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Effectiveness of creative arts-based parent training for parents with children with Autism Spectrum Disorder

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ABSTRACT

The mixed-method study evaluated the effectiveness of the 6-week long Creative Arts-based Parent Training program for parents with children with Autism Spectrum Disorder (ASD). Korean Parenting Stress Index-Short Form and Korean Parenting Efficacy Test were used to examine parental stress and sense of competence. Qualitative data were collected for the experimental group (EG) ($n = 17$) using a 30 min focus group interview, art journaling, and questionnaires. There was no difference in age ($t(25) = 1.38$, $p = .19$) and gender ($p = .86$) between the experimental and control groups ($n = 15$). The program was a positive experience. Qualitative data on parental experience and quantitative data on parental stress showed significant change, favoring the EG, $t(17) = -2.72$, $p = .014$ after controlling for inequality of variances. The EG highlighted the program as: (a) a social connection; (b) new opportunities to be child-focused, and (c) the learning of importance of emotion for child development. More, implementation promoted changes in both parents and children as the fundamental parenting style and the view on the child and disability changed. Therefore, although the study had some limitations, the program showed the promise of group-based supplementary parent training in parent-mediated, creative arts–based intervention as an early intervention treatment for children with ASD.

Introduction

Researchers across multiple disciplines have worked to identify psychological mechanisms and genetic and immunological factors to treat and improve symptoms in people with Autism Spectrum Disorder (ASD). Feng (2016) found promising data suggesting that missing links in the brain may correlate to the unique social behaviors and communication problems associated with ASD. Kim et al. (2017) used epidemiological methods to study the how maternal gut bacteria in mouse offspring increased the likelihood of developing ASD, suggesting links between ASD and fetuses exposed to maternal inflammation. While researchers continue to identity likely causes, no single treatment or intervention is known to be effective for all cases (Kasari, 2002). ASD manifests differently, with various expressions of symptom, creating unique challenges for each case (Grandin, 1995; World Health Organization, 2016). As a result, interventions must be designed to be adaptable to accommodate the particular circumstances (Green & Garg, 2018). Moreover, building joint attention skills (Tomasello & Farrar, 1986; Wong & Kasari, 2012) to improve reciprocity and mutuality is critical for children with ASD (National Institute of Child Health & Human Development, 2000; Wong & Kasari, 2012; Yoder, Watson, & Lambert, 2015) for the development of early social cognitive skills and improvement of communication skills including social communication (Goods, Ishijima, Chang, & Kasari, 2013; Kasari, Gulsrud, Wong, Kwon, & Locke, 2010; Kasari, 2002; Kasari Lab, 2016a, 2016b); social–cognitive and language development (Carpenter, Pennington, & Rogers, 2002); and expressive language (Autism Speaks, 2017).

A review of the literature suggests that creative arts approaches emphasize a child's innate abilities and talents in early development where creative experiences that include imitating, pointing, mirroring, touching, and sensing. These capacities directly relate to the core areas of nonverbal communication, joint attention, social communication, and interaction (Hildebrandt, Koch, & Fuchs, 2016; Martin, 2008, 2009a,b, 2014; Schweizer, Knorth, & Spreen, 2014). Dance-movement therapy, for instance, has been shown to reinforce nonverbal communication skills by enhancing empathy and embodiment when patients mirror movements (Hildebrandt et al., 2016; McGarry & Russo, 2011; Fraenkel, 1983). Art therapy offers opportunities for empathic relations (Durrani, 2014), while hand-made and material-oriented artmaking provide other important sensory experiences (Henry, 1992; Kuo &

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Plavnick, 2015; Schweizer et al., 2014). However, the efficacy of using creative arts therapies in treatments for children with ASD is neither well studied nor widely recognized outside the creative arts therapy field. Moreover, few evidence-based studies have examined whether creative arts approaches combined with parental involvement provide effective treatments (Randall & Parker, 1999). Allgood's (2005) family-based study on the use of creative arts therapy-driven parent training practices suggests that ongoing family-based intervention and parental training helped parents to understand their children through creative play techniques, recognize their children's strengths, and understand their role in relationship with their children.

Research has shown that the involvement of parents (Bearss et al., 2015; Charlop-Christy & Carpenter, 2000, Diggle, McConachie, & Randle, 2002; Ingersoll, Wainer, Berger, Pickard, & Bonter, 2016; Lafasakis & Sturmey, 2007; Matson, Mahan, & Matson, 2009; Rogers et al., 2012; Solomon et al., 2007), families (Allgood, 2005; Brian et al., 2017; Mudford, Martin, Eikeseth, & Bibby, 2001; Rao & Beidel, 2009; Reaven & Hepburn, 2006), schools (Cochran-Smith & Lytle, 1999; Goods et al., 2013; Wong & Kasari, 2012), and communities (Han & Kim, 2018; Leaf, Taubman, McEachin, Leaf, & Tsuji, 2011; Shire et al., 2017) in early intervention can be efficacious (Stahmer & Aarons, 2009; Wallace & Rogers, 2010) when combined with early detection (Carpenter, Mastergeorge, & Coggins, 1983; Karp, Ibanez, Warren, & Stone, 2017; Woynaroski et al., 2016). According to Ozonoff et al. (2008, 2010, 2014), early behaviors that are indicators of ASD often manifest in the second year of life (Wetherby et al., 2004). Various strategies have been used to educate caregivers about the core symptoms of ASD: socialization (Stevenson, Krantz, & McClannahan, 2000), communication (Bottema-Beutel, Yoder, Hochman, & Watson, 2014; Greenspan & Wieder, 2006) and imitation skills (Bearss et al., 2015; Vanvuchelen, Roeyers, & De Weerdt, 2011; Zaghlawan & Ostrosky, 2016). Parent-focused interventions, such as training, education, and practices (Bearss et al., 2015; Diggle et al., 2002; Green et al., 2013; Matson et al., 2009; Rogers et al., 2014; Steiner, Gengoux, Klin, & Chawarska, 2013) are both cost-effective (Breiborde, Woods, & Srihari, 2009) and clinically supportive in training skills in imitations (Zaghlawan & Ostrosky, 2016), social communication (Schertz, Horn, Lee, & Mitchell, 2017), joint attention (Bottema-Beutel et al., 2014; Kasari, 2002), play (Freeman & Kasari, 2013), and social communication (Bottema-Beutel et al., 2014; Kasari et al., 2010) in toddlers and preschoolers with ASD.

Interaction-focused, parent-mediated intervention emphasize the role of "parents as mediators" (Diggle et al., 2002; Matson et al., 2009). Such interventions reinforce a supportive and sensitive parent-child relationship, resulting in the optimal environment; parental synchrony is vital for children's development (Green et al., 2013). Sensitive parental response is the central effector on children's development (Kasarid et al., 2010; Murray, Fiori-Cowley, Hooper, & Cooper, 1996; Tamis-Lemonda, Bornstein, & Baumwell, 2001), because parents affect not only the way children experience the world but also how they perceive and interpret it. A child's social learning and interactions start from everyday parent–child interactions, communications, and nonverbal messages (Tortora, 2006). High quality interaction is imperative for future development of at-risk children (Wan et al., 2013). Thus, parents need to build responsiveness and sensitivity (Kasari et al., 2010; Schertz et al., 2017; Zaghlawan & Ostrosky, 2016) to understand their child's world, to become "mediators" (Diggle et al., 2002; Matson et al., 2009).

Freeman and Kasari (2013) noted the importance of parent–child interaction and characteristics of play (Lowry, 2018) in children with ASD. Greenspan and Wieder (2003) also emphasized symbolic and creative play. The Creative Arts-based Parent Training program focused on building communicative, positive parent–child relationships, utilizing a creative arts-based approach in everyday play with children with ASD. The program was designed to expand the idea of play in parents' minds so that they could understand not only the meaning of the play, but also parents' role in communication and connection with their children. Moreover, the creative arts-based training model emphasized the parents' well-being, effecting emotional change in parents. Parental well-being and stress are important issues (Derguy, Bailara, Michel, Roux, & Bouvard, 2016; Hasting et al., 2005; Hoffman, Sweeney, Hodge, Lopez-Wagner, & Looney, 2009; Keenan, Newman, Gray, & Rinehart, 2016; Krakovich, McGrew, Yu, & Ruble, 2016; Ruiz-Robledillo & Moya-Albiol, 2015), as is parental competence (Hasting & Brown, 2002). Parental stress has been known to be an impactor on the relationship and attachment between parent and children (Keenan et al., 2016), possibly affecting treatment responses (Reaven et al., 2015). Research demonstrates that caregivers for children with ASD report significantly higher psychological distress and attachment-related anxiety than do parents of typically developing children (Hoffman et al., 2009; Keenan et al., 2016; Montes & Halterman, 2007). The quality of the attachment between children and parents seems to be related to parental stress and caregivers' well-being (Keenan et al., 2016) in parents of children with ASD. As a result, it seems necessary to examine stress in parents of children with ASD, particularly given that they tend to be at higher risk for psychological problems (Murphy et al., 2000), such as depression (Hodge, Hoffman, & Sweeney, 2011; Lee, 2009; Yirmiya & Shaked, 2005) and attachment-related anxiety (Keenan et al., 2016; Krakovich et al., 2016) in relation to the parent–child relationship and interactions.

Though there were limits to the study, a preliminary examination of the Creative arts-based parent training program (Park, 2018) verified the efficacy of the impact and cultural adequacy of the program. Preliminary evidence supports the notion that creative arts-based training encourages positive changes in parenting and empowers highly stressed parents of children with ASD. It was also a promising study (Park, 2018) in terms of feasibility, acceptability, and cost-effectiveness. Costs associated with professional care and arts therapy services can present obstacles for parents seeking to support their ASD-diagnosed children. Often, access to these services is limited due to the family's locational and financial constraints (Ganz, 2007; Young, Ruble, & McGrew, 2009), and the availability of support from public systems varies depending on the country or region.

Thus, training parents to provide such therapy is a promising alternative that offers feasibility, acceptability, and cost-effectiveness (Brian et al., 2017). Moreover, the program's intention was to provide culturally sensitive parental coaching that could address parent isolation, acceptance, competence, and confidence with their children (Tonge et al., 2006). Provisions like parent-based mediation can empower parents and children simultaneously (Ingersoll et al., 2016). Providing services to parents to reduce their emotional burden and stress (Keenan et al., 2016; Krakovich et al., 2016) can help parents accept their child's disability, allowing them to overcome the feelings of guilt and responsibility that often accompany diagnosis of ASD (Han & Kim, 2018).

Purpose of the study

The current study sought to investigate the impact of the Creative Arts-Based Parent Training program on parents in a larger sample, with a parent facilitator assisting in delivery of the program. The research questions were: What effect does the program have on parents? Does the program have an impact on parental stress and perception of competence with their children with ASD?

Aim and importance

The program aimed to be responsive to cultural sensitivity in the ASD community in Korea. Often, socially isolated groups form unintentionally because of a separation between majority and minority groups, causing the emergence of dominant and marginalized groups. The minority or marginalized groups often deal with their perceived social status as the devalued "other." Hadley (2013) argues that in ableist societies, the "dominant attitudes in society devalue and limit the potential

of people with disabilities" (p. 378). Though there are ongoing efforts to address issues related to ASD and disabilities in Korea, Korean culture around the ASD population comports with this view of ableist societies. Despite various community and public-based efforts to build knowledge and support for ASD, resources and options remain limited (Han & Kim, 2018). Moreover, Korean society is less tolerant of "neurodiversity" (Silverman, 2015) than Western culture, which affects both parents and families of children with ASD.

Providing culturally sensitive services directly to parents is an important step in building parents' efficacy and competence as caregivers of children with ASD while also caring for their own well-being. In addition, children with ASD require individually tailored intervention to address their specific needs and expression of various symptoms. Home environments are the natural setting to build support systems helping these children to generalize learned skills. Home-based learning optimizes the natural and familiar cultural and ecological spaces that children already have.

Methods

The study used a mixed method approach to ensure the concept of "triangulation" (Berrol, 2006, p. 242), incorporating different methods for gathering information to examine measurable effects and explore and explain the phenomena and processes. Data were gathered using (a) a short version of the Korean Parenting Stress Index (K-PSI; Jung, Lee, & Park, 2012); (b) the Korean-Parenting Efficacy Test (K-PET; Kim, 2009); (c) questionnaires; (d) art journaling; and (e) a 30-min focus group interview. The quasi-experimental research design did not provide a randomization process to assign participants. The research program had the approval of IRB and informed consents signed by all participants. Experimental group (EG) participants approved the use of their artwork for academic and research purposes. Six weekly sessions of Creative Arts-based Parent Training (the program) for parents of children with ASD were conducted between February and March 2019. A parent facilitator (PF) participated in and assisted the researcher in conducting the program. The PF was a former participant in pilot and reviewed all workbook materials and organization process before Session 1. Each session lasted 3 hr, with time for art journaling, psychoeducation, the art-experiential process, and open discussion. Parents in the control group (CG) did not participate in any parenting group experience and only completed the pre- and post- K-PET, K-PSI, and demographics survey measures.

Program

The program objectives were: (a) to teach parents creative arts-based skills with psychoeducational materials to help them better understand their children; (b) to help parents build a more secure parent–child relationship; and (c) to empower parents by teaching them the skills necessary to support their children. The program was designed to build awareness of ASD and understanding of typical child development and of ASD-related developmental issues. Based on field recommendations and research, the training materials included psychoeducation about ASD; information on creative arts approaches; art experientials; and references, all of which were organized into the workbook by the researcher to structure the sessions. The original workbook from the pilot (Park, 2018) was edited for the current research.

Structure of the program and actions

During Session 1, the researcher introduced the program, modeled the structural process, and confirmed participation with agreements. After Session 1, the parent facilitator introduced art journaling and helped leading the sharing portion of art journaling. When needed, the researcher briefly addressed behavioral and developmental issues related to participants' individual children, but the art process was the main focus. After the art journaling, the researcher presented relevant psychoeducational materials and then introduced creative arts-based experiential learning.

The last part of the program provided space for open discussion led by both the parent facilitator and the researcher. The researcher answered questions regarding the program's contents and the individualization of its contents, including creative arts approaches. The parent facilitator shared her experiences and insights. The psychoeducation and experiential parts of Sessions 1 and 6 were shorter than in the other sessions to allow for collection of data. Otherwise, the structure and timing of activities remained the same throughout the program.

Workbook. Session 1 focused on general information about the program (goals of the program, the researcher's biography, and the schedule and overview of each session); facts and concerns about ASD; and the importance of building parent-child relationships with play in the early intervention period. At the end of the session, all participants completed the pre-study measures. After Session 1, each session had a specific topic: non-verbal communication for Session 2; body and gesture for Session 3; sound and communication for Session 4; art and sensory regulation for Session 5; and emotions for Session 6. At the end of Session 6, participants completed the post-study measures, participated in a focus group interview.

Psychoeducation. The group leaders provided information about development, ASD-related symptoms, and early detection and intervention. For instance, materials for Session 2 included information about neurotypical development, neuroplasticity, and early brain and language development in children (Dawson, 2008; Elsabbagh & Johnson, 2007). Researchers have recognized the value of psychoeducation for parents and caregivers. Patra, Arun, and Chavan (2015) concluded that psychoeducation facilitated parent empowerment, decreasing parenting stress and improving knowledge about ASD. There have been continuous efforts to develop caregiver/parent focused intervention (Green & Garg, 2018). Research has found that such practices support parents by actively involving them and engaging them in learning (Bearss et al., 2015) and made significant difference in (a) a treatment's effectiveness (Bottema-Beutel et al., 2014; Diggle et al., 2002; Green et al., 2013; Kasari et al., 2010; Matson et al., 2009; Rogers et al., 2014; Steiner et al., 2013); (b) organization of emotions (Berkovits et al., 2017; Kim, Wigram, & Gold, 2009); (c) expression and recognition of those emotions (Grossman, Klin, Carter, & Volkmar, 2000; Lindner & Rosen, 2006; Richard, More, & Joy, 2015); and (d) changes in nonverbal communication skills through body awareness and motor coordination in children with ASD (Koch, Mehl, Sobanski, Sieber, & Fuchs, 2014; Martin, 2014).

Art experiential learning. Art experientials were designed for parents to simulate the ASD-related bodily experiences their children might have. Art experiential learning encourages the use of a variety of methods and materials to develop parents' understanding of their children and reinforce the concept that there is "creativity within all of us" through everyday play (Lesner & Hillman, 1983, p. 113). These experiences were meant to teach parents to foster engagement and intimacy, hold their children's interest, and facilitate joint attention in their "shared world" at home (Greenspan & Wieder, 2006, p. 65). Moreover, the shared experience was meant to improve their interaction to support the expression of emotions in children with ASD. Participants were encouraged to replicate, adapt, and change the learned creative approaches with their children in play at home. Feedback was provided during the open discussion if any participant had a question regarding the creative implementation of the skills.

Art journaling. The program was structured to provide 1 hr of art journaling as an opening of each session. Each participant made an art entry for each session, and facilitators collected the artworks. The participants were guided by the following prompt: "Please draw/make/write

something that describes your relationship with your children for the art journal inquiry. Then, please pick a word(s) or sentence(s) to describe the nature of your relationship (e.g., difficult, stressful). If appropriate, please give your representation a title." Art journaling was intended as a way for group members to check in and talk briefly about weekly experiences with their children. This was a part of creative experience to foster parents' inner journey of learning to record their life through art (Hieb, 2005). Group therapy was not intended but the creative process with art journaling facilitated therapeutic effects on participants.

Participants

Recruitment

Recruitment took place through the Internet and with a flyer at local parents' support groups. Flyers were sent to the Seoul Support Center for Family with Disabilities, Seoul Guro Parents' Solidarity for the People with Disabilities, the Korean Parents' Network for People with Disabilities, and Gangseo Rainbow Parents' Association through the parent facilitator. Flyers were also sent to Internet-based parent blogs for parents of children with ASD and other developmental disorders, with permission from the blog managers. Flyers were sent to the PURME Foundation and the NEXON Children's Rehabilitation Hospital, as well. A short telecommunication-based introductory screening process was conducted for all participants in both groups.

Sampling/selection procedure

Parents volunteered to be in either the program (experiential group (EG)) or the control group (CG). The study did not include randomization to the control or experimental group and the CG neither studied nor had any control intervention. All participants acknowledged that they could withdraw their participation at any time. While there were no specific inclusion/exclusion criteria, participants had to be the primary caregivers of preschool-aged children with ASD. Accordingly, all children had been diagnosed with ASD or "borderline ASD," a term commonly used in Korea.

The children had been diagnosed using various standard assessment instruments for ASD: the Korean version of the Autism Diagnostic Observation Schedule (ADOS-2 (Lord et al., 2012), K-ADOS (Yoo & Kwak, 2007)); the Korean version of the LENA Developmental Snapshot (Bae, Yoon, & Sul, 2015, adapted from Gilkerson & Richards, 2008), the Korean version of the Wechsler Scale of intelligence (Kwak, Oh, & Kim, 2011, adapted from Wechsler, 2003); the Korean version of the Child Development Review-Revised (Kim & Shin, 2007, adapted from Harold & Heidi, 2004), and the Korean version of the Childhood Autism Rating Scale (Kim & Park., 1996; adapted from Schopler, Reichler, & Renner, 1986). No children were allowed in the actual sessions with parents in the program.

Experiential group

While most of the participants were mothers in both the EG and CG, some fathers participated. Table 1 shows participants' demographic information. Originally, 26 participants were recruited for the EG. However, 19 showed up for Session 1, and two withdrew. 17 participants were divided into the morning group (eight participants) and afternoon group (nine participants). The mean age of the children in EG was 3.9 years. All female participants were homemakers and not employed; all male participants were employed. All accepted their children's diagnosis. All children attended more than two therapy sessions per week. Some participants missed some sessions; eight participants attended all sessions, five missed one session, and four missed two sessions. Overall, there was an 88 % attendance rate.

Control group

The CG included 15 participants. Most participants in the CG received and filled out the measures online except five participants who completed the measures in person with parent facilitator. None of participants in the CG were involved in any part of the program. The CG could elect to receive the workbook by mail but none requested. The CG continued the therapies for their children while the program was running. Some CG participants were involved in local parent support group. The mean age of the children of CG participants *was* 5.7, slightly higher than that of the children of EG participants ($M = 3.9$). Most CG children planned to attend schools for special education in the following year.

Measurements

Pre-study measures, completed during Session 1, included a short version of the Korean Parenting Stress Index (K-PSI; 32 items, 10 min.), the Korean-Parenting Efficacy Test (K-PET; 29 items, 20 min.), and a questionnaire about the participants' demographics. Post-study measures, completed during Session 6, were the same except that a self-evaluation of participation was included. A focus group interview was conducted during Session 6, as well.

K-PSI-SF

Abidin (2012) developed the Parenting Stress Index (PSI) to measure parents' experience of stress in parenting and focuses on domains in which stress might occur. Four characteristics are measured: (a) child characteristics, including six subscales; (b) parent characteristics, including seven subscales; (c) situational/ demographic life stress; and (d) total stress. The reliability and validity of the Korean version of the measure, the K-PSI, was verified across diverse populations (Jung et al., 2012). Moreover, the test demonstrated the reliability of the subscales of child characteristics, with reliability coefficients that ranged from .78 to .88, while reliability coefficients for subscales of parent characteristics ranged from .75 to .87 (Jung et al., 2012). The reliability coefficient of the two domains and the total stress scale was $r = .96$ or greater, suggesting a high degree of internal consistency. For the study, a shortened version of the K-PSI (K-PSI-Short Form; K-PSI-SF) was used to measure parental stress levels among participants. The K-PSI-SF had internal consistency reliability (Cronbach's $\alpha = .91$) and the test-retest reliability $r = .77$ ($N = 328$, $p < .001$) for total stress domain. The shortened version contained 32 items and took 10 min.

Table 1
Demographic Information about the Participants in the Experimental and Control Groups.

	Experimental ($n = 17$)		Control ($n = 15$)	
	Female ($n = 12$) Mean n (%)	Male ($n = 5$) Mean n (%)	Female ($n = 11$) Mean n (%)	Male ($n = 4$) Mean n (%)
Age	38.8	44.2	37.9	39.7
Education				
High School	3(25 %)			
Undergraduate	9(75 %)	4(80 %)	11(100 %)	4(100 %)
Master's degree		1(20 %)		

K-PET

The Korean-Parenting Efficacy Test (K-PET) has been widely used to assess Korean parents' perception of their competence with their children. This measure was adapted from others: The Parenting Sense of competence (PSOC; Gibaud-Wallston & Wandersman, 1978) and the Parenting Alliance Inventory (PAI; Abidin & Brunner, 1995). Kim (2009) translated these measures and used them for the process of standardization. K-PET tests two domains: the parent domain (15 questions) is a parent self-evaluation and the spouse domain (14 questions) measures the parent's perception of their spouse's participation and support from the spouse in parenting.

The reliability and validity of the test measures were verified in a study ($N = 731$) that demonstrated an internal consistency reliability for parent domain of $r = .88$ (subscales: competence, $r = .85$; safety, $r = .81$) and for the spouse domain of $r = 92$ (subscales: fostering participation, $r = .90$; consensus, $r = .85$). Test-retest reliability was $r = .79$ ($N = 113$, $p < .01$) for parenting domain and $r = .80$ ($N = 113$, $p < .01$) for spouse domain after 1 month. The version contains 29 items and takes 20 min.

Data analysis

Quantitative scales and statistical analysis

The EG completed paper-based scales and answers were manually entered into the computer program for scoring. Some CG participants completed computer-based scales, which were sent directly to them via computer system and answers were scored automatically by the computerized scoring system run by Inpsyt (www.inpsyt.co.kr). All EG and CG participants completed pre– and post-test K-PSI-SF (Jung et al., 2012), and K-PET (Kim, 2009). Statistical Package for the Social Sciences (SPSS, version 24 for Windows) was used for the statistical analyses. Descriptive statistics, independent sample t-tests, and effect sizes were calculated to determine differences between the EG and CG.

Qualitative analysis

Focus group interview. At the end of Session 6, 30-mins focus group interview was conducted (see Table 2 for sessional structure) using four planned questions: (a) How would you describe your experience of the program? (b) How did you find the creative approaches? (c) How did you implement what you learned from the sessions? and (d) How do you feel about yourself after the six-week program? The PF and researcher led the focus group interview during Session 6. The researcher scribed memos covering the names of main speakers and briefs or topics of their open discussion as the interview session was recorded but not videotaped. The raw recorded version of focus group interview was in Korean. Thus, it was transcribed word-for-word in Korean first and then textual thematic analysis was conducted using a method developed by Moustakas (1994). Finally, the analyzed main themes were translated into English.

Table 2
The Examples of Sessional structure (Session 1, 2, 6).

Session	Structure
Week 1	***General information about ASD: Concerns & Anxiety***
	20 min. Introduction to the CAPT program & confirming of the participation agreements for the study
	60 min. Art journaling (my relationship with my child)
	40 min. General understanding of ASD & finding the child's strengths
	30 min. Experiential—understanding my worries and anxieties
	Free home task: child's play, routine, space, and anger
	30 min. pre-study questionnaire, K-PSI, K-PET
Week 2	***Understanding Non-verbal stages & Communication***
	60 min. Art journaling (my relationship with my child)
	30 min. Child development 1. Brain and language development
	60 min. Experiential—understanding non-verbal communication
	30 min. Open discussion: understanding my child
	Free home task: behaviors and gestures
Week 6	***Emotions & Expressions: Building relationship***
	60 min. Art journaling (my relationship with my child)
	20 min. Emotions & expressions - sense of self & emotional development, relationships, and social-skills development
	20 min. Experiential—expressing emotions
	20 min. Open discussion: understanding my child
	30 min. Post-study questionnaire, K-PSI, K-PET
	30 min. Focus group interview

Art journaling. Participants used art journaling at the beginning of each session as the examples in Table 2 show. Except the Session 1, the initial processioning and sharing were led by the PF, then the researcher supported by answering the questions about children's behavioral and emotional responses and changes. When EG participants shared their artworks, the researcher scribed their processes and verbal expressions for reference in later qualitative process. For instance, based on Moustakas's (1994) modification of the Stevick-Colaizzi-Keen method of analysis of phenomenological data, the phenomenological representations of drawings from art journaling were analyzed first for their representational contents. Then the contained written words (in drawings) like "distress, despair, agony" in the drawing (See Fig. 3) or notes of verbal expression about the drawing (Fig. 4) helped grouping of the artworks.

Questionnaires. During Session 1 (pre- questionnaire) and Session 6 (post- questionnaire) (See Table 2), questionnaires were prepared and given to the EG through the workbook as pre-written parts. The descriptive analysis of demographic information like sex, educational level, age, and their child's age from pre-questionnaire were completed (see Table 1). Post-questionnaires questions focused on experience of the program. For instance, post questionnaires asked if the EG participants have noticed any (small) changes in their children during the program or if EG participants felt any change in their comport, stress and anxiety level with their children after the 6-week program in three ways: increased, decreased, or stayed the same. Self-reported written responses from EG participants per question were gathered and then separately scribed word-by-word for each question then analyzed by the researcher, if necessary, the number of similar or the same written responses were counted and presented accordingly (e.g. increased decreased, the same).

Results

The following results are presented with caution as there was no randomization or real control intervention. The EG and CG had no difference in age, $t(25) = 1.38$, $p = .19$. While there were fewer men in each

Table 3
K-PSI-SF Pre & Post Scores in the Experimental and Control Groups.

	Experimental		Control		
	Pre	Post	Pre	Post	Effect Size
Total stress (TS)	76.89	70.29	80.93	81.47	.42
PD	61.65	56.65	70.73	69.4	.16
PCDI	74.12	72.18	78.06	79.8	.13
DC	80	73.06	80	80.2	.42

Note: PD stands for Parent Distress; PCDI stands for Parent-Child Dysfunctional Interaction; DC stands for Difficult Child.

Table 4
K-PET Pre & Post Scores in the Experimental and Control Groups.

	Experimental		Control		
	Pre	Post	Pre	Post	Effect Size
Efficacy	48.35	51.47	46.2	45.8	.16

Table 5
Narrative voices from Focus Group Interview.

Theme	Example quote (translated from Korean to English)
A child-focused	Participant A: "I started to focus on his level again. My effort was changed to the level of his eye, and it was effective. He seemed happier."
New finding	Participant 5: "I started to observe my child and tried to understand him from his view. I put more effort into understanding him… I realized my role as a parent and the importance! I only thought of my ways…"
New effort	Participant A: "I was so upset and tired from past years and now I know… I can do better things for him…for things I can do…"
Emotions	Participant 8: "As I focused on his emotions, I was changed, and his play started expanding when I was focused on his emotions… when I become child focused…he was different. It was an astonishing change!"
Play & communication	Participant C: "The more I played with C, the more I realized the necessity of play for secure attachment…I became a more concrete thinker in the play direction."

group, there was no difference in gender breakdown between groups $p = .86$. Results from the EG ($n = 17$) included some qualitative data.

K-PSI & K-PET

Total scores on the K-PSI-SF changed significantly more for the EG, $t(17) = -2.72$, $p = .014$, after controlling for inequality of variances. Changes in scores for the Difficult Child subscale were also significantly different, $t(16) = -2.68$, $p = .016$, again after controlling for inequality of variances. Detailed examination of these scores indicated that the variances, while controlled by the statistical procedures, arose largely from the scores of three or four parents in the EG who rated themselves very differently at pre-test compared to post-test. The effect size for the K-PSI-SF was .16. Scores for the EG showed significantly more change than did those of the CG. (see Table 3) EG participants' average rating of efficacy level increased ($M = 3.12$, $SD = 13.68$), and the average efficacy level of CG participants decreased ($M = -.13$, $SD = .45$). However, there was no corresponding statistical significance found between groups $t(30) = .912$, $p = .369$. Effect size was .16, reflecting no significant difference between groups. (see Table 4)

Focus group interview

Nine EG participants (seven in the morning, and two in the afternoon) provided the majority of the feedback during the actual interview, and the rest expressed agreement with the those nine. Five themes arose: (a) a child-focused view; (b) new findings and an observation opportunity; (c) new efforts for children; (d) a focus on emotion and the importance of recognizing emotions; and (e) play and communication. All EG participants reported the program offered new self-finding opportunity—one that was healing and helpful. Narrative voices from participants are described in Table 5.

Art journaling

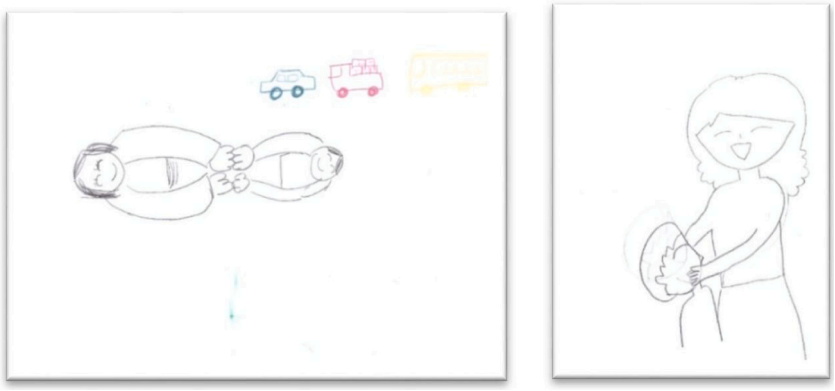
Seventeen EG participants completed at least four art journals during the six-week program, yielding 90 art journals for analysis; 32 drawings were excluded based on their highly individualistic characters, leaving 58 drawings that were first grouped by subthemes, then categorized into seven main themes (see Table 6): (a) togetherness (see Figs. 1 and 2); (b) struggles and worries (see Figs. 3 and 4); (c) problematic behaviors (see Figs. 5 and 6); (d) family time (see Figs. 7 and 8); (e) changes in children (see Figs. 9 and 10); (f) adaptation (in new school period) (see Figs. 11 and 12); and (g) art and play (see Figs. 13 and 14). Sixty-four percent of the participants' drawings included one of the seven themes. The rest of the drawings (36 %) showed no thematic associations. They were more individualistic or naturalistic sceneries (see Figs. 15 and 16).

Table 6
Themes from art journaling.

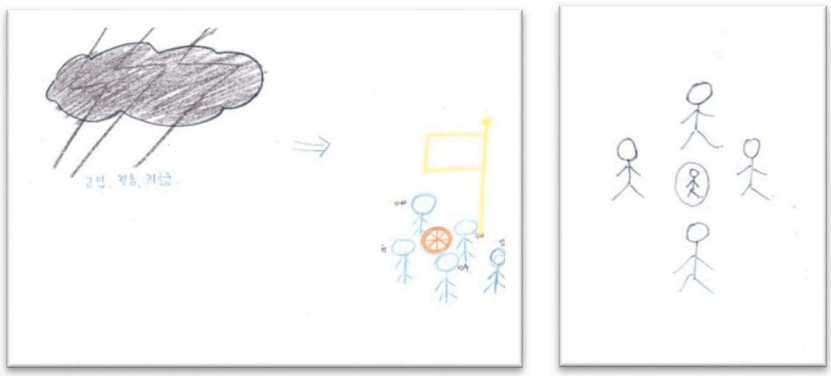
	Drawings ($N = 90$) Drawings for analysis ($n = 58$)
Togetherness	15.5 %
Struggles & Worries	13.8 %
Problematic Behaviors	15.5 %
Family Time	17.2 %
Change in Children	13.8 %
Adaptation (in new school period)	15.5 %
Art & Play	8.7 %

Questionnaires

According to the pre-study questionnaire, the EG parents' top five areas of concern for their children were (a) difficulty with social expression; (b) lack of basic understanding of communication; (c) sensitivity to change and environment; (d) problematic behaviors, such as self-harming, throwing objects, running away, and jumping; and (e) emotional tantrums. The EG aimed to learn and understand more about their children in general through the program. After the program, the EG reported changes in their perceived stress, anxiety, and comfort level with their children, as measured by self-reports: stress reduced (47 %), anxiety decreased (58.8 %), and comfort level increased (64.7 %). For all EG participants, reported comfort level with their children either stayed the same or increased, while stress and anxiety levels either stayed the

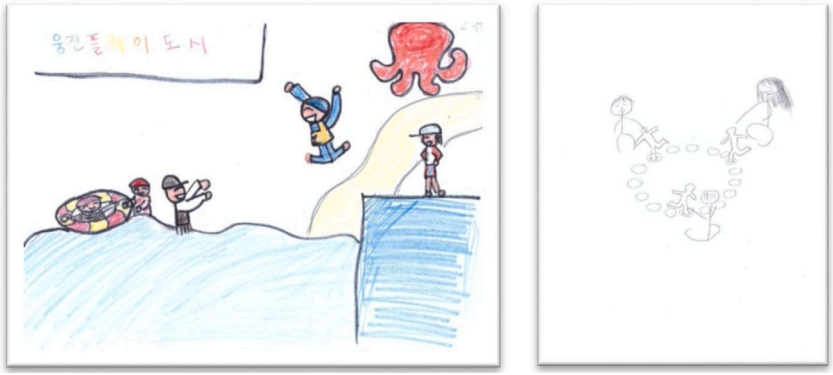


Figs. 1 and 2. Examples of Theme 1 (Togetherness): Participant C & Participant 9.



Figs. 3 and 4. Examples of Theme 2 (Struggles and Worries): Participant 3 & Participant 5.

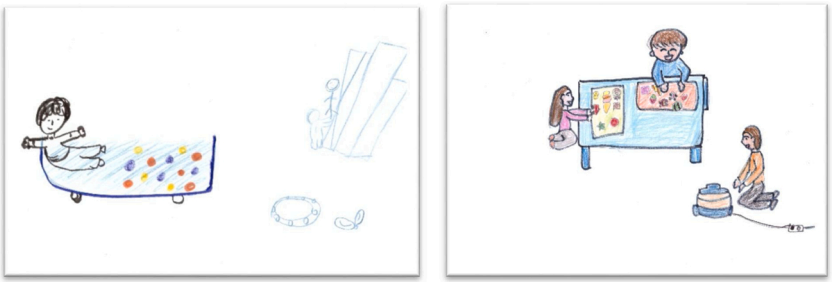
Figs. 5 and 6. Examples of Theme 3 (Problematic Behavior): Participant 6 & 7.



Figs. 7 and 8. Examples of Theme 4 (Family time): Participant C & Participant 8.

Figs. 9 and 10. Examples of Theme 5 (Change in Children): Participant E & Participant B.

Figs. 11 and 12. Examples of Theme 6 (Adaptation (in new school period)): Participant 5 & Participant 9.



Figs. 13 and 14. Examples of Theme 7 (Art and Play): Participant 3 & Participant C.

Figs. 15 and 16. Examples of No Theme (Nature scene): Participant 4 & Participant 8.

same or decreased, except for one female participant (see Table 7). EG participants reported being satisfied with the program and that the program was beneficial in terms of the (a) information provided; (b) sharing of experiences; and (c) discussion, although they all experienced the program differently. Eighty-two percent stated that the art journaling portion of the program, both process of making the art and the sharing of art, made them feel connected and provided them insights into their children and their parenting skills. Some EG participants also found the program to be therapeutic; they felt connection through stories of their children and a sense of a safe zone.

Table 7
Changes in Participants' Ratings of (1) Comfort Level with the Child, (2) Level of Stress, and (3) Anxiety Level with the Child.

	Comfort	Stress	Anxiety
Increased	11	1	1
Same	6	8	6
Decreased	0	8	10

Moreover, some EG participants observed changes in their children in the areas of emotions, relations, communications, socializations, problem solving, and creativity. 70 % reported they saw changes in their children's responsiveness and expression of emotions. Of that 70 %, 23.5 % observed emotional changes in relations; 29.4 % noticed expansion of play; 17.6 % noticed use of symbolic play; 17.6 % found increased use of expressive words; 41.1 % found increased interaction; 11.7 % found increased initiation; and 17.6 % observed sharing with others as results of the creative approaches they used at home. These parents in the EG reported that creative arts approaches (a) were helpful in holding their children's interest and attention; (b) gave them ways to observe their children; (c) were helpful in reading their children's responsiveness and in building interactions; (d) offered ways to understand their children's sensory problems (likes and dislikes); and (e) offered ways to expand their play skills and find meaningful connections.

Discussion

The program was a positive experience for this highly stressed group of parents in Korea. Statistical analysis of scores on the K-PSI-SF for the EG compared to the CG confirmed the program had a positive impact on high levels of stress. K-PSI-SF scores for the EG changed significantly more than did scores for the CG, $t(17) = 2.72$, $p = .014$, after controlling for inequality of variances between the two groups. However, no statistically significant difference was found for K-PET scores, the parents' efficacy test for felt competence.

Implementation of the program promoted changes in parents in their fundamental parenting style and view on the child and disability. EG participants reported that over the course of the program they experienced changes in themselves as parents. They felt that they became more open to their children's differences and began to understand them better as they learned more about ASD. Many of them used the specific phrase "child-focused" at least once during the art journaling, open discussions, or focus group interview. Parent–child interaction is a critical piece of child development, and for children with ASD, establishing communication and interaction through play with their parents is a first step in their social communication and language development (Bottema-Beutel et al., 2014; Freeman & Kasari, 2013). Children with ASD typically show qualitative differences in or the absence of joint attention that affected child's later development in engagement with others, including in their non-verbal and verbal abilities (Kasari et al., 2010). Many studies have addressed aspects of sustained joint attention and engagement in children with ASD including facial expression, responsiveness, gestures, pointing and sharing, reciprocal engagement, and imitation skills (Ingersoll, 2008; Lebarton & Iverson, 2016; McDuffie et al., 2007; Smith & Bryson, 1998), and several studies have presented various ways to teach and improve joint attention skills (Kasari, 2002, 2010). Here, the generalization of attained joint attention skills in natural situations and the initiation of such skills in new contexts and with new people are key (Kasari et al., 2010). Kasari et al.'s study (2010) targeted parents rather than children in interventions to promote generalizing learned joint attention skills, and they noted improvement in targeted areas of joint engagement and functional play through parental joint attention intervention for toddlers in early development.

The program was developed in recognition of the importance of joint attention development in children with ASD. The intention of the creative parts in the program was to encourage parents to play with their children at home targeting developmental areas related to joint attention. For instance, creative movement taught parents to use the natural movement of children with music to build imitation skills and pointing through play. In addition, using some creative materials like han-sam (a Korean traditional long cloth that covers hands) for dancing and moving allowed parents to learn to implement materials in movement and play to stimulate children's interest. The program also instigated relationship-based components throughout the process and focused on encouraging parents to build spontaneous child-led flow in engagement, as suggested in DIR®/Floortime™ (Greenspan & Wieder, 2003; Hess, 2013, 2015). It was designed to simulate the parents with the ASD-related bodily experiences so parents could understand ASD-related challenges of their children and adopt a new relational view on their children in play. Moreover, art experientials were used to help parents understand bodily experiences related to ASD symptoms to encourage non-verbal communication. Most EG parents reported not knowing how to communicate, understand, or respond to their children because they were minimally verbal or had a limited ability to speak. Art interventions in the program provided a new way of making connections for parents with their children. The program guided parents to find the individualized communication using non-verbal communication.

EG participants came to understand themselves as agents of change for their children, because the new insights about their children marked "a change in [their] understanding of their relationship with their child…[, especially] on child's strength and changing role with their children" (Allgood, 2005, p. 98). Consequently, as their views on their children changed, they changed their attention, communication, and engagement style, in turn, evoking changes in their children. This relational change was reflected in Schertz et al.'s (2017) study on parent–child relationships, which found that teaching parents to mediate toddlers' social communication at home helped the toddlers build individualized social interaction methods, beginning with their parents in their natural everyday environments. Here, art inaugurated a process that guided these parents and led them to develop a new awareness. Studies on group-based approaches for parents that used music (Allgood, 2005) and art (Riley, 2001) reported new kinds of awareness at various levels that enabled parents to relate to others and themselves as a parent in their own parenthood. EG parents developed similar experience-based knowledge through art: a way of knowing with art (Allen, 1995). The reports of EG parents resembled the reports of parents in Allgood's (2005) study, in which parents described the effectiveness of using art for learning and gaining new insights connected to the following changes: (a) understanding importance of their relationship with their children, (b) identifying their child's strength; and (c) understanding their changing role with their children.

The creative art approaches embedded in the program also made parents more emotionally expressive. In particular, the creative process and the routine of art journaling facilitated bonding between parents and children that enabled parents to share their emotions and experiences. EG parents came to think about everyday activities, behaviors, and their relationship with their children during the course of the program. They said that making art led them to a new awareness of their children and themselves because the art journaling cycle – the repetition of (a) thinking, finding, and doing activities with children; (b) understanding their actions and responses as they attended to their children; and (c) attending and engaging in weekly sessions, including making art and sharing experiences with their own children – enabled parents to focus on their children and themselves, their past and present relationships, and their role as a caregivers. EG parents said they were so busy and only focused on more immediate matters for their children, like therapy. In addition, parents reported that they rarely found opportunities to express their feelings and worries comfortably. They were culturally and socially stressed by the demands of supporting their children with responsibilities. They often ignored these emotions because they lacked a safe place to share them and had been shaped by a cultural tendency to avoid emotional expression as adults and as parents. Throughout the program, these parents created their own grounds for emotional sharing and found safe spaces for the free expression of emotions, which led them to think about their children's emotions as well.

They said that it felt good to express such emotions and share their feelings truthfully. This was an empathic opportunity for these parents to communicate with each other (Leong, 2013). Parents said that because they learned the importance of emotional sharing by becoming attuned to each other's emotions in the program, they became more considerate of their children's emotions and other problems that their children had.

The change in emotions for both parents and children was another key component of the program. Emphasizing areas of emotional development in children with ASD is crucial because affect and affective connections with people are among the core conflicts (Kanner, 1943). Most EG parents mentioned that they learned how to approach their children emotionally through the program. In addition, they felt their children's professional therapeutic interventions (e.g., applied behavior analysis) often neglected their children's emotions and emotional development. The program acted for parents as an "added on" feature, providing a foundation for emotional development at home though the understanding of the relationship of (a) facial recognition (Betts, 2003; Martin, 2008); (b) facial expressions and emotions (Grossman et al., 2000; Lindner & Rosen, 2006; Richard et al., 2015); (c) emotional responsivity (Scambler, Hepburn, Rutherford, Wehner, & Roger, 2007);

(d) the importance of emotional, motivational responsiveness for development (Kim et al., 2009); and (e) emotional responsivity connected to social relatedness and communication (Daou & Hady, 2016; Daou, 2014; Daou, Vener, & Poulson, 2014; DeQuinzio, Townsend, Sturmey, & Poulson, 2007; Gena, Krantz, McClannahan, & Poulson, 1996; Grossman et al., 2000; Hobson, Ouston, & Lee, 1988; Kahana--Kalman & Goldman, 2008; Klin, Jones, Schultz, Volkmar, & Cohen, 2002; Lindner & Rosen, 2006; Richard et al., 2015; Scambler et al., 2007). The program was a relationship-focused intervention for social-emotional functioning and development (Mahoney & Perales, 2003) using parents as agents, helping children to learn and make inferences about others' nonverbal affective displays (i.e., emotional states such as facial expressions). These emotions and expressions are related to theory of mind (ToM; Baron-Cohen, 1997; Baron-Cohen, Leslie, & Frith, 1985), a critical concept that plays a key role in understanding children with ASD, especially their challenges in areas of social skills and behavior. Thus, making and connecting self and emotion, linking ToM and emotion, is important. (Heerey, Keltner, & Capps, 2003).

Schreibman, Kaneko, and Koegel (1991) and Schreibman (1988) mentioned that naturalistic settings and strategies tend to induce greater generalization of skills and easier adaptions among the children with ASD. Throughout the study, it was evident encouraging parent mediation provided a more natural setting for these children. Findings supported the idea that parents are the best agents of change (Schertz et al., 2017), as more than half of the EG participants reported notable changes in their children and new insights were gained through creative arts approaches (Allgood, 2005). Clearly, parents experienced new opportunities as they allowed themselves to serve as proto-therapists for their children (Matson et al., 2009).

Social connection was the strength of the program as strongly recognized in both pilot and current study. Participants in the pilot study felt empowered by attending and sharing their stories as a group, and this mutual benefit from the power of sharing continued in the current study. EG parents reported that they felt often isolated due to their children's diagnoses, though some had joined local support groups to acquire information and participate in social events. More than 80 % of participants (14 participants) gave high satisfaction scores (either 4 or 5 out of 5, with 3 indicating moderate satisfaction) and liked the art journaling process. The sharing in the art journaling process provided a bonding experience, empathy, and insights about their children as well as their parenting skills. Some said it was particularly meaningful to have a space to communicate about their children's similarities and difficulties. This process through art made the EG parents understand their children, their development issues, and accept them more. The program reflected the advantages of mutual parent to support parent intervention for the parents of children with ASD (Ainbinder et al., 1998; Solomon, Pistrang, & Barker, 2001).

The empathy created by artmaking and sharing within the closed group process in the program reflected the social boding. This bonding assisted and created connections between these parents, providing a safe space that improved the psychological state of the parents whose children had similar experiences. It was unintended healing, giving parents an opportunity to connect by sharing energy from being together, knowing others in the same situation.

Such group support for parents of children with disabilities has been proven effective, enhancing psychological well-being through group therapy (Lee, 2017, 2020). However, these parents' efforts were focused on their children, and they rarely receive necessary support for their own self-care due to the lack of social infrastructure and practical support. Research by Lee (2017, 2020) on group art therapy for parental stress in mothers of children with disabilities in Korea found significant differences in stress, perceived stress, and mood change between the EG and CG after a 6-week group art therapy program. These findings suggested a need for a more tailored and individualized approach for parents of children with disabilities in Korea, including private psychological services, group therapy, education, and training.

Lastly, the individualized experience of the program combined with the materials presented and the parent facilitator were strengths of the program. Access to individualized information in discussion helped EG participants understand their children and improve their relationships with their children. This feature of the program provided a point of contact for consultation for parents during the training. For instance, the parent facilitator shared her life experiences and information for school admission, and this was helpful for EG parents who were anticipating school admission for their children the following year. Moreover, some participants found locally available parent associations and support groups for their children through the help of the parent facilitator. This co-leadership arrangement had several advantages: (a) the sharing of energy; (b) the sharing of roles and responsibilities; (c) a complementary effect; (d) the exchange of feedback; and (e) the ability to provide more specific information in certain areas of interests to participants.

The parent facilitator was also a good role model for the participants, as her child had recently started the first grade and could employ a culturally sensitive approach for this group of Korean parents. Cultural ideology is embedded in "social habits and cultural forms" (Brookfield, 2005, p. 41), and such embedded social tendencies have deliberately influenced beliefs, personal choices, and systematic approaches at the micro and macro levels for people with disability, in this case, children with ASD and their families. Members of the ASD community experience a difference in ideology, which naturally creates and "conceals the power relations" (Stige, 2002, p. 332) every day. In Korea, children with ASD and their parents struggle with cultural invisibility. They are a minority group, needing a place to share their thoughts and emotions and the information necessary to take care of their children. Therefore, although the study had some limitations, creative arts-based parent training program showed the promise as supplemental parent training as qualitative data on parental experience and quantitative data on parental stress showed significant change.

Limitations

The study employed a mixed methods creative arts-based intervention for parents of children with ASD. The group was biased by a self-selecting recruitment process. It did not include randomization for sampling process, nor did it have any control intervention for the control group. Therefore, the findings should be viewed with caution and may not be generalizable to all other parents with children with ASD. Moreover, the study included a relatively small number of volunteered parents for experimental and control groups. In addition, the program was limited by its short implementation period as well as its sample size, as inevitable life conflicts occurred, affecting the attendance of a few participants. Finally, the research relied on self-reporting, thus carrying biases from idiosyncratic individual results.

Recommendations for future research

Future studies might use additional quantitative measures such as the Korean version of a Child Behavior Checklist and related instruments (CBCL; Achenbach, 1999) to gather parent-reported child characteristics to assess changes in the children as the parents change. In addition, a framework, and guidelines for evaluation of the parent education and training program could be adapted for post-program evaluation, and a fidelity check could be done as well. EG participants suggested that future programs could employ media such as video clips of children for discussion. Finally, research on the effects parent facilitators and on co-leading is a viable option, because the parent facilitator's role was so distinct for participants.

Summary

The study examined the efficacy of creative arts therapies-based

approaches combined with psychoeducational information for parents with children with ASD as a kind of parent training. Parent training is a crucial way to provide information about ASD and support caregivers and families with children with ASD. The program sought to help parents leverage the advantage of natural home environment and play for the child development and stabilize a secure parent-child relationship in early developmental age. The program also focused on emotional components for child development through art-based experientials and approaches. It was a quasi-experimental mixed-method study incorporating (a) a short version of the Korean Parenting Stress Index (K-PSI; Jung et al., 2012); (b) the Korean-Parenting Efficacy Test (K-PET; Kim, 2009); (c) questionnaires; (d) art journaling; and (e) a 30-minute focus group interview.

There was no randomization process for assignment of participants. Thus, the following results were carefully presented with caution for generalization: The significant change in K-PSI-SF total scores was found favoring the experimental group, $t(17)=-2.72$, $p = .014$ after controlling for inequality of variances. There was also a significant difference in change scores for the Difficult Child subscale $t(16)=-2.68$, $p = .016$, again after controlling for inequality of variances. However, there was no corresponding statistically significant change found between groups in K-PET scores. Five themes emerged in the focus group interview: (a) a child-focused view; (b) new findings and an observation opportunity; (c) new efforts for children; (d) a focus on emotion and the importance of recognizing emotions; and (e) play and communication. Seven themes were analyzed for art journaling: (a) togetherness; (b) struggles and worries; (c) problematic behaviors; (d) family time; (e) change in children; (f) adaptation (in new school period), and (g) art and play. According to the post-questionnaires, experimental group (EG) felt increasement in comfort level and decrease in stress and anxiety level with their children. All EG participants reported being satisfied with the program: they determined that the program was beneficial in terms of the (a) information; (b) sharing of experiences, and (c) discussion, although they all experienced the program differently. Plus, EG reported that they felt more empowered and effective.

Lastly, the EG reported that they were more socially connected and experienced improved well-being, a noteworthy gain for a group of parents who often feel isolated. The potential of the program as a parent training for children with ASD was apparent in these experiences. The EG participants reported positive changes in (a) parenting, (b) understanding of play and communication, (c) emotions, (d) connection and relationship, and (e) felt stress level with their children. Therefore, while the study had some limitations, creative arts-based parent training program demonstrated promise as a supplemental training for parents with children with ASD. Qualitative data on parental experience and quantitative data on parental stress confirmed significant changes.

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