

Perceived benefits of Playback Theatre for children with Attention-Deficit/

Hyperactivity Disorder: An exploratory study

ABSTRACT

Treatment options for children with attention-deficit/hyperactivity disorder (ADHD) are limited. Some social work practitioners have attempted drama-based approaches to improve the functioning and well-being of such children. However, studies on such interventions are few, and their benefits to children with ADHD are uncertain. In this exploratory qualitative study, children with ADHD, their parents and a social worker were interviewed to investigate the perceived benefits of Playback Theatre, a drama-based programme, particularly in terms of improvements in the executive functions that are often impaired in individuals with ADHD. Results of the study provided preliminary support that Playback Theatre can improve all four dimensions of executive functions. Other improvements in social support and self-confidence of the children were also reported. The implications for future treatment model using Playback Theatre, social work research and practice are discussed.

Keywords: Playback Theatre, drama, Attention-Deficit/Hyperactivity Disorder

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Introduction

The global prevalence of attention-deficit/hyperactivity disorder (ADHD) is between 1.5% and 8%, depending on the diagnostic criteria used (Taylor et al., 2004). One study estimated that approximately 3.9% of the adolescents in Hong Kong met the diagnostic criteria of ADHD (Leung et al., 2008). Both children and adults with ADHD show a persistent pattern of inattention and/or hyperactivity-impulsivity (American Psychiatric Association, 2013; Barkley, 2015). One longitudinal study that followed a cohort of school-aged children with different self-control levels over 40 years found that school-aged children with poorer self-control in early years tended to have worse health, earn less, and commit more crimes 30 years later than their counterparts after controlling for intelligence quotient, gender, social class, major demographic factors (Moffitt et al., 2011).

Practitioners and researchers are interested to know about what and how an intervention helps children with ADHD and the model of executive functions may offer a direction for such exploration. Children with ADHD have significant impairments in executive functions (EFs), including cognitive flexibility, inhibition, self-control, self-regulation, working memory, problem solving, reasoning and planning (Barkley, 2015). Several definitions of EF are commonly used in previous studies, but there is no consensus (Jurado & Rosselli, 2007). EF was first described as a set of mental

constructs including central executive, phonological loop and visuospatial sketchpad (Baddeley & Hitch, 1974), and later defined by Lezak (1983) as a set of mental capacities for formulating goals, planning to achieve the goals, and effectively carrying out the plans. There are two types of assessments of EF, including self-report measures (i.e., rating scales) and performance-based measures (i.e., neuropsychological-cognitive tests). Low correlations between two types of measures may indicate that they measure different levels of cognition (Toplak et al., 2013). Both types of measures are valuable because they contribute complementary information about cognitive and behavioural functioning (Isquith et al., 2013).

Among different conceptualizations of EF, Barkley and Murphy (2011) constructed a comprehensive model emphasizing functional aspects of EF. According to their model, EFs can be divided into four areas, namely nonverbal working memory, verbal working memory, self-regulation of affect and reconstitution. Working memory refers to the processing of information while maintaining such information in temporary storage (Baddeley, 1983). Nonverbal working memory and verbal working memory process differently. In this process of nonverbal working memory, individuals recall self-experiences and vicarious experiences, enabling them to respond and interpret the future (Barkley, 2001). Because children with ADHD face difficulties in sustaining their attention on mind activities, they also face problems in predicting future

events or upcoming responses by evaluating their experiences and thus might feel compelled to give improper responses. The functions of nonverbal working memory can be explained in time management, visual and auditory information memorisation ability and self-discipline (Barkley, 1997b). Time management refers to the ability of an individual to finish the tasks in hand in the available time in the most efficient way. Individuals with a sense of ‘temporal duration’ can manage their time and events in daily life (Burt & Kemp, 1994). However, individuals with ADHD usually have problems in estimating time and planning accurately and thus end up causing delays (Barkley & Murphy, 2011). Time management also requires the ability to retain events in memory and appropriately respond to tasks in daily life (Waldum & McDaniel, 2016). This involves learning from self-observation or vicarious learning, storing the information and formulating responses when similar situations are encountered (Barkley, 2001). Children with ADHD are less efficient in learning and storing information and applying it when responding to others (Holmes et al., 2014). Thus, their ability to memorise information needs to be improved. Self-discipline, which is the ability to control one’s own behaviour and follow rules, is guided by nonverbal working memory (Farias et al., 2017). Normal individuals learn nonverbal signals, such as symbols, signs and pictures, and automatically repeat the associated behaviour by recalling the memory; however, children with ADHD often have a limited ability to

retain information and are less likely to recall memories and the rules they should have learnt before (Barkley & Murphy, 2011).

Verbal working memory refers to self-directed talk that facilitates self-regulation (Alderson-Day & Fernyhough, 2015). During self-talks, individuals can describe and reflect upon events by self-questioning (Flavell, 1976). They may use some rules to guide their responses for moral reasoning. Children with ADHD often have inadequate skills for self-talks, which limits their ability to follow instructions and guidelines (Winsler, 1998). Verbal working memory involves three functions: description and reflection, self-discipline using instructions and moral reasoning (Barkley & Murphy, 2011). Description and reflection functions are mainly related to self-talk and are used in formulating appropriate responses to external stimuli. Children with ADHD tend to have weak verbal working memory, and thus many of their responses appear incomplete and unclear. Self-discipline involves the functions of both verbal and nonverbal working memories. The process of remembering other people's speech in verbal working memory helps one to create one's own rules (Fahy, 2014). Children with ADHD usually face difficulties in understanding, following and even creating rules, and thus their behaviour appears unintentional and random (Barry & Kelly, 2006). Moral reasoning refers to the internalisation of social norms and morals. Most people learn norms and morals from the common rules followed by society. Moral reasoning

also involves the process of reviewing the past and future and creating similar rules by inner speech. Because inner speech is less developed in children with ADHD, their moral reasoning is often delayed (Barkley & Murphy, 2011).

Executive functioning promotes the self-regulation of affect (Barkley, 1997b). It helps to inhibit socially inappropriate responses and delay some improper emotional expression. This type of emotional self-control is established by the integration of verbal working memory with nonverbal working memory (Tannock, 1998). A conflicting and counterbalancing process between the working memory and inner emotions results in the self-regulation of affect. Emotional instability often observed in children with ADHD is attributable to the failure of such self-regulation (Petrovic & Castellanos, 2016). The self-regulation of affect involves emotional management, motivation and goal-directed actions (Carver, 2006). Emotional management refers to the ability to inhibit emotional reactions to an event. Due to poor verbal and nonverbal working memories, children with ADHD cannot effectively process information and internalise societal rules (Kofler et al., 2011). These children are less likely to delay or suppress emotional expression and may respond inappropriately when faced with different challenges. Motivation and goal-directed behaviour involves experiential learning. As children with ADHD face problems in reviewing the past and future, they

cannot effectively enhance motivation and commit to goal-directed behaviour (Barkley & Murphy, 2011).

Reconstitution is the ability to deconstruct and reconstruct behavioural sequences (Barkley, 1997b). During deconstruction, the behavioural structure is divided into different hierarchies, followed by reconstruction, wherein a new creative behaviour is generated. The outcome of this process should contain both verbal and nonverbal behavioural responses. The ability to deconstruct and reconstruct events is limited in children with ADHD (Barkley, 1997b). Thus, they often cannot create a new verbal or non-verbal response. Therefore, their responses are random and difficult to understand. Reconstitution requires both information organising and problem-solving skills. In this process, old information is integrated from working memories and appropriate responses are formulated. Children with ADHD often have poor organisational and problem-solving skills and thus cannot respond appropriately to challenges (Barkley & Murphy, 2011).

Evidence-based treatment for ADHD focus on the use of medication, behavioural therapy, and parent training (Cairness & Millner, in press). Psychostimulant medications are popular, and more than 70% of children with ADHD have reportedly experienced improvements in attention and learning after taking these medications (Biederman et al., 2008; Multimodal Treatment Study of Children with ADHD

Cooperative Group, 1999). However, stimulants may also produce side effects, such as sleep problems and appetite loss and thus are not the preferred choice of treatment for very young children (Corcoran, 2011; Faraone, Biederman, Morley, & Spencer, 2008). Behavioural interventions are also effective in improving motivations and reducing the disruptive behaviour of children with ADHD (Fabiano et al., 2009; Roman, 2010). However, as parents are under stress that is arising from the managing of their children with special needs, many parents terminate the training prematurely (Loren et al., 2013). Besides, it is likely that the effects will be undermined if the behavioural principles cannot be implemented consistently and uniformly and it may be a challenge for many Chinese families when multiple caregivers, such as grandparents, are involved in the implementation of behaviour management plan (Millichap, 2010). Therefore, social work practitioners and researchers continue to explore new psychosocial interventions that can help to promote the well-being of children with ADHD.

In recent years, Playback Theatre, an interactive and improvisational form of drama, has become popular in Hong Kong, Taiwan and many other countries worldwide. Playback Theatre was founded in 1975 in New York by Jonathan Fox and Jo Salas. The International Playback Theatre Network was founded in 1990, and as of 2018 the network included 320 practitioners and individual members from 40 countries. Playback Theatre is performed by trained actors or even audience members in theatres,

educational settings such as schools and conferences, social service settings such as community centres and old age homes, prisons and even on street performance. Playback Theatre can be a joint participation by trained actors and other audiences. Alternatively, it can be conducted by instructors, such as other group approaches conducted by social work practitioners, and participants include actors as well as storytellers and their narrations will be enacted by the actors.

The format of Playback Theatre utilises component theatrical forms developed from their sources in improvisational theatre, storytelling and psychodrama (Fox, 2004). These components include scenes (also called stories or vignettes) and narrative or non-narrative short forms, including 'fluid sculptures', 'pairs' and 'chorus'. In a Playback event, an audience member narrates a moment or story from their life, chooses actors to play different roles and then the entire audience watches the enactment as the story comes to life with artistic shape and nuance. Actors draw on non-naturalistic styles, such as metaphor or song, to convey the meaning (Fox, 2015).

Performers in Playback Theatre may specialise in one of the following roles: conductor, actor or musician. The active performers can create their performances without a script or score. Following the practice of the original Playback Theatre company, most companies do not consult before beginning the story, trusting instead to a shared understanding of the story they have heard and a readiness to respond to each

other's cues. The role of conductor may not intervene much, often involving and conversing with the audience as a group or individually and generally involving no acting (Salas, 2008).

Although Playback Theatre was not developed as a therapeutic intervention, it is adaptable for use by mental health professionals including social workers, who have received formal training in Playback Theatre. Participants can gain insight, catharsis, connection and self-expression by telling their stories and participating in the enactment of other people's stories (Salas, 2008). A few pioneers discussed the application of drama therapy in working with ADHD (Chasen, 2005, Dix, 2012). However, very few studies have investigated Playback Theatre as a therapeutic intervention.

Studies on the therapeutic outcomes of Playback Theatre or drama-based approach are limited. One quantitative study that explored the effects on individuals recovering from mental illness found that such drama-based interventions can improve EFs (Moran, 2011). Participants of Playback Theatre express themselves through non-verbal signs, such as facial expressions and body movements, during the play, and these experiences help them in appropriately responding to similar situations in real life. They learn to value other people's stories, understand their meaning, and respond to others with empathy. Thus, Playback Theatre functions as training for verbal and nonverbal working memories. When an actor received the information of the person who shared

a story and put them into a sequence of behaviours in acting, which involves self-directed talk as well as self-regulation of affect. The actors thus learn to be non-judgmental, control their emotions and understand feedback from the audience using nonverbal working memory, which involves the reconstitution of emotions (Moran, 2011).

One exploratory qualitative study by a Hong Kong-based NGO suggested Playback Theatre as a complementary intervention for promoting the well-being of children with ADHD (BGCA, 2017). In that case, Playback Theatre helped children and adolescents with ADHD learn how to better express their emotions both verbally and through using body movements. They also learned to regulate their emotions while listening to other people's stories and showed improvements in anger control. Another study of drama therapy discussed the application of drama therapy in children with ADHD students in Taiwan (Chang and Liu, 2006). Results showed that students with ADHD were less likely to be rejected and their negative social perception was largely improved. However, both studies focused on the children's development in communication and social ability. Other benefits of drama has received inadequate attention in scientific studies.

Based on these findings, we conducted an exploratory qualitative study to investigate how children with ADHD can benefit from Playback Theatre in each of the

four areas of EFs: nonverbal working memory, verbal working memory, self- regulation of affect and reconstitution.

Methods

Study Design

This study used a qualitative research design in which children with ADHD, their parents and a social worker (the instructor) were interviewed by the first author to investigate their views about how Playback Theatre could enhance the EFs of children with ADHD.

Participants

Purposeful sampling technique was used to select participants. Three 8–11 year old children with ADHD who had completed a Playback Theatre programme conducted by a social worker were interviewed along with their parents. The social worker was also interviewed.

Procedure

Playback Theatre training

The training was based on the core training context of the School of Playback Theatre (School of Playback Theatre, United Kingdom, 2012), which included PT artistic forms training, improvising and conducting skills, and social awareness training.

Before the end of each session, participants shared their thoughts, feelings, and experiences of that session. For the children who were recruited in this study, they started to participate in the programme for at least nine months. The children would meet weekly in the social worker's service centre for the programme (please refer to Table 1 for the history of participating in Playback Theatre programme for each child). Occasionally they had exchange events with other children Playback Theatre training groups.

Data collection

An interview guide was developed before the interview, based on the Deficits in Executive Functioning Scale and the model of executive functioning in ADHD (Barkley & Murphy, 2011).

The interviewing questions for children and parents are similar and questions were adjusted using age appropriate language. The interviews started with the background of the children (age, history of participating Playback Theatre programme, children's personal experiences of the programme). It followed with a brief inquiry about what kind of changes that each child has experienced. The interviewed continued by inviting the children and parents about their perceptions of change in each area of EF. For example, for verbal working memory, participants were invited to share how the ability to describe and reflect their experiences had been changed. The exact question will be

“Have you (your child) learn to describe their experiences and share through participating the Playback Theatre training?” For the child participants, we also asked “do you think other people understand what you want to express better after joining the training?” For the social worker’s interview, we started from questions about how she organized the programme and her overall experience in training the children. Then the interview was followed by her perceptions about how children had been improved in each area of EF.

The first focus group included three children with ADHD who had joined a Playback Theatre programme. The children were interviewed for 30 minutes to understand their experiences and perceptions of the programme. They were asked to narrate the time they spent in the programme, whether they participated in the performances, their overall experience in these activities, and what they learnt from those experiences. They were also asked to share the type of difficulties they encountered, how they handled them, and the extent to which they could apply that learning in real life.

The second focus group included the children’s parents who were interviewed for 1 hour to understand their perceptions of how their children had benefited, guided by the questions related to the four EF areas. The parents were asked to narrate their understanding of their children’s involvement in the Playback Theatre programme and

their general experiences. They also explained their intention behind allowing their children to participate in the programme, the difficulties and challenges their children encountered, what their children learnt and whether their children could apply that learning in daily life. To facilitate the process and help the children and parents to understand and focus on the questions, the keywords of all questions were displayed on a paper distributed to them at the beginning of each interview. Since it was likely that parents did not have understanding on the concept of EF, the interviewer covered each sub-topics of EF one by one and invited participants to share the perceived benefits in their children in each dimension of EF.

Finally, the social worker who was also the Playback Theatre instructor was interviewed for 50 minutes to understand her perceptions of how the children benefitted in terms of EFs after joining the programme. The instructor was asked to narrate her overall experience about the participation of children with ADHD in Playback Theatre, the difficulties encountered and how she faced those difficulties. She also shared the strategies she used to work with the children and how she guided them to improve their performance, particularly in relation to the EFs.

It was found that the children had difficulties in concentrating during the interviews. Scaling questions were thus used to help them express their ideas concretely. Although the children had difficulties to share their ideas in detail, all interviews ran

smoothly.

Data analysis

All interviews were audiotaped and transcribed for further analysis.

Thematic analysis was used to derive concepts, themes and models through a detailed reading of raw data (Braun & Clarke, 2006). The researchers constantly referred to the models of EFs and the interviewees' views about benefits from the Playback Theatre programme. Although the researchers had studied the model of executive functions, they 'bracketed' the assumptions that participants' perception would fall into the categories automatically, especially in the early stages of analysis. 'Reflexive validity' was met by constantly revisiting the original ideas and the emerging process of the categories (Stiles, 1993).

The following strategies and principles provided by Thomas (2006) were adopted in the present study.

1. Data analysis was guided by the research objective of the study, i.e. determining the benefits for children with ADHD of participating in a Playback Theatre programme.

The analysis was conducted by performing repeated readings and interpretations of the raw data. The researchers derived all findings by analysing the raw data and not from any prior expectations or models.

2. The raw data were divided into categories and coded into a model, and the similarity and differences between the categories were compared with those in the original model developed by Barkley and Murphy (2001).
3. Interpretations of and decisions about which data were more useable were made by the researcher.
4. The trustworthiness of findings was checked by debriefing with peers and consulting a senior researcher.

The model or framework resulting from the coding process included five basic features (Thomas, 2006). (1) Category label: a word or phrase used to refer to the category. (2) Category description: a description of the meaning of the category. (3) Text or data associated with the category: examples of text coded into the category that illustrates meanings, associations and perspectives associated with that category. (4) and (5) Links and model: to modify the original method developed by Thomas (2006), we critically evaluated the validity of the original model of executive functioning for ADHD and attempted to develop a model for Playback Theatre programme for children with ADHD.

The intended outcome of the process was to create categories by labelling the segments of the text, reducing overlap and redundancy, and continuously revising and refining the category system. Such a model is expected to incorporate three to eight of

the most important categories (Thomas, 2006).

All participants provided written consent and parental consent before data collection. The study was approved by the Human Subjects Ethics Sub-committee (Reference number: HSEARS20180202012) of the researchers' university.

Results

The participants' background was summarized in Table 1.

Table 1. Participant backgrounds

Participants	Age/ Sex	Role	Background (if applicable)
Mrs. E	F	Parent of A	
Mrs. L	F	Parent of B	
Mrs. M	F	Parent of C	
A	M/10	Self	<ul style="list-style-type: none">● diagnosed with ADHD● participated in the Playback Theatre programme for 3 years
B	M/8	Self	<ul style="list-style-type: none">● diagnosed with ADHD● participated in the Playback Theatre programme for 9 months
C	F/9	Self	<ul style="list-style-type: none">● diagnosed with ADHD

			<ul style="list-style-type: none"> ● participated in the Playback Theatre programme for 1 year and 3 months
Ms. J	F	Social Worker	<ul style="list-style-type: none"> ● The trainer of the Playback Theatre programme in a Hong Kong-based NGO ● Received Playback Theatre instructor training for 3 years

Results

In general, we found the benefits of the Playback Theatre programme were consistent with those of the model of EFs. We collected the transcripts of all participants about perceived benefits from the interviews, and labelled each quotation with the participant code.

1. Benefits to nonverbal working memory

1.1. Time Management

Two parents expressed that Playback Theatre could improve their children's time management skills.

'I think their management is better now. For example, when my child knows he has an examination soon he will create a schedule for studying and taking rests before starting revision, and after studying two chapters, he will plan to watch TV for a few minutes....' (Mrs. L)

Mrs. M also remarked that her children could create a timetable and procedure, indicating an improvement in time management.

1.2. Memorising Ability

1.2.1. Vicarious Learning

Parents also stated that their children's vicarious learning ability and imitation skills improved by remembering emotional cues.

'I think Playback Theatre helped them to remember the feelings of other people.... They remember the meanings of the facial expressions, such as upset and angry.' (Mrs. E)

'During the Playback Theatre training, the social worker would share her story, such as a story about receiving a gift. Then, the children were asked to portray her feelings about receiving the gift through using their imaginations. At that

moment, she would consolidate the concept of “receiving a gift” with being “happy”.’ (Mrs. M)

The social worker described her role in helping the children learn vicariously.

‘During the Playback Theatre training, the children occasionally played the role of an audience.... They could learn something that they had no chance to learn in daily life.... Sometimes in the past, they had probably been stopped by the teacher before they could learn, but here, they could learn those things by hearing stories from audience members.’ (Ms. J)

1.2.2. Imitation

Some formats of the Playback Theatre programme required the children to enact a single story differently. When the children were asked to memorize the original story. The children could thus observe how differently other’s behaved or enacted and learn that behaviour by storing it in their working memory.

‘The benefit of the playback is that during the performances, actors have to respond to the same emotions.... When everyone is focused on the same story, the children could observe other participants’ behaviour and modify their actions.’ (Ms. J)

1.3 Self-discipline

The participants agreed that Playback Theatre offered a good learning environment for them to develop self-discipline.

'When the children were on the stage, they became other people and performed well by following the instructions.' (Mrs. E)

The social worker added that the techniques used in Playback Theatre also function as instructions or cues during the performances. These nonverbal instructions helped the children behave properly on stage.

2. Benefits to verbal working memory

For verbal working memory, we found evidence of four subthemes: the ability to describe and reflect, moral reasoning, self-discipline (verbal) and memorisation ability (verbal).

2.1 Ability to describe and reflect

All participants stated that Playback Theatre could enhance the children's ability to describe and express.

'He [my child] can speak with clear sentence clearly now than he did before. In the past, his sentences were unorganised, and I would need to guess what he was talking about, but that has changed much now.' (Mrs. L)

This was also supported by child C, who stated that she found it was easier to express her ideas now.

2.1 Perspective taking (theory of mind)

The children said that they learnt to listen to other people's stories before expressing their views, and this finding was supported by their parents' perspectives. This indicated that children's abilities of perspective taking (theory of mind) improved, which is important for moral reasoning.

'They needed to listen to the audience member's story before performing. During the programme, they got used to listening to other people's stories and understanding their needs underlying their stories. It was good training for them because earlier they focused on their own worlds.' (Mrs. E)

2.2 Self-discipline (Verbal)

The social worker emphasised that the rituals followed in Playback Theatre provided simple instructions for the children to follow. The step-by-step verbal instructions given by the social worker proved to be an effective technique to improve the children's self-discipline.

'Rituals provided a framework and reminded the children to complete the performance. They had to properly follow the instructions

that had been taught during the training.... The advantage of Playback Theatre is that the rituals are quite simple.... The children also understood that if they did not follow the rituals, they would not be able to perform well.’ (Ms. J)

Two children, A and B, agreed that they found the rituals easy to follow and became more self-disciplined after joining the Playback Theatre programme.

3. Benefits in the self-regulation of affect

The participants agreed that children with ADHD showed improvements in emotional management, motivation and goal-directed behaviour.

3.1 Emotional Management

All of the participants agreed that the Playback Theatre programme could help the children with ADHD release their anger and become more reactive in conflicts and other contexts when they faced demands that they would normally refuse.

‘In the past, she always argued with me when she refused to do homework. She always made excuses and cried for a long time, but now she has improved a lot. She cries less and calms down quickly.’

(Mrs. M)

The children also expressed that the Playback Theatre programme reduced their likelihood of becoming angry and that they have learned to communicate with others peacefully.

In addition, the social worker stated that the children could learn to be serious when faced with some external demands, e.g. performance.

'Earlier, the children often lost control even when they were performing. They could not evaluate what should and should not be done at that moment.... The Playback Theatre training provides a framework for the children to form habits. They can gradually handle their emotions by adaptation.' (Ms. J)

All participants noted that Playback Theatre helped the children learn to cooperate and work peacefully. The children became aware that a performance is a form of teamwork and learnt that even when they had conflicts, they still need to continue. Playback Theatre offered an environment for the children to learn to play supporting roles in the team.

'Some of them were less capable of expressing their emotions, and some could express them with flexibility.... During the performance, they tried to support each other and used their strengths.... I think it [the programme] allowed them to understand

that everyone is unique and that each participant has his/her own strengths. It has helped them grow.’ (Ms. J)

The social worker remarked that the programme promoted the personal growth of the children and enhanced their ability to cooperate with each other. The children learnt to be less self-focused and to pay attention to the needs of other people. It is critical that children with ADHD have the chance to be less occupied with their own views and learn to listen to other people’s views.

3.2 Motivation and goal-directed actions

The parents observed that the Playback Theatre programme could enhance their children’s motivation to concentrate during the performance. As the children learnt to self-regulate their emotions, they became more aware of external demands and could understand that they should concentrate on the performance to receive and follow important instructions.

The parents noted that their children could thus understand the procedures of sequential tasks and better manage their reluctance to participate. Their motivation consequently improved, making them more likely to complete goal-directed actions.

‘She used to feel reluctant about doing homework.... I used to tell her that after you finish homework, you can take a longer rest. Now, she understands that she has to finish her homework first, and

gradually the results have appeared. After understanding the whole process, she is less likely to resist.’ (Mrs. M)

4. Benefits to reconstitution

Children with ADHD showed improvements in information organisation and problem-solving skills.

4.1 Problem Solving

The parents mentioned that the Playback Theatre programme enhanced their children’s creativity as their ability to create new solutions to solve the same problem increased.

‘During the performance, children needed to understand the stories shared by others and act immediately. I was so surprised that he [her child] could be so powerful.’ (Mrs. L)

Participant C felt that her creativity increased from 5 to 10 on a scale of 10.

In addition, the problem solving skills of the children increased because Playback Theatre offered valuable learning opportunities for the children to take challenges and face problems creatively.

‘They were not willing to join Playback Theatre at the beginning, but they found it wonderful after joining.’ (Mrs. E)

The parents acknowledged the role of the social worker, stating that her guidance had empowered the children to face the problems. They noted that their children had become more ready to accept new challenges.

'I think they became more ready to accept the new thing (Playback Theatre) after joining it. They found it interesting after accepting it.' (Mrs. L)

4.2 Organisation

The parents recognised their children's improvements in organisation skills, as the Playback Theatre programme provided an opportunity to organise information for an outcome. The social worker explained that listening to another member's story in the performance must have enhanced all members' organisational skills.

'If the story of the audience member is very long, the children would have to organise the story from a complex one into a simple one. It is quite challenging.' (Ms. J)

Moreover, in Playback Theatre, all members are required to function as a team. Each member should contribute their strengths. During the performance, they have to divide the labour by allocating responsibilities and roles to each member so that all members can contribute to the team.

'Playback theatre is not simply based on personal memories.... It is very

important to organise the pieces of the narrative into a concrete story and then contribute to the team.' (Ms. J)

5. Other benefits

In addition to the four EFs, all participants agreed that the children enjoyed the friendships and gained peer support in the programme by forming a long-term group for performance. The Playback Theatre programme became a community of trust and mutual acceptance.

Furthermore, with the increasing number of performances over time, the children developed a higher self-confidence and showed a better personal growth. They have received good opportunities to practice communication and present/express themselves. During each performance, the team members often discussed the division of labour and each member contributed his/her strengths to the team. Thus, the children could gain a sense of achievement and happiness.

Discussion

Although Playback Theatre was not intended as a therapeutic intervention for people with mental disorders, our study provides some insights of different stakeholders that such approach may benefit nonverbal working memory, verbal working memory,

the self-regulation of affect and reconstitution in children with ADHD. Participants experienced gains in peer support and self-confidence, advantages that medical treatment cannot offer but are critical for their development.

Acting and performance provide excellent opportunities for children with ADHD to learn vicariously and strengthen their memorisation ability through interesting and energetic activities. Such children can learn from observing, imagining, listening and sharing, but activity-based learning experiences are seldom obtained in formal education.

In one study, participants demonstrated improved empathic listening after joining Playback Theatre (Moran, 2011). In our study, children with ADHD learnt to listen to and observe the feelings of other members and understand their underlying meanings. Such knowledge about emotional cues and the relevance of emotions are valuable for children with ADHD to improve their daily functioning. This process was classified as benefits in the core process of nonverbal working memory.

To the best of our knowledge, no study has evaluated the beneficial effects of participation in Playback Theatre on the verbal working memory of children with ADHD. Parents in our study believed that their children's ability to express clearly had increased, suggesting that acting and performance offer a great learning experience to children with ADHD. It is likely that these children find it difficult to maintain

concentration for learning when instructions given are in formal language. In contrast, an activity-based learning programme, such as Playback Theatre, can offer training in several skills.

Children with ADHD in our study could better manage their emotions and their anger was largely reduced after joining the Playback Theatre programme. This finding is consistent with that of a study by a Hong Kong-based NGO (BGCA, 2017), which reported that most children from their Playback Theatre programme could learn how to adjust their tempers and aggressive emotions. As studies have consistently reported the high prevalence of misconduct and anti-social behaviour in children with ADHD (American Psychiatric Association, 2013; [Barkley, 1997a](#)), improvements in the self-regulation of affect are critical for enhanced functioning and well-being.

Organisational and problem-solving skills are considered as crucial for learning and development in children. In this study, the participants agreed that children with ADHD showed considerable improvements in organisational and problem solving skills. Previous studies on Playback Theatre have focused on its benefits in emotional well-being (Moran, 2011, BGCA, 2017). However, the Playback Theatre programme in our study focused on performance and thus required much effort and good organisational and planning skills from the participants. More studies should investigate how the improved organisational and problem-solving skills developed in Playback

Theatre are put to work in external environments.

Recent studies have suggested that a significant proportion of children with ADHD report inattention and related symptoms in adulthood (Kooij et al., 2010). More psychological interventions should be developed to improve the EFs of such children so that the impairment in their cognitive development can be reduced. Moreover, positive mental health and social relationships should be promoted in light of the high comorbidity associated with other mental health issues in ADHD. Our preliminary findings suggest that Playback Theatre helps to enhance the EFs of children with ADHD. Moreover, the social worker in our study reported that the children could learn a lot in a group atmosphere. Because the Playback Theatre programme involves group-based learning uses a non-stigmatising, non-clinical approach, social workers and other mental health professionals can use this format for treating children with ADHD, who can gradually apply their experiential learning in daily life.

To the best of our knowledge, studies on the application of Playback Theatre and the drama-based approach in people with mental health disorders are rare. Our study used a qualitative research design, and future studies using quantitative or mixed methods are warranted to examine the effectiveness of this study design. We suggest that more drama-based or activity-based learning should be integrated into formal and informal education systems for the benefit of children with ADHD or other mental

health disorders.

Notwithstanding the importance of its findings, this study also has some limitations. First, it used a qualitative design with a small sample size. Therefore, the participants' perceived benefits cannot be considered as evidence of the programme's effectiveness. Self-selection bias may exist in this design, and further studies using alternative methods (e.g., peer and member checking) are warranted. Second, during interviews, the children with ADHD could not respond to all questions as some EF concepts were abstract for them. Thus, the results might be biased to parents' perceptions, so other evaluation methods, such as a naturalistic study and behavioural observation, are required to acquire more knowledge. Finally, all perceived benefits of Playback Theatre in this study are based on the participant's subjective perception, and we did not include any variable for objective measurement. We are uncertain whether the reported benefits in our study can be reflected in the actual behaviours of the children with ADHD. We are also uncertain that findings in this study can be generalized to other children with ADHD and other Playback Theatre programme. Further studies should also evaluate the therapeutic benefits of other drama-based interventions, such as psychodrama, in addition to Playback Theatre, so that these approaches can be integrated into evidence-based interventions in social work.

Conclusion

In this study, we explored whether the perceived benefits of Playback Theatre approach could enhance the EFs of children with ADHD. We summarized the preliminary findings that all participants (parents, children with ADHD and the social worker) that Playback Theatre programme was perceived to benefit the nonverbal working memory, verbal working memory, self-regulation of affect and reconstitution of the children. These findings can form the basis for further rigorous studies on the outcome of drama-based interventions and related treatment approaches.

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