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A pilot study of art therapy for children with special educational needs in Hong Kong

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Abstract

A pilot study explored the effectiveness of art therapy in improving the self-motivation and emotional and behavioral adjustment of children with special educational needs in Hong Kong. Six children aged between 6 and 10 participated in an art therapy group for 14 weekly sessions. Results from a range of standardized tests administered before and after the session block indicated that the art therapy group had little impact on the children's sense of autonomy, competence, and relatedness in their learning. However, in-session observations showed that the art therapy facilitated the fulfilment of these three areas, and parental reports via interview indicated that art therapy had improved the emotional and behavioral adjustment of their children. Issues in facilitating art therapy groups for children with special education needs are discussed.

Keywords: Art therapy; children; special educational needs; self motivation

Art therapy is a psychological intervention that emphasizes self-direction, exploration, and connectedness in the process of art making art. Much of the research on art therapy has focused on its beneficial effects on different socioemotional outcomes (Freilich & Shechtman, 2010, Slayton, D'Archer, & Kaplan, 2010). Relatively little research has examined the effects of art therapy on self-motivation. According to self-determination theory (Deci & Ryan, 2011; Ryan & Deci, 2000), autonomy, competence, and relatedness are the basic needs of human beings. When these needs are met, individuals become self-motivated and self-determined, but when they are not met, individuals become amotivated or externally driven. If art making can support a person in executing their own will, overcome their fear of failure, and connect with another person, could it help children who experience little control in their life, have little confidence in their abilities, and feel isolated in regard to rebuilding their sense of autonomy, competence, and relatedness? In Hong Kong, where academic demands are very high, children with special educational needs (SEN) who are studying in mainstream schools often find it hard to have their autonomy, competence, and relatedness needs met. The present research explored whether or not art therapy can be used as an intervention through which to help children with SEN in Hong Kong to develop their motivation to learn. Specifically, we studied the effect of group art therapy on promoting a sense of autonomy, competence, and relatedness in children with SEN who are studying in mainstream primary schools. We argue that, because self-direction, exploration, and connectedness are inherent parts of the art therapy process, engaging children with SEN in art therapy will help these children to have their basic psychological needs met and reestablish their self-motivation.

Literature Review

According to self-determination theory (Deci & Ryan, 2011; Ryan & Deci, 2000; Ryan & Niemiec, 2009), children have an innate tendency to grow and are intrinsically motivated to learn. Autonomy, competence, and connectedness are three of the most important factors for children to develop intrinsic motivation, which is defined as behaviors conducted when an external force that is inherently enjoyable and interesting is absent (Ryan & Deci, 2000). When these three basic needs are met, children will engage with a task because of the intrinsic enjoyment derived from the task itself. However, when these needs are unfulfilled, children are likely to become amotivated or extrinsically motivated. They will engage with a task only when external forces are present.

In a learning setting, autonomy refers to whether or not people are given choices of what and how to learn, competence refers to whether or not people feel that the challenges they face are optimal and are confident that they can handle them in the learning process, and connectedness refers to whether or not people experience close relationships with their significant others, such as their parents and peers (Niemiec & Ryan, 2009). Children learn the most when their sense of autonomy, competence, and connectedness are high. They will not only show a higher level of involvement in learning, but also a higher level of persistence when they encounter difficulties (Deci & Ryan, 2008). A longitudinal study showed that the satisfaction of these three psychological needs has long lasting implications for children's learning and adjustment; the study found that the extent to which these needs were met in elementary school had a positive relationship with students' achievement, motivation, and academic, social, and emotional adjustment at the end of high school (Ratelle & Duchesne, 2014).

Children with Special Educational Needs

According to information from the Education Bureau (2008) of Hong Kong, there are eight common types of SEN. A Whole School approach is implemented to cater for the learning needs of children with SEN, which means that students with SEN are included in regular classrooms, which have a teacher to student ratio of about 1:30, and follow the same curriculum framework as other mainstream students. Although the intention of the policy is to protect the rights of and provide equal learning opportunities for children with SEN, due to differences in their learning and social capacities, children with SEN may experience less autonomy, a lower sense of competence, and poorer interpersonal relationships than their typically developed peers. Children with attention deficit disorder, for example, may feel that they have little control over the learning process because they cannot follow the pace of learning in class and there is little that they can do to change this. In addition to this, children with reading and writing disabilities may feel that the relationship between effort and outcome is very weak (Carlson, Booth, Shin, & Canu, 2002); they may feel that, no matter how hard that they try, they still cannot remember the study material at hand (Burden & Burdett, 2005). Also, children with ASD may find it hard to develop a sense of connectedness with their peers because they do not know how to initiate or maintain a conversation (Orsmond, Krauss, & Seltzer, 2004). As well as performing poorly in academic tasks, these children's sense of confidence and self-esteem often suffers (Gurney, 1988; Humphrey, 2002). In summary, it is not difficult to understand why children with SEN may experience a significantly lower motivation to learn and a poorer self-image than their typically developed peers, because of their compromised learning and social capacities.

The Use of Art Therapy with Children with SEN

In art therapy, one of the important principles is that art making should be spontaneous, self-motivated, and self-sustained (Dalley, 2008). Clients are not forced to create anything that

they do not want to and are given freedom to choose whether or not they want to create and what they want to create. This expectation of self-direction is important for participants, especially children with SEN, in regard to developing a sense of autonomy. Unlike in a regular classroom, in which tasks and schedules are arranged, children are allowed to explore what they want to create in an art therapy room. Even though a theme or a task will occasionally be suggested in a session for therapeutic purposes, children still have the choice of accepting or rejecting the suggestion. Such an experience will enhance children's sense of autonomy by enabling them to initiate and practice self-willed behaviors. Consistent with this belief, Rosal (1993) reported that art therapy helped a group of middle school students with behavioral disorders to improve their sense of internal locus of control; the students perceived themselves as having more control over their own behaviors after participating in the group. Similarly, Gussak (2007) found that art therapy enhanced the internal locus of control of a group of female inmates; the inmates felt more in control of their own experiences after participating in an art therapy group.

Although no research has been conducted to investigate the effect of art therapy on individuals' sense of competence, as a meta-analysis has shown that both the self-rated and peer-rated self-esteem of individuals are significantly related to the individuals' general self-efficacy, we can use research findings from self-esteem research as a proxy through which to understand the potential effect of art therapy on the self-efficacy of children. For example, Schweizer, Knorth, and Spreen (2014) reviewed 18 publications related to art therapy and ASD published in the past 30 years. They concluded that children with ASD experience higher self-confidence and become better at regulating their emotions after receiving art therapy. In addition to this, one study (Mousavi & Sohrabi, 2014) of 30 children who had anger and aggressiveness problems found that, after a 10-week art therapy program, these children showed less anger and greater

levels of self-esteem. The authors explained that, because there is no "right" or "wrong" way of making art in an art therapy setting, children are encouraged to use their own ways to express themselves and are thereby empowered to assert themselves in the process.

The relationship between client and therapist is one of the most important therapeutic elements of all therapies. Art therapy facilitates children to develop connections with the people around them because it supports them in expressing themselves in a nonverbal way in a safe environment (Liebmann, 2008). This nonverbal element is especially beneficial for children who have difficulty verbalizing their experiences. For example, Elkis-Abuhoff (2008) documented the way in which art therapy improved the social functioning of an adolescent with Asperger's syndrome and had great difficulties expressing herself and interacting with the outside world; art therapy facilitated the adolescent girl to express herself and helped her to be heard. In addition, a study in a group art therapy setting demonstrated that art therapy can improve the social skills and reduce the problem behaviors of children with ASD (Epp, 2008). Art therapy has also been found to have positive effects on children with ADHD, helping them to express themselves, to be aware of the self and others, and to develop better self-control (Henley, 1998, 1999).

In summary, we expect that, through art therapy, children with SEN will be able to develop a stronger sense of autonomy because they will be given freedom to choose what artwork they want to create and how they want to create it. They will also develop a better sense of competence because exploration is emphasized in the process and the outcome of the children's efforts will be clearly evidenced in their artwork. Furthermore, they will develop a higher sense of relatedness because they will be able to express and share their inner thoughts and feelings with the therapist through their artwork. The co-presence and witnessing of both the other participants and the therapist can also facilitate the child to feel that their experiences are

shared. The experience they gain in this art therapy group setting will enhance their motivation not only in the art therapy room, but also in their learning and daily life because, when children's innate needs for competence, autonomy, and relatedness are satisfied, their propensity for growth will be resumed; this effect can be generalized to other life domains (Niemiec & Ryan, 2009). Finally, we expect that, because children will also have chances during the art therapy program to express their inner feelings and learn how to manage their behaviors and resolve conflict (Rubin, 2009), their emotional and behavioral adjustment will also be improved after participating in the program (Cortina & Fazel, 2015). Although previous research has demonstrated that an integrated art curriculum can enhance the academic performance and well-being of students, little is known about how a brief art therapy program may affect the learning motivation of students (Beauregard, 2014; Fiske, 1999). Will children who grow up in an education system that emphasizes obedience and following the instructions of adults (Zhou, Lam, & Chan, 2012) be able to benefit from an art therapy intervention approach that emphasizes self-direction, exploration, and creativity?

Method

Participants

The participants were referred by a social worker who had had prior contact with the participants at an integrated youth service center. A pre-group interview was conducted with both the participants and their parents, in order to obtain more information about the participants and their diagnoses. At the end of the interviews, eight children with SEN were recruited into the group. A female participant quit the group after the second session because she was selected for a ballet performance, and a male participant quit after the seventh session because he was

involved in swimming training. Of the remaining participants, five were male and one was female; their ages ranged from 6 to 10. Two participants had been diagnosed with attention deficit disorder, three had been diagnosed with ADHD and other symptoms, such as autism, dyslexia, and social impairment, and one had a comorbid diagnosis of ADHD and ASD. The ages of the mothers ranged from 30 to 41. Four of the mothers were married, one was divorced, and one was widowed. All but one of the parents were immigrants from the PRC, which means that the parents might encounter more difficulties in providing academic guidance for their child, due to lack of experience and insufficient knowledge in some subjects, such as English. Four of the parents had graduated from middle school, one had graduated from certificate-based education and one had graduated from college. Five out of the six families lived in government-funded public housing, which is aimed at low to middle level income families. The fee for the cost of the art materials was about US$4 per session, which was meant to have an empowering effect on the family. The parents paid for the fee in two installments. A fee waiver option was provided if the family had difficulty paying the fee.

Procedure

Structure of the group process. For 14 weeks from July to October 2015, the group met once a week; each session lasted 75 minutes. The group was conducted by an art therapist with a master's level of training in art therapy, a PhD level of training in psychology, and two years' post art therapy training experience working with children with SEN. A male assistant, who was taking a master's level social work degree, also participated in all of the sessions. The program was divided into four phases, as follows.

Pre-group phase. Interviews were conducted in order to assess the learning motivations and emotional and behavioral adjustment of the participants. The purpose of the research and the rationale of the group were explained to the parents and their concerns were addressed. Consent for their child's participation was obtained from each parent. In addition, the participants completed nine items selected from the Balanced Measure of Psychological Needs Scale (BMPN: Sheldon & Hilpert, 2012). It measures the extent to which the needs of the participants for autonomy, competence, and relatedness were fulfilled. The items were modified to match the school learning context. They also completed the Intrinsic Motivation Inventory (IMI: McAuley, Duncan, & Tammen, 1987). This scale has nine items, three from each of the following dimensions: interest/enjoyment, pressure/tension, and effort/importance. Finally, the children also answered the 13-item Mood and Feelings Questionnaire: Short Version (MFQ-S: Angold et al., 1995), measuring their mood and self-perception. While the children were completing the questionnaires, the mothers completed the MFQ-S and the Child Behavior Checklist: Parent Version (CBCL: Achenbach & Rescorla, 2001), which measured their child's emotional and behavioral adjustment.

Preparation phase (Session 1 to Session 7). The therapist helped the group to develop a safe and criticism-free environment and assessed the strengths of the children and their perceptions of the self, their family, and school. The participants also learned how to use different art materials for creation. In this phase, although a theme and a creative task were introduced in each session, the participants were also given opportunities to engage in self-initiated artwork and were given guidance to accomplish them.

Working phase (Session 8 to Session 14). Some common issues that concerned the participants were identified during the preparation phase. For example, some participants had

difficulty making friends. In view of this, a story related to one of the common issues was introduced at the beginning of each session. Then, the participants were guided in developing projects that may or may not be relevant to the story of the week.

Post-group phase. A post-group interview was conducted to understand the change in the participants' learning motivations and emotional and behavioral adjustment. The participants completed the same set of scales as they had in the pre-group phase, as well as nine items (three items per domain) that measured the participants' subjective experiences of autonomy, competence, and relatedness in the art therapy group. Sample items included: "I have freedom to choose the topic for my artwork in the group" (to assess autonomy); "I am confident in making my ideas real" (to assess competence); and "I like to have other children in the group" (to assess relatedness). In addition, the mothers completed an open-ended interview and described any changes that they had observed in their children during this period.

A typical group session. In order to create a secure and stable environment, a group routine was developed. First, the group started with a quick five-minute check-in, followed by a 10-minute warm-up activity, which could be either a drawing task or a story. Then, using the materials chosen, the participants were facilitated to create one or multiple pieces of art, as they liked. Finally, they sat together in a circle and shared their artwork with each other.

Results

Our aims were to improve the learning motivation and the emotional and behavioral adjustment of the participants. As changes in these outcome variables were assessed by both qualitative and quantitative measures, we report data from both sources. Due to the small sample size, statistical tests were not used to analyze the results from the standardized scales. In regard

to qualitative data, we made use of the data from the in-session observations and the interviews with parents.

Regarding autonomy and the survey measure, we found a decrement in the mean score of the autonomy subscale in the BMPN (M_{pre} = 2.33, *SD* = .33; M_{post} = 1.93, *SD* = .39). Compared with when they first joined the art therapy group, the participants reported experiencing less autonomy in school. However, when we used how frequently the participants chose to work on a self-chosen project as an indicator of the children's sense of the autonomy, we found that the participants chose to work on their own projects almost every session. This indicates that all of the participants experienced a strong sense of autonomy in the sessions. They did not feel that they had to create any artwork that was consistent with the theme of that week or to seek suggestions from the therapist.

With respect to competence, the results from the survey showed that the change in the mean score in the competence subscale of the BMPN showed only a very slight reduction (M_{pre} = 2.17, *SD* = .46; M_{post} = 2.13, *SD* = .16). However, when we used the change in the clay works of the participants (clay being the most frequently chosen media) as a proxy to gauge the change in their sense of competence, we observed a different pattern. As none of the participants had used clay before, they were taught some basic skills, such as how to mold a piece of clay into simple shapes and how to affix two pieces of clay together in Session 6. At the beginning, most of the participants had little confidence in their skills in using the clay. Some of them would create a form and then destroy it due to their dissatisfaction with the quality of the product; some of them would build only simple shapes due to a lack of confidence in their skills. However, as the group proceeded and as they gained more confidence in their skills, they started to build more complex

structures. Also, when they were more satisfied with their works, they became less likely to destroy their work, as the following examples illustrate.

In the beginning, H's clay works were relatively simple. He made objects such as a ball or a gun, and he did not paint those pieces. As the group proceeded, his clay works became more complex and expressive. For example, in Sessions 12 and 13, he created a train that was structurally more complex. He colored it with different colors and was proud of his product. Similarly, at the beginning, P's skill in using the clay was quite elementary. He used the clay as if it was a drawing material. He created a two-dimensional flat house using the clay. Gradually, his skill improved and he started to make three-dimensional objects; for example, he made a three-dimensional apple pie and a slide.

This increase in the participants' sense of competence was not only reflected in the complexity of the clay works they created, but also in other aspects of their lives. For example, T's mother described how, in the past, T had been very anxious and unwilling to try new activities. However, after participating in the group, T was more willing to try new activities. In addition, H's mother reported that H had more self-confidence in playing music instruments at home. In the past, he would refuse to perform in front of family members, but now he would agree to perform when he was invited to do so.

The mean scores in the relatedness subscale of the BMPN increased from M_{pre} = 1.89, *SD* = .66 to M_{post} = 2.13, *SD* = .58, meaning there was a small increase in the sense of relatedness in school reported by the participants. In the in-session observations, it appeared that the degree of relatedness among group members varied a lot. Some participants were able to develop friendships with other participants, while others were not. For example, L and T displayed the

highest level of relatedness in the group. They were willing to share their thoughts and feelings about their artwork and their out-of-the-group life experiences with the group. They also appreciated the artwork created by other group members and initiated steps to maintain relationships with each other after the group had ended. H and Y1 showed a moderate level of relatedness. They were willing to explain the ideas behind or share their thoughts about their artwork with other group members. They also observed how other group members created their artwork and sometimes imitated them. However, they would not share their life experiences outside the group in the sessions or initiate maintaining any contact with other participants when the program was near its end. P and Y2 maintained a low degree of relatedness with other participants throughout the therapy program. They were not willing to share their thoughts and feelings with the group very much, even when they were invited to do so; they focused on their own work most of the time. Thus, overall, the group seemed to facilitate some of the children to develop relatedness to a certain degree, but the effect was limited when the participants had a strong deficit in social interaction, such as P, who had a comorbid diagnosis of ADHD and social impairment, and Y2, who had a comorbid diagnosis of ADHD and ASD.

Emotions and Behaviors

In general, the survey data (see Table 1) showed no noticeable difference in the self-reported mood ratings (MFQ-S) of the participants (M_{pre} = 4.67, SD = 3.04; M_{post} = 5.20, SD = 2.79). However, there was a noticeable drop in the negative mood of the children in the post-group ratings (M_{pre} = 9.17, SD = 4.67; M_{post} = 5.80, SD = 3.19). There was also a noticeable change in the problem behaviors (CBCL) reported by the parents, especially withdrawn/depressed behaviors (M_{pre} = .81, SD = .37; M_{post} = .51, SD = .37), social problems (M_{pre} = .92, SD = .40; M_{post} = .69, SD = .37), and aggressive behaviors (M_{pre} = .96, SD = .57;

M_{post} = .69, *SD* = .53). The mothers of the participants reported that their children displayed significantly fewer negative emotions and problem behaviors, especially depression-related behaviors and aggressive behaviors. In the post-group interview, all of the mothers except Y2's reported that their children were happier or better at regulating their emotions, such as being able to calm down faster when they were having a tantrum, and had become emotionally more stable.

Discussion

The two main aims of this research were to explore: (a) whether or not art therapy could enhance the sense of autonomy, competence, and relatedness of schoolchildren with SEN in Hong Kong; and (b) whether or not art therapy could improve the emotional and behavioral outcomes of these children. Below, we discuss these two questions separately.

To answer the first question, we can further divide it into two subquestions: (1) Did the children experience autonomy, competence, and relatedness in the art therapy group? (2) Did these experiences help them to build a stronger sense of autonomy, competence, and relatedness in regard to learning? In the post-group survey, the children reported that they had experienced a strong sense of autonomy, competence, and relatedness in the group (see Table 1). Their average ratings for these items were above 4.20, which is high on the 5-point scale used. They rated that they had been given a lot of freedom to choose what to create and what materials to use. They had also experienced competence because they were able to accomplish and creating what they wanted to make. Finally, they had enjoyed the co-presence of the other children in the group. The in-session observations also showed that the participants had enjoyed the autonomy that was provided and had had no problem deciding what to do. Whenever they were given a choice, many of them had chosen to work on a project that they themselves had initiated.

Although, when we first designed the program, we had concerns about children in Hong Kong, who are taught to follow directions from adults, would have problems adapting to a nondirective environment, none of the participants expressed any difficulty. Moreover, the in-session observations showed that these children demonstrated a higher sense of competence as the group progressed. They changed from being critical and unsure about the quality of their clay works and frequently destroying and redoing them, to becoming confident about their ability and creating artwork that was structurally more complicated and more difficult to build. Possible causes for these changes could be the nonjudgmental and supportive attitude of the therapist and other group members, alongside the intrinsic reinforcement of art making itself. When the participants found that, in the art therapy sessions, there was no standard to meet, and process and exploration were emphasized over outcome and accuracy, they started to develop confidence in their work. Furthermore, because enjoyment is the natural outcome of one's efforts in the creative process, the participants readily experienced the contingency between their efforts and the outcome. These combined factors helped the children to develop their sense of competence.

Although, in general, the participants reported in the survey that they had enjoyed the presence of other members in the group, the in-session observations showed that not all of them did. Some of the participants paid little attention to other participants in the group from the start, and some of them were only willing to describe their artwork to other participants when they were encouraged to do so. Therefore, we cannot make a strong conclusion that the children experienced strong relatedness in the group.

Can art therapy enhance the sense of autonomy, competence, and relatedness of children with SEN in a learning setting? The results from the self-reported measures of the participants were mixed. On the one hand, there was a decreasing trend in the pre- and post-group measures

of sense of autonomy and competence, and almost no change in their interest to learn, as shown in the mean subscale score from the IMI. On the other hand, there was a slight increase in their sense of relatedness and the effort they put into school work, as shown in the mean subscale score from the IMI (see Table 1). Although the results do not provide strong evidence to support the argument that art therapy is effective in enhancing the sense of autonomy, competence, and relatedness felt by children with SEN in a learning setting, when we interpret the data, it should be noted that the group started in August, when the participants were on their summer holiday, and ended in October, when they were taking part in midterm tests in school. Thus, it is possible that the lack of change was due to the difference in the children's workloads in these two points in time. To tease out the effect of art therapy and the effect of the school cycle, a control or waiting list group should be used in future studies. We also suggest that, in addition to self-reports by participants, a third-person report, such as a teacher's ratings, should be included to assess the changes in the three needs.

The effectiveness of art therapy in improving the emotional and behavioral outcomes of children with different issues is more obvious. Similar to previous literature, in the present study, we found a trend of improvement in the emotional and behavioral outcomes of the participants in both the parents' ratings and the interviews. The mothers rated their children as having fewer negative emotional and behavioral problems. In addition to this, three parents reported that their children had become better at expressing themselves and better at understanding the perspectives of others after joining the group. Our in-session observations were consistent with previous findings (Henley, 1998, 1999), which showed that art therapy helps children with ADHD to be more aware of their own feelings and better at expressing themselves and seeing the perspectives of others.

Reflections

During the group process, we found that, when working with children with SEN with the aim of improving their self-motivation, we needed to find a good balance among the three components; autonomy, competence, and relatedness. For example, due to their impulsivity, lack of planning, and inattention, the participants with ADHD were sometimes not able to accomplish their goals of creating artwork with which they felt satisfied. Consequently, these participants experienced a lower sense of competence when they tried to compare their end products with those of their peers in the group. In order to balance their need for autonomy and competence, we sometimes had to explicitly teach these participants strategies to help them overcome their dispositional tendency. For example, after a participant had decided on a theme for their project, we would plan the working process with them and guide them through how to break up a complex task into simpler subtasks. Although, to some extent, this may have reduced the participant's sense of autonomy, it may equally have facilitated them to develop their problem-solving skills and may ultimately have led to a better sense of competence. Similarly, although we wanted to give the participants complete freedom to choose whether or not to share their work, because some of them had a strong tendency to avoid talking in the group, we had to use strategies to encourage them to share with the group; for example, we allowed them to be the last person to talk in the sharing session. This may have reduced their sense of autonomy, but it also may have encouraged them to step outside their comfort zone and to relate to others.

As a pilot study, the present research has a great deal of room for improvement. First of all, because art therapy is new in Hong Kong, most parents do not know what it is and are unsure about its effects. Many parents would rather choose to send their child to tuition classes than to a therapy group. Thus, we had a limited number of participants in this study, and we were not able

to include a control group. As such, we were not able to identify whether the changes observed were due to the effect of the art therapy, a change in environment, or the natural development of the participants. Second, because the parents did not fully understand the importance of the group to their children, the attendance rate of this group was not ideal, ranging from 57.14% to 92.86%. Two participants dropped out during the program, and one participant only participated in half of the sessions. The low attendance rate compromised the validity of the study's conclusions because, when there was little change in the outcome variables, we were unable to tell whether this was due to the low participation rate or the ineffectiveness of the art therapy itself. Third, there was a gender imbalance in the sample; there was only one female in the group (male:female = 5:1). Although this gender ratio is close to the 7:1 male to female ratio in the distribution of ADHD in the population, as reported by the Health Department of Hong Kong (cited in Chan, 2014), further research is needed to examine the effectiveness of art therapy for female children with SEN in Hong Kong. To resolve these limitations, we suggest that a pre-group workshop could be organized for potential parents, in order to explain to them what art therapy is and how it might help their children. They could also be given some hands-on experience of art therapy, so that they can experience the power of creativity and understand its value.

Conclusion

The present research provides initial evidence that children with SEN in Hong Kong are able to benefit from non-directive art therapy. The behaviors of the children in the sessions displayed self-willed behaviors and showed they enjoyed the autonomy given to them. Their sense of competence in art creation was also developed through exploration and practice in a nonjudgmental environment. However, not all of the participants were able to develop a stronger

sense of relatedness in the sessions, and the generalization of the developed sense of autonomy, competence, and relatedness from the art therapy sessions to the learning setting was limited when they were assessed using survey measures. Nonetheless, a trend of improvement in the participants' emotional and behavioral adjustment was reported in the ratings of and interview with the parents of the children involved in the study. Future research with a bigger sample size and a concurrent waiting list group is recommended, in order to further explore the effectiveness of art therapy for this population.

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Table 1

Means (Standard Deviations) of Different Measures

	Child		Parent	
Measures	Pre	Post	Pre	Post
BMPN[a]				
Relatedness	1.89 (.66)	2.13 (.58)		
Competence	2.17 (.46)	2.13 (.16)		
Autonomy	2.33 (.33)	1.93 (.39)		
IMI[b]				
Interest/enjoyment	2.06 (.23)	2.07 (.13)		
Pressure/tension	1.17 (.26)	1.47 (.34)		
Effort/importance	2.28 (.59)	2.53 (0.45)		
MFQ-S[c]	4.67 (3.04)	5.20 (2.79)	9.17 (4.67)	5.80 (3.19)
CBCL[d]				
Anxious/depressed			.80 (.54)	.63 (.44)
Withdrawn/depressed			.81 (.37)	.51 (.37)
Somatic complaints			.47 (.57)	.40 (.32)
Social problems			.92 (.40)	.69 (.37)
Thought problems			.39 (.30)	.21 (.10)
Attention problems			1.19 (.36)	1.03 (.42)
Rule-breaking behavior			.35 (.22)	.25 (.22)
Aggressive behavior			.96 (.57)	.69 (.53)
Group evaluation				
Autonomy		4.60 (.49)		
Competence		4.50 (.77)		
Relatedness		4.20 (.68)		

Note. [a] Balanced Measure of Psychological Need Scale. [b] Intrinsic Motivation Inventory. [c] Mood and Feeling Questionnaire-Short Version. [d] Child Behavioral Checklist.

Table 2

Session Plan

Session	Theme	Content
1	Getting to know each other	• Draw a self-portrait
2	My family	• Paint different family members
3	My school	• Draw a school
4	My emotions	• Draw your emotion
5	Things that give me comfort	• Print something that gives you comfort
6	My strength	• What if you were an animal?
7	The most scary monster	• Make a scary monster
8	My world	
9	Perfectionism	
10	Success and failure	• Sessions 8 to 12: free choice of task
11	Expression	
12	Friendship	
13	Review	• Review artwork from previous sessions
14	Saying goodbye	• Group drawing
		• Self-portrait