <http://dx.doi.org/10.38140/pie.v40i4.6743>

e-ISSN 2519-593X

Perspectives in Education

2022 40(4): 196-214

PUBLISHED:

23 December 2022

RECEIVED:

27 October 2021

ACCEPTED:

18 May 2022

Grade 1 teachers' experiences of supporting learners living with attention-deficit/hyperactivity disorder (ADHD)

Abstract

South Africa's policy on screening, identification, assessment and support (SIAS) stipulates that teachers support learners with barriers to learning and development in their mainstream classrooms. This includes learners living with Attention-deficit/hyperactivity disorder (ADHD). Yet, little research has been conducted regarding Grade 1 teachers' utilisation of support strategies for learners living with ADHD in mainstream classrooms. This study focused on Grade 1 teachers' support for learners living with ADHD. An exploratory, interpretive, interactive, qualitative case study was employed. Twelve purposefully selected Grade 1 teachers, representing five public schools (varying from Quintile 1-5) and one private school from the West Coast Education District, South Africa, participated in an unstructured open-ended focus group interview resulting in an interview framework being developed. This interview framework directed the field observations of classroom visits and semi-structured individual interview questions of six purposefully selected Grade 1 teachers. Qualitative content analysis was used to analyse the transcriptions of the individual interviews, as well as the field notes. The study found that teachers were innovative in developing effective support strategies to support Grade 1 learners living with ADHD in their classrooms.

Keywords: ADHD, Grade 1, teachers, experiences, support, strategies

1. Introduction

Attention-deficit/hyperactivity disorder (ADHD), a neurological condition of childhood, affects 8% of South African children (Van Dyk *et al.*, 2015). Braude and Dwarika (2020) point out that South Africa's inclusive education policies, such as the *Education White Paper 6: Special Education: Building an Inclusive Education and Training System* (South Africa. Department of Education [DoE], 2001), as well as the screening, identification, assessment and support [SIAS] guidelines (South Africa. Department of Basic Education [DBE], 2014), make it imperative that

learners with special educational needs are accommodated and supported in mainstream schools. Not all learners displaying ADHD symptoms are officially diagnosed with ADHD but may be at various stages of the referral process. However, all these learners, whether officially diagnosed or not, can be difficult and frustrating to teach. Therefore, in this paper, learners diagnosed with ADHD or displaying ADHD symptoms are referred to as learners living with ADHD.

2. Research problem and question

This research study was triggered by one of the researchers, who is also a Grade 1 teacher who struggled in supporting and addressing the needs of learners living with ADHD in her classroom. Loedolff (2019) points out that the SIAS (DBE, 2014) guides teachers on integrating inclusive education in mainstream schools, but that it does not provide clear or precise guidelines regarding classroom management and support to learners living with ADHD. The aforementioned researcher, as a Grade 1 teacher, felt lost as very limited research in South Africa has been done on how a Grade 1 teacher can support a learner living with ADHD (De Sousa, 2020; Kern *et al.*, 2015; Etchells, 2015; Perold, Louw & Kleynhans, 2010). Although the Department of Basic Education (DoE, 2001; DBE, 2014) acknowledges the pivotal role parents and guardians play in supporting not only their learners, but also interacting with the teacher, the researcher endeavoured to gain an understanding of what strategies she should consider in her Grade 1 classroom to ensure that the learning of learners living with ADHD in her classroom are enhanced and supported. This study, then, examined how Grade 1 teachers support learners living with ADHD in their classes by investigating the following: What are the experiences of Grade 1 teachers implementing support strategies to learners living with ADHD?

3. Conceptual framework

Bronfenbrenner's bioecological systems model (1979), as well as Feuerstein's model of mediated learning (MLE) (Todor, 2015), underpin this study. The integration of both models provides a conceptual framework for understanding the influences of the environment on teacher-learner interactions and ultimately on the performance of learners living with ADHD.

Bronfenbrenner's bioecological systems model (1994) views both internal and external challenges within the microsystem (direct interactions with individuals) and the mesosystem (teacher to learner; teacher to parents; learner to peers). By understanding how the environment affects learners living with ADHD, teachers develop innovative teaching and learning strategies to meet the needs of each learner (Swart & Pettipher, 2019).

Feuerstein's model (1991) of mediated learning experience (MLE) compliments Bronfenbrenner's model. Feuerstein and Feuerstein (1991: 3) describe mediated learning experience (MLE) as "an interaction of the organism with its environment via a human mediator". Thus, MLE highlights a teacher's role as a mediator displaying preferences of specific intervention strategies when addressing the specific needs of a learner with barriers to learning. According to Tzurriel (2013), MLE encompasses the cognitive strengths and insufficiencies of children. MLE comprehends the emotional needs of learners such as impulsiveness and energetic behavioural inclinations. Feuerstein's model (1991) synthesises with this research study in regard to cognitive, behavioural and social support strategies for Grade 1 learners living with ADHD.

4. Literature review

The conceptual framework grounds the literature review whereby the researchers endeavours to obtain an in-depth understanding of the research topic, concepts and strategies in supporting learners living with ADHD.

4.1 Inclusive education in South Africa

The Salamanca Statement (1994), which emphasises the right of all children to education, is the basis for South Africa's inclusive education policies (De Sousa, 2020). Amod, Vorster and Lazarus (2013: 217) view White Paper 6 (DoE, 2001) from a social-ecological perspective whereby "disorders as located within the individual" are transferred to a "broader [inclusive] system". In the White Paper 6 (DoE, 2001) it is specified that children with learning difficulties such ADHD can attend mainstream schools.

4.2 ADHD as a barrier to learning

Inattention, hyperactivity and impulsivity are ADHD symptoms (American Psychiatric Association [APA], 2013). According to Ciuluvica, Mitrofan and Grilli (2013), ADHD may impair the development of executive functions. ADHD is an internal obstacle to learning, influenced by biological and genetic factors (Schellack & Meyer, 2016; Pascual, Muoz & Robres, 2019). The National Curriculum Statement (DBE, 2011) emphasises reading, writing and arithmetic as foundational abilities for later learning (Gardner, 2021). The impaired cognitive and emotional abilities of Grade 1 learners living with ADHD affect their future growth (Colomer *et al.*, 2017). Therefore, Grade 1 teachers play a key role in early ADHD identification and diagnosis (DoE, 2001), as well as in providing support and guidance to these learners.

4.3 Support strategies

Behavioural management strategies include antecedent-, consequent- and self-management strategies (Gaastra *et al.*, 2020). Rief (2016) considers physical and schedule structures as antecedent strategies. Consequent-based strategies entail augmenting the environment in such a way that the prevalence of specific behaviours is either limited or encouraged (DuPaul, Weyandt & Janusis, 2011). Behavioural management strategies, such as daily report cards, response cost and behavioural contracts, are deemed effective for enhancing the behaviour of learners living with ADHD (Curtis *et al.*, 2013; Rief, 2016). Self-management strategies include self-monitoring, goal-setting, self-reinforcement and self-instruction. DuPaul *et al.* (2011) advocate empowering learners living with ADHD to regulate, monitor, record or assess their behaviour or academic performances. Academic support strategies are used to assist learners living with ADHD who experience academic difficulties. Computer-assisted instruction (CAI) involves using computers to teach and instruct (Botsas & Grouios, 2017). Peer tutoring is when a learner instructs, supports or responds to another during collaboration and academic work completion (DuPaul & Stoner, 2014). Peer tutoring improves the social skills of learners living with ADHD. Rief (2016) explains that social skills training (SST) teaches learners interpersonal skills. These strategies improve the classroom performance of learners living with ADHD (Corkum, Corbin & Pike, 2010; Jijina & Sinha, 2016; Beets, 2019).

5. Research methodology

The qualitative research methodology pointed the researchers in utilizing a qualitative research design which clarified the type of case study and sampling that was deemed to be appropriate in collecting rich and in-depth data. The qualitative research methodology rendered an opportunity for the participants to voice and explain their understanding knowledge, perspectives and actions in supporting Grade 1 learners living with ADHD.

5.1 Research design

An exploratory, interpretative, interactive, qualitative case study design was employed to investigate teachers' experiences, knowledge and beliefs in terms of supporting Grade 1 learners living with ADHD (Merriam & Tisdell, 2015; Nieuwenhuis, 2016; Khaldi, 2017). An unstructured focus group interview, field notes and semi-structured interviews were used to obtain rich qualitative data. The researchers explored the strategies Grade 1 teachers use in supporting learners living with ADHD in their classrooms. The 12 participants in the unstructured open-ended focus group interview interacted with the research statements when they engaged in a brainstorming activity to shed light on their understanding, knowledge, experiences and perceptions of rendering support to Grade 1 learners living with ADHD. In their engagement, they simultaneously embarked with interpreting their knowledge, beliefs and classroom support actions. The classroom visits and interviews with the purposefully selected six participants from the original twelve (one participant from each of the six schools) interacted and interpreted the interview framework, which was designed by the focus group interview participants. This qualitative research design was embedded in a case study as all the participants were Grade 1 teachers supporting learners living with ADHD in their classroom. Thus, the support to the said learners were rendered in a natural setting, namely the classroom as a "bounded system" (Hancock & Algozzin, 2016: 30).

5.2 Sample

A non-probability purposive convenience criterion case sample was used (Merriam & Tisdell, 2015; Lumadi, 2015). Ten participants, from seven public schools were purposively chosen to participate in an unstructured open-ended focus group interview as they were teaching Grade 1 learners living with ADHD in the West Coast Education District. These seven schools were representative of the various socio-economic status, varying from quintile 1-5. Two private schools in the said district, sent one Grade 1 teacher each, to participate in the unstructured open-ended focus group interview. Subsequently, the researchers purposefully chose five participants from the public schools, representing each quintile and one participant from the private schools, which she deemed to have comprehensive understanding and experiences teaching Grade 1 learners living with ADHD, to participate in the semi-structured individual interviews and field visits to their classrooms.

5.3 Ethical considerations

The Cape Peninsula University of Technology and the Western Cape Education Department granted ethical approval. Principals, teachers and parents of Grade 1 learners gave informed consent prior to this study. Informed consent was obtained by presenting the participants with descriptive information of the research, including the title of the research study, the procedures, the benefits expected to come from it, and that there were no anticipated risks and no compensation offered to the participants. The informed consent also addressed the

guarantee of confidentiality and the possibility of withdrawing from the study at any time without repercussions (Cohen *et al.*, 2018). The confidentiality and identity of the participants and their schools were safeguarded by not disclosing their actual identities in any publication or report linked to this study. This was ensured by the use of special identifying codes, called pseudonyms, to protect participants and schools, for example, Participant 1 and School 1. The obtained data are treated as confidential and were only viewed by the researchers. The collected data will be saved on a password-protected computer to minimise the risk of unauthorised access, and the original data (hard copy) will be destroyed once the study is complete.

5.4 Data collection and analysis

The Interactive Qualitative Analysis: A Systems Method for Qualitative Research [IQA] (Northcutt & McCoy, 2004) guided data collection during the unstructured open-ended focus group interview and the semi-structured individual interviews. Ananth and Maistry (2020) emphasise the relevance of IQA as a research design as it highlights that human (Grade 1 teachers') expertise is grounded in their social experience. However, Northcutt and McCoy (2004) focus on system relationships, whereas this research study concentrated on understanding, explaining and clarifying participants' experiences, beliefs and knowledge. Thus, four alterations to Northcutt and McCoy's IQA (2004) were made, namely, abandoning the theoretical coding steps; replacing these with field observations of classroom visits (Northcutt & McCoy, 2004); utilising a scientific software programme Computer-Aided Qualitative Analysis Software (CAQDAS) called ATLAS.ti9, to organise and manage the data collected during the IQA steps; and implementing Zhang and Wildemuth's (2017) qualitative content analysis method to analyse the data generated from individual interviews and portrayed by the field notes of the field observations.

During the focus group interview, data were collected when the teachers generated each their own understanding, beliefs and experiences of supporting learners living with ADHD and subsequently writing it on flashcards. These flashcards were randomly placed on the venue's walls. The teachers then proceeded to analyse the data collected (information on the flashcards) when they grouped these written ideas into themes. Northcutt and McCoy (2004) regarded this grouping activity as inductive coding. Deductive coding commenced when the teachers labelled the themes. The themes were then arranged into categories (Northcutt & McCoy, 2004). The categories and themes formed an interview framework which guided the data collection process during the subsequent field visits of the researchers to the six purposively chosen teachers. The interview framework also acted as a tool when the researchers met with each of the six teachers, following the field visits to their classrooms, to conduct semi-structured individual interviews.

The teachers' involvement with data analysis were restricted to the data collected from the focus group interview. The researchers utilized the eight steps of Zhang and Wildemuth's (2017) qualitative content analysis method to analyse the field notes of the field visits and the individual interviews. The said eight steps entailed transcribing the data; reading and re-reading the data until certain thoughts, activities and collaborations came to the fore; the progressing to themes and coding the said themes into categories; re-reading the data to ensure coding consistency; making inferences and conclusions; and conveying the results.

6. Findings and discussion

This article's findings and discussion focus on strategies that were used by Grade 1 teachers to support learners living with ADHD in the mainstream classrooms. The data analysis showed that Grade 1 teachers consider themselves experienced mediators in providing a quality mediated learning experience (MLE) to learners living with ADHD (Feuerstein, Feuerstein & Falik, 2010). Quality MLE is attained when teachers alternate curriculum and assessment procedures (differentiation) for learners with learning difficulties in mainstream classrooms (Topkin, Roman & Mwaba, 2015). The MLE model suggests that teachers recognise a learner's specific behavioural tendencies, emotional and social needs, intellectual capabilities and weaknesses, and then choose and modify support strategies to accommodate each learner (Feuerstein & Feuerstein, 1991). According to their knowledge, experiences and beliefs, Grade 1 teachers identified and implemented support strategies that were most effective in addressing the various needs of learners living with ADHD. Bronfenbrenner's bioecological systems model (1979) shows the relationship between learner characteristics (microsystem) and teacher support (mesosystem).

Trustworthiness was realized by triangulation (different data collection tools were utilized), member checking of the interview framework by the six teachers in their individual interviews, and intensive engagement with the data during the collection and analysis thereof (Merriam & Tisdell, 2015). Validity of this research article was enhanced by the utilisation of the interview framework from the focus group interview. By implementing Northcutt and McCoy's IQA Systems Method framework (2004) the researchers ensured that participants did not influence one another in generating data nor did the researchers influenced them. The validity of each category of the interview framework was strengthened when the participants in the semi-structured individual interviews changed, added, approved, or differed with the content of the interview framework (Northcutt & McCoy, 2004). The researchers avoided making personal interpretations when comparing individual interview and classroom observation transcripts. They relied on the transcripts, which comprised both the spoken and nonverbal interactions of the participants. As the researchers utilized a non-probability sample method, the aim of the study was not to generalise the findings to a larger population (Pascoe, 2014).

Thus, it was found that Grade 1 teachers used differentiated teaching resources and classroom management methods to support learners living with ADHD in mainstream classrooms. The following discussion shed light on how Grade 1 teachers were innovative in managing and using various support strategies.

6.1 Teaching resources

Teaching resources are resources that can be used for individual learners in the classroom. Although medication is deemed beneficial in supporting learners living with ADHD, it is not a quick fix. One teacher believes it is beneficial to investigate the causes of the behaviours, taking each learner's background and socio-economic circumstances into account. She also believes in making use of natural remedies.

One always thinks quick-fix with a pill but there is actually so much more ... omega oils ... believe in natural things (T11).

Whilst Königs and Kiliaan (2016) confirm the positive effect of omega-3 supplements on the treatment of ADHD symptoms, little supporting evidence was found by Abdullah *et al.* (2019) to confirm the positive impact of omega-3 supplements on the symptoms that learners living

with ADHD may experience. Likewise, Händel *et al.* (2021) agree that polyunsaturated fatty acids, such as omega-3, do not yield a positive effect on behavioural difficulties and the main symptoms of ADHD in children.

Some Grade 1 teachers regard headphones as vital for boosting concentration and limiting distractions.

He only uses them while he works ... so that he can...have ... silence (T9).

Trampolines, soft cushions and elastic bands can be used to prevent needless movement and increase focus. Rief (2016:103) suggests a therapeutic ball to address a learner's need to wiggle and squirm. Moreover, elastic bands can be used to reduce unwanted movements.

It ... has to ... give a little resistance. He must put [his feet] behind [the elastic band] so that he can always push his feet forward [while the elastic band tied to his chair's feet] (T11).

Fidget toys, including pipe-cleaners and modelling clay, enhance the attention span of a learner living with ADHD:

... Give pipe-cleaners to him, then he can fold [it] around the stick while he listens ... something in his hands to hold his attention and then he concentrates (T1).

I would rather give them ... clay (T9).

The research found that Grade 1 teachers built their own learner support apparatus when none or only minimal resources were available. One Grade 1 teacher supplemented her teaching and learning resources by placing thick, durable cardboard rolls of plastic wrapping under the feet of learners living with ADHD.

It's probably the ways in which you get him to sit still, like how I gave D the little pipe. ... Then I said: "You know, he taps his feet. That's why he gets it, so that he can keep his feet still" (T1).

Another approach to lessen fidgeting and movement is using a sensory box.

Those sensory boxes work quite well. Because it keeps them still. It keeps them busy. I had the boxes ... sand ... soup stuff ... corn ... candles ... dinosaurs [coloured] beans, rice, and pasta (T11).

A manual wall clock with graphics indicates when an activity begins and ends. As directed, learners move the clock hand to the next activity picture. A timer clock can motivate a learner to finish tasks on time.

I tell him that he has to beat the clock. So, I only set the timer for him (T11).

Teachers give learners educational games and puzzles after they finish their work to reinforce concepts.

6.2 Classroom management methods

Classroom management methods entail various classroom approaches and techniques.

You can use different methods for different children... like brain breaks (T3).

Classroom management methods include classroom structures, management of discipline, classroom support strategies and physical intervention strategies.

Classroom structures consist of physical and schedule structures (Reiber & McLaughlin, 2004; Rief, 2016). A physical structure indicates learner seating. Most Grade 1 teachers agree with Alanazi and Al Turki's (2021) advice to seat learners living with ADHD in rows, and place them in front of the classroom, close to the teacher, to avoid distractions (Lawrence, Estrada & McCormick, 2017). One Grade 1 teacher prefers that learners decide for themselves where they wish to be seated.

I asked him where he would like to sit ... So, he sits here [in the middle of the classroom] ... then he can kind of see what's going on around him (T3).

The physical classroom structure integrates interactive learning and teaching elements. Interactive whiteboards and television sets are popular in Grade 1 classrooms (South Africa, 2004), enhancing the learning and teaching of learners living with ADHD via e-learning.

Electronic whiteboards can highlight a day's schedule or day programme. Instead, several teachers prefer to remind Grade 1 learners of the day's flow verbally.

Visual indications, such as classroom rules and step-by-step guidance cards in completing an activity, play a key part in the management of Grade 1 classrooms:

I paste the visual stuff there. Now ... do what is shown on the board (T11).

Peer tutoring is an alternative to visual clues for regulating classroom time-to-task.

I sometimes put [learner's name] when she's done with A. Then she mustn't give her answers but only say what she must do like paste ... it can also help with an ADHD child who doesn't finish (T11).

According to Moeyaert *et al.* (2021), peer tutoring has a considerable impact on both academic and social-behavioural outcomes.

Classroom discipline requires a shared understanding (Trytsman & Chabangu, 2020). De Jager (2013) stresses the role of parents in supporting learners living with ADHD to demonstrate positive behaviour, since their value system must complement school values.

But it starts with the parents (T11).

Reiterating directions and directives, face-to-face dialogues with learners, and directing the focus of learners living with ADHD were employed to lessen unwanted behaviour. Accepting and loving a learner living with ADHD unconditionally improves learning outcomes.

If you show a bit of love, then she listens (T5).

Enhancing self-images were found to benefit self-regulatory behaviour.

What a difference it made to that child. Just to be a leader (T11).

Lakkala *et al.* (2020) verify that enhancing learners' self-perception as capable learners motivates them to set new goals.

In addition to the above methods of reinforcing positive discipline and outcomes, it was found that teachers encourage positive discipline. Visual picture cards, in addition to

face-to-face encounters, were used to remind learners of classroom rules. Learners were often rewarded for demonstrating acceptable classroom behaviour.

Token reinforcement and response cost are other classroom disciplinary approaches. Token reinforcement is utilised to encourage positive behaviour.

A sticker is handed for desired or expected behaviour. When the sticker card is full (ten stickers), it is exchanged for a bean. At the end of each week, the learner with the most beans is honoured with classroom privileges (T11).

In contrast to token reinforcement, response cost focuses on resolving undesirable behaviour. One teacher describes her reaction cost strategy this way:

If the child talks [for the first time] then his name comes on the yellow [robot light] ... if he talks again, then he comes [on the red light] in trouble (T11).

In the sticker and bean example, the learner would lose a bean or a privilege for misbehaving.

Despite the foregoing management approaches for classroom discipline, Grade 1 teachers agree that discipline begins with themselves.

You have to be prepared and your planning needs to be right, or you must at least know what you are going to do with the children on the day (T7).

In summary, classroom management and support practises for Grade 1 teachers focus on helping learners living with ADHD. Brain break activities are one way to help learners with ADHD.

We do a lot of stand-up ... line crossing (T3).

Grade 1 teachers in this study altered the classroom environment (e.g., seating arrangements) to enhance the learning of learners with ADHD (Yoro, Fourie & Van der Merwe, 2020: 3), giving clear directions and granting extra time. Teachers utilise various learning styles to support learners with ADHD.

You can use different methods for different children (T3).

Differentiation was understood by Grade 1 teachers as choosing the best support strategies for learners living with ADHD, not only preparing a variety of activities.

Grade 1 teachers support learners by emphasising a healthy diet and regular water intake. One teacher links learner diet to classroom behaviour.

I notice a slight improvement in his behaviour if he eats the porridge before he comes to class (T3).

This finding supports Kozyra *et al.* (2020) that nutrition affects the behaviour of learners living with ADHD.

Alanazi and Al Turki (2021: 1215) suggest that learners living with ADHD benefit from physical activities to convey content. Grade 1 teachers combine hands-on activities.

Maths ... are very practical. And when we do sounds, they have sound cards with which we build words (T1).

I had ... beanbags I give the command to put it on [their] heads and to do middle-line crossing, take him with your right hand, put him on your left foot ... in the mornings ... I do math games with them. I throw the dice ... and then I ask where it landed on. Say it lands on 5, then I ask them to double it (T11).

According to teachers, physical intervention strategies must consider differentiated apparatus.

You will differentiate with the apparatus. The one sits on the chair, this one has an elastic band, this one has a ball (T11).

7. Support strategies to Grade 1 learners living with ADHD

Based on the findings and discussion, the following recommendations are offered to help Grade 1 teachers support learners living with ADHD. Some support strategies can be utilised for multiple characteristics and are marked with an asterisk (*) in the table below.

Table 1: Recommendations to assist Grade 1 teachers in supporting learners living with ADHD in their classrooms

| SUPPORT STRATEGIES FOR GRADE 1 LEARNERS LIVING WITH ADHD | |
|---|--|
| Characteristics | Recommendations |
| <p>1. Learner is unfocused, daydreaming and has a short attention span. He/she struggles to complete detailed tasks. The learner is disoriented and forgets verbal and visual instructions. Visual-auditory processing is poor.</p> | <p>Medication (prescribed or natural)</p> |
| | <p>Peer tutoring</p> |
| | <p>Earphones</p> |
| | <p>Learner classroom seating</p> |
| | <p>Multisensory instructions or content through e-learning</p> |
| | <p>Visual clues</p> |
| | <p>Repeating the instructions</p> |
| | <p>Brain breaks</p> |
| | <p>Be adaptable in the classroom</p> |
| | <p>Shorter instructions or tasks</p> |
| | <p>Attention grabbers</p> |
| | <p>Physical activities</p> |
| | <p>Sensory boxes</p> |
| <p>Timer clock</p> | |

| SUPPORT STRATEGIES FOR GRADE 1 LEARNERS LIVING WITH ADHD | | |
|--|---|--|
| Characteristics | Support strategies | Recommendations |
| | Motivations | A learner is rewarded with privileges or physical objects to encourage good behaviour and discourage unwanted behaviour. Privileges entail being rewarded as a class captain or acting as a messenger, additional recess, playtime or token reinforcement. |
| | Clock with images | Images of the daily schedule are put on the analogue clock to remind ADHD learners when an activity begins and ends. |
| | Routine | Display a visual daily routine of the day's activities. |
| | Body percussion | Body activities like rhythmic clapping improve concentration and working memory. |
| 2. Learner is unorganised, work becomes messy, learner struggles with poor handwriting skills | *Peer tutoring | *Peer tutoring |
| 3. Learner is hyperactive and can't sit still for lengthy durations. This causes fidgeting and frequent conversations. Learners enjoy hands-on activities. Learners with ADHD can appear unruly. | *Peer tutoring | *Peer tutoring |
| | *Sensory boxes | *Sensory boxes |
| | A trampoline | Trampolines can be used to reduce energy. |
| | Chairs with soft cushions | This supports the learner's back and helps to stay seated. |
| | Therapeutic ball | Addresses the learner's craving for physically activity. The ball should only be given at certain times during the day. |
| | Elastic band | The elastic band helps learners stay still while working. It is wrapped around a chair's front legs so the learner can kick forward against it. |
| | Clay | Give clay as a fidget toy. |
| | Educational game or puzzle | After completing a task, play an educational game or do a puzzle. |
| | Timer clock | The timer clock indicates when learners may carry out physical activities, such as ten jumping jacks. |
| | | Rolling equipment beneath the feet |
| | Healthy dietary practices and regular water consumption | A diet with vital nutrients and no sugars will improve behaviour by reducing the learner's energy. Implement regular water breaks. |
| | Permit finishing tasks while lying down | Learners lay on their stomach and work or lay under the table while writing. |

| SUPPORT STRATEGIES FOR GRADE 1 LEARNERS LIVING WITH ADHD | | |
|---|--|--|
| Characteristics | Support strategies | Recommendations |
| | <p>Practical activities and games</p> <p>Outside physical activities</p> <p>Fidget toys</p> | <p>Practical exercises or games include movement and burn up energy.</p> <p>The teacher and/or assistant take the entire class out.</p> <p>To focus a learner's attention, give the learner a fidget toy like a pipe-cleaner to wrap around a crayon.</p> |
| 4. Learner is impulsive and acts inappropriately. | <p>Classroom rules</p> <p>*Motivations</p> | <p>Display classroom rules visually. Repeat instructions.</p> <p>*Motivations</p> |
| 5. The learner has a low self-image, feels alone and seems indecisive. He/she expresses both a desire and inability to achieve. | <p>Individualised attention</p> <p>*Visual clues</p> | <p>Listens to the learner and makes him/her feel cherished. Guides the learner to finish the assignment, boosting self-esteem.</p> <p>*Visual clues</p> |
| 6. The learner displays moodiness. The learner is disobedient and is the "class clown". | <p>*Educational game or puzzle</p> <p>*Classroom rules</p> <p>*Individualised attention</p> <p>Discipline</p> <p>*Motivations</p> <p>Response cost</p> | <p>*Educational game or puzzle</p> <p>*Classroom rules</p> <p>*Individualised attention</p> <p>Consistency and repetition are key to maintaining classroom discipline. Discuss the expected classroom behaviours.</p> <p>*Motivations</p> <p>A robot system can be utilized to signify good behaviour. When a learner misbehaves, his/her name is moved from the green light to the yellow light. The learner is reprimanded at the red light.</p> <p>*Healthy dietary practices and regular water consumption</p> |

In closing the above discussion on findings and recommendations, Grade 1 teachers need to take cognisance that there is not a "one size fits all" strategy to address the individual needs of a learner living with ADHD (Nombuso, 2016). Nevertheless, as Grade 1 teachers may find it challenging to support learners with ADHD in their classrooms, the above support strategy summary for Grade 1 mainstream classrooms may be beneficial, despite limitations experienced in this research study.

8. Limitations

This study did not identify emotional and social support strategies, or more specifically, social skills and self-management strategies. Another limitation is that the research was limited in scope to the West Coast Education District of the Western Cape Province. Therefore, the findings are not representative nor generalisable to all Grade 1 teachers. Nevertheless, as Grade 1 teachers may find it challenging to support learners living with ADHD in their classrooms, the support strategy summary for Grade 1 mainstream classrooms may be beneficial to all Grade 1 teachers.

9. Conclusion

It is evident that Grade 1 teachers are knowledgeable about diversity and types of teaching resources available to support learners with living ADHD. However, they lack knowledge of specific behavioural support strategies (daily report cards and behavioural contracts), social skills training and self-management techniques (DuPaul & Stoner, 2014; Rief, 2016). Teachers intuitively apply support strategies that they believe will augment the teaching and learning of Grade 1 learners living with ADHD. Grade 1 teachers adhere to Bronfenbrenner's bio-ecological (1979) model of human development that proximal processes should be guided by the characteristics of the person, context and time factor to augment the teaching and learning of a learner living with ADHD (Bronfenbrenner & Morris, 2006; Swart & Pettipher, 2019). Teachers acknowledge their role as competent mediator, as outlined in Feuerstein's (1991) MLE model, by selecting, devising and implementing techniques that help individual learners living with ADHD in their specific context. By researching support strategies, a summary is presented to aid Grade 1 teachers in the West Coast District in the Western Cape to enhance the teaching and learning of learners living with ADHD.

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