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A qualitative analysis of a clay art therapy project in enhancing emotion regulation among secondary school youth in the context of socio-political unrest

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ABSTRACT

Background: The drastic socio-political unrest in Hong Kong (HK) due to the different political issues in 2019 and the novel coronavirus epidemic has drawn rising negative emotions in the society, which the demand for psychological support is soaring. As the epidemic has greatly limited the flexibility of rendering conventional face-to-face counselling, alternative therapeutic approaches are vital to combat the accelerating demand of social and psychological support.

Methods: This study reports the qualitative research results of investigating the treatment efficacy and the mechanism of art therapy with clay (CAT), on the emotional problems of youth in the context of HK. The intervention composes of six 2-hour sessions led by an art therapist who is also an experienced school social worker.

Results: The phenomenographic approach of analysing the post-intervention focus groups triangulated by the in-sessions art-based inquiry worksheet responses have depicted the therapeutic effects of CAT in three different themes as (1) *releasing physical tension, soothing and regulating emotion*; (2) *building persistence in face of adversities and failures, and*; (3) *art products as representations of new meanings of life and positive self-image*.

Conclusions: The CAT process and the created ceramic artworks show powerful therapeutic effects in reorganizing and incorporating challenging experiences and failures, regulating feelings, and instilling new meanings to existential struggles and life issues. Traumatic experience and challenging situation have an existential implication that help one to recapture the core values of life and promote psychological positivity. The creation of animal symbols in the youngsters' ceramic artworks embrace a sophisticated process of charging emotion, revitalize ideas, and connect personal experience to the collective experience.

Keywords: *Art therapy; Clay art therapy; Emotion regulation; Resilience; Existential meaning; Adolescence; Animal symbols; Phenomenographic research*

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Introduction

Since June 2019, Hong Kong society has been suffering from drastic socio-political unrest, arising from the Extradition Law dispute, novel coronavirus (COVID-19) epidemic, and other political controversies in 2020. This period has been the most distressing course of time for many Hong Kong people. A local cohort research reports the rate of probable depression in Hong Kong population has increased from 1.3% in 2011 to 9.1%; potential suicidal ideation increased from 1.1% to 4.6%, during the socio-political turmoil in 2019 (HKUMed, 2019). However, due to quarantine and various public health concerns, the recent shutdown of schooling services and limited conventional casework service provision have greatly limited the flexibility of providing face-to-face verbal counselling to those in need. Novel therapeutic methods are thus vital in combating these psychosocial issues.

The potential benefits of using visual art in adolescence social work service.

Art had been an outlier to scientific fields until the recent widespread recognition of the psychotherapeutic effects of visual art (Liu & Miller, 2008). The combined verbal-nonverbal treatment methods of art therapy (Nan & Ho, 2014) allows an individual to retrieve, understand and experience staggering emotions, assists the expression of sophisticated feelings and helps the person to ignite insights into other internal cognitive processes (e.g., ideas, memories or motives) (Nan & Ho, 2014). With the use of a range of art media and materials, art therapy can facilitate the adjustment of the psychophysiological interactions, with which the person can experience a fuller embodiment of his or her own emotions and behaviours (Hinz, 2019; Siegel, 2009).

Existing art therapy research indicates that art-making reduces stress levels (Irvin, 2014), anxiety (Sandmire et al., 2012), and depressive symptoms (Bell & Robbins, 2007; Slayton, 2012) among children and adolescents that have behavioural-emotional issues. Art-based group work can encourage one to become more attentive to their emotions and to express them under a mutually supportive and unthreatening environment; furthermore, it promotes self-awareness and enhances self-esteem, and likewise builds a sense of self-efficacy and creativeness in children (Coholic, 2009).

As a fast-growing profession, art therapy has been developing its own theories and techniques over time. However, as human being has an innate nature of create art and express via artistic means (Carroll, 2004), art as a therapeutic tool can be applied and adapted to different professions including social work (Glagging, 1992). The International Association of Schools of Social Work –

Social Dialogue (2017; 2018) has documented a wide range of arts activities carried out by social workers, in which some of them were collaborated with other professionals including art therapists.

Clay art therapy: The Expressive Therapies Continuum as the theoretical underpinnings.

Clay is a distinct art medium. Its distinct malleable feature can facilitate rich expressions, such as making various unique shapes and three-dimensional clay objects. The literature shows the many benefits of clay art making to psychological health, such as increasing resilience in children and youth and enhancing mental and emotional adaptation to adverse environments (Jang & Choi, 2012). This distinct tactile quality of clay can provoke intensified haptic sensory experiences. Skilful interaction with clay can optimize and attune the arousal responses in regulating the autonomic nervous system; thus, aiding in monitoring the experience and expression of emotion and emotion-cognitive interactions (Bratton & Ferebee, 1999; Nan & Ho, 2014). The proposed intervention protocol – Clay Art Therapy (CAT) adopts the Expressive Therapies Continuum (ETC) (Hinz, 2019; Nan, Hinz, & Lusebrink, in press) as the theoretical framework to guide the treatment. The ETC protocol mimics the various neurological processes being activated when individuals employ a range of art media in the art making processes. These neurological processes imbedded into the ETC consists of four levels of art expression: Kinesthetic/Sensory (K/S), Perceptual/Affective (P/A), Cognitive/Symbolic (C/Sy), and Creative (Cr). The K/P/C components represent art-making experiences that are processed predominantly in the left hemispheric brain, while the S/A/Sy components represent processes that take place mainly in the right (Lusebrink, 1990). The primary goal of the model is to facilitate experience of the four levels and ultimately to achieve the integration of different neurological functions. The Creative component represents the expression of such integrative ability during art making and, in the artists' creative artworks.

Clay art therapy: The implications imbedded in the various intervention components and the benefits.

Clay art making involves rich tactile, proprioceptive, and visual experience (Nan, 2021). Parallel to the ETC components, the rhythmic movements in physically interacting with clay incorporate gross motor skills (i.e., the K component) and fine motor skills (i.e., the S component). The physical activities of patting, throwing, rolling and such kind of large scale acts of handling clay not only allow release of physical tension but also facilitate emotional catharsis of negative feelings (Greenberg & Stone, 1992; Jang & Choi, 2012). The methods of squeezing, smoothing the clay surface, and lightly touching the clay can strengthen the sensory experiences. Therefore, the range of kinesthetic-sensory movements have the effect of attuning under- or over-stimulated body sensations and emotional processes, a common sign in those who have depressive/anxiety

symptoms (Czamanski-Cohen & Weihs, 2016; Brenner, Leung, Sreevani, & Nan, 2018). Kinesthetic-sensory stimulations that facilitate rhythmic bodily movements during the clay making process produce distinct therapeutic effects, such as physical warm-up, release of physical tension, creation of a sense of control, and connection between the mind and the body (Mellor, 2015; Lavender et al., 2017; Brenner, Leung, Sreevani, & Nan, 2018). K/S rich activities thus promote positive moods (Kronholm et al. 2007) and encourage social participation. As activities on this level do not require high skills level, it is best suitable to work with adolescents in a group setting if they are not familiar with clay art making.

Clay art activities related to the visual sense (i.e., the A component) is especially intense when it is related to clay surface treatment tasks, such as colouring or glazing of semi-clay products. Use of colours in warm and cold colour tones can stimulate or calm arousal responses, stabilise and harmonize the emotions, as well as regulate the psychophysiological stress response (Czamanski-Cohen & Weihs, 2016). Swinging to the other end of the P/A level of the ETC, decorating semi-clay products, such as designing patterns (e.g. star-shape) or enriching the clay surface with other features (e.g. putting flowers and leaves on a mug) enliven the viewing and perceptual processes (i.e. the P component) with sophisticated schemas. These perceptually rich processes can complementarily enhance the affective expression on the other pole of the P/A level of the ETC by reinforcing a pleasant and satisfactory feeling of making a clay product in a nice shape. The research on neuroimaging and electroencephalography (EEG) shows that in the viewing process (i.e., the P component), both in terms of art making and art appreciation, the brain produces long-range synchronization or cooperation in the right-hemisphere (Bhattacharya & Petsche, 2002, 2005) and induces activities in the prefrontal cortex and amygdala (Vessel et al., 2012) that promote alternative neuronal pathways (Nan, Hinz, & Lusebrink, in press). The improvement of the perceptual abilities can enhance objective judgement and elimination of subjective bias that strengthens the ability to reappraise life scenarios when transferring these experiences to life and fosters maturation for adolescents.

Clay art making processes that require more sophisticated skills, usually at the later stage of the CAT treatment, require more organizing, analysing, and planning skills that allow the training of cognition (i.e., the C component). Both the perception and cognitive components promote objective and logical judgement and train up problem-solving skills in which perceptual skills enhances cognitive abilities. Such integrative utilization of different cognitive functions involves a complex coordination between different cortical regions (Lusebrink, 2004) that can harmonize autonomic nervous circuits showing a reverse flow of the ETC component/level from a top-down order. Activities rich in symbolic, artistic expressions (i.e. the Sy component of the ETC) embrace the

range of processes including meditating on the creation and expression of meaningful life experiences in embodied symbols. At times, the inner experiences are abstract, the expressions in ceramic products after firing the clay, such as miniatures, may concretize the ideas and facilitate the articulation of these experiences.

The CAT model with the ETC framework has been widely applied by the principal investigator (PI) previously in a randomised controlled trial for adults with depression (N=100) (Nan & Ho, 2017). Participants reported an alleviation of symptoms of depression and other benefits in the CAT treatment group than a non-directive visual art (VA) control treatment after the six-week intervention. This study confirmed de Moraes et al.'s (2014) finding that in psychiatric patients working with clay helped to alleviate emotional problems, such as signs of depression, anxiety problems and mental pain originating in memories and desires (Carr, 2008). This CAT model has also been applied in the outpatient community setting for many years that stories are narrated in another article (Nan, 2021).

The clay art therapy project

In search of new therapeutic alternatives under the turmoil of socio-political unrest, the PI, both a social worker and an art therapist, has been investigating the treatment efficacy and the treatment mechanism of this uprising psychotherapy trend – art therapy with clay on emotion regulation of secondary school students.

Method

Study design

This study implemented a mixed qualitative-quantitative research plan. Whereas qualitative research methods can provide facts and details to the intervention process, quantitative methods can yield significant effects with empirical data. The participants were randomly assigned into an experimental group of art therapy with clay (clay art therapy, CAT) facilitated by an art therapist (i.e. the PI) and a waitlist control group. This journal article focuses on reporting the results of the qualitative part of the research.

In the qualitative aspect, this project adopted an art-based phenomenographic approach to understand the experiences of the participants. Phenomenography focuses on describing, evaluating, and embracing experiences toward a phenomenon and identifying the ways these experiences inspire meanings to their world (Marton, 1981). The phenomenographic approach emphasizes collective experiences as well as differences in the individual experience (Barnard et al., 1999). Qualitative data in this study included the post-treatment focus group interviews and the filling of

the art-based inquiry worksheets after the participants created their personally meaningful ceramic products in the latter phase of the group.

In the quantitative aspect, self-reported questionnaires were adopted to report the change of emotional regulation difficulties or strategies (Lavender et al., 2017) of the participants. Hair cortisol was collected and analysed for physiological stress levels of the participants over time (Gilbert et al., 2017; Hannibal & Bishop, 2014). The results of the analysis of the quantitative part of the research were detailed in another upcoming journal article.

Participants

2 local Catholic girls' schools were invited through established school networks introduced by Caritas Family and School Services. Students who were interested in the project were invited to take a screening test. Those who were found eligible and had provided both personal and parents' consents could join the study, details of screening test and eligibility criteria were as follows:

Screening: Potential participants had completed a screening test, the Depression, Anxiety and Stress Scale (DASS) (Mellor et al., 2015). The recommended clinical thresholds score on the depression, anxiety and stress subscales are 9, 7 and 14 respectively for mild symptoms and 21, 15, and 35 respectively for severe symptoms (Mellor et al., 2015). The thresholds quoted above were likewise validated in HK. Students who had completed the DASS screening test and had depression subscale scores in between 9 and 21 (mild to moderate depressive symptoms) were eligible for the study.

Inclusion Criteria. The criteria for recruitment of participants include: S.4-5 students, aged between 15 and 17; Ability to understand and communicate in Cantonese; Suitable and able to perform activities in groups during the course of the 6-week program; and students with DASS depressive subscale scores in the 9-21 range.

Exclusion Criteria. Participants were excluded if: Diagnosed with mood disorder, anxiety disorder, or any other psychiatric disorder that required medical treatment, or professional intervention during the past 12 months; and with other medical conditions that were likely to limit group participation during the 6-week program.

All participants had demonstrated subclinical depression symptoms. 41 students joined the project and were randomly assigned into the experimental group or waitlist control group on a 1:1 basis. Both groups had matched demographics and mean screening test scores. While the experimental group received six 2-hour weekly CAT sessions, the waitlist control group continued their usual afterschool activities. The waitlist control group received the same CAT sessions after all research data was collected.

Intervention

This study adopted CAT as the intervention approach (Nan et al., 2020). The 6 two-hour weekly sessions integrated emotion regulation strategies into the teaching of clay hand-building knowledge and techniques.

The various CAT processes promoted a range of kinaesthetic movements (e.g. pounding, kneading clay, see Figure 1), sensory-rich activities (e.g. pinching and coiling clay, see Figure 2), and the creation of personally meaningful clay products for firing into ceramic pieces (e.g. glazing clay works, integrating pinched works together as a miniature, see Figure 3).



Figure 1. Clay art making process on the kinaesthetic level – pounding and kneading clay



Figure 2. Sensory-rich activities in clay art making process – pinching



Figure 3. Affective and symbolic processes in clay making – applying glaze to personally meaningful clay products

Through these processes, the art therapist (i.e. the PI) guided the participants to experience, understand emotions via the various ways of interacting with clay, and freely express personal ideas and feelings in an embodied art form created from the clay. By the end of each session, 10-minute reflection was rendered to assist the participants to relate their art making experiences to their life experiences in the backdrop of the socio-political unrest in the society and consolidate the learning on emotional regulation strategies.

Data collection and plan of data analysis.

All data of the project was gathered after acquiring the ethical approval from the Ethics Review Board from a local university (Ref. code: HASC/17-18/0681) and the written consent from both the parents and the participating students. All participants were given a number code to mask their identities and demographic information.

In the qualitative aspect of data collection, the format of the focus group was semi-structured that allowed the participants to give feedback to questions and elaborated their reply by free interaction among the group members. The typical questions of the focus groups included asking for the experiences of the participants in the CAT processes, the impacts of the groups on emotion regulation, their reflection on using art to regulate emotions and face problems in life. In addition, questions related to the production of the ceramic products were raised, such as asking the participants if the ceramic products carried any special meanings to them. The focus groups were audiotaped and transcribed into verbatim. An independent researcher (i.e. the second author, who was not the PI of the project) who did not involve in the intervention process conducted the focus group discussion and coding of the focus groups verbatim and the art-based inquiry worksheets.

The major steps of phenomenographic data analysis proposed by Dahlgren and Fallsberg (1991) was adopted. In phenomenographic research, the focus is to study the variations among people's interpretations of a given phenomenon (Marton, 1981), which in this specific circumstance – “what” they talk about clay art making and “how” do they talk about it (Larsson & Holmström, 2007). The second author conducted the data collection and phenomenographic analysis of the data; the first author, independent from the data collection/analysis processes, was a co-reader to check the coding of the verbatim. The coding process of the focus group scripts began with familiarization with the verbatim and the art-based inquiry worksheets by repeated reading for achieving immersion, followed by initial inductive open coding, which major coding of each participant were indicated in terms of “what” was the focus of the participants' answers and “how” did they describe it. Codes were then sorted into internally consistent and externally mutual exclusive categories. Finally, themes were developed by using the metaphor “Clay art making as ...” to describe each category.

Meanwhile, the PI as an experienced art therapist and the main instructor of the intervention, made records of observations on the group dynamics and individual performance during the intervention and evaluations on the participants' artworks. The art-based inquiry worksheets were analysed in a similar repeated reading, coding and categorizing process. These materials were triangulated with the extracted themes stemmed from each focus group, in purpose of seeking consistency among the different qualitative indicators to corroborate the validity of the qualitative data.

Research results

With 21 students participating in the CAT intervention groups, two groups of participants (8 and 6 participants from each school respectively) have been invited to join the post-treatment focus group interviews when data has become saturated and sufficient for identifying core themes (Morgan, 1997). Apart from the focus groups, the in-session art-based inquiry worksheets that record students' creative ideas and affective experience during the art creating process were included for analysis and used as a source of data triangulation.

Combining coding analysis of both focus group interviews and art-based inquiry worksheets, three main themes have been devised in response to the effects of CAT in emotional regulation and instilling personal strength and hope during depressive and stressful socio-political turbulence:

Theme 1: *Clay art making as a way of releasing physical tension and calming emotions*

Release of physical tension. The kinesthetic-sensory processes of interacting with clay acts as a channel for the participants to release physical tension (e.g., hitting and touching the clay while

screaming and yelling) and facilitate warm-up especially at the initial phase of the group. This process echoes the function of the Kinesthetic/Sensory level in building up a sense of control and safety in a group setting when the feeling of tension is being reduced. Therefore, K/S rich activities may be a socially desirable way of physical and psychological stress treatment method:

When I failed sometimes [at making clay art by hitting, kneading, and pinching it] ... I scream out loud for a few times and then rediscover the inner peace and continue to work again. – Participant 1

Calming and soothing emotions. Clay art making activities allow the participants to engage and focus, diverting their attention to the soothing visual and haptic sensations of art creation which can calm unquiet souls that are beset by disturbed thoughts and emotions:

A hobby like pottery that requires repetitive actions and procedures ... can help relax and soothe my feelings ... it is a form of distraction [from own problems]. Participant 2

During a time of public health threat and political uncertainty, negative emotions like fear, hopelessness, and anxiety may preoccupy the mind and the heart, thus strategies to soothe and divert such emotions are vital. Clay art making invites the participants to focus on the present moment via the intimate interaction with the clay and be absorbed in its sensory and kinaesthetic rich processes. For example, the rhythmic motion of the body (e.g., caused by clay kneading or pinching) can stimulate a sense of inner rhythm, which can elicit positive emotions and foster self-exposure (Kronholm et al., 2007).

Theme 2: *Clay art making as a way of building persistence in face of adversity and failure*

Growing patience and persistence. Becoming familiar with the physical properties of clay requires a lot of time and it is easy to fail at first as clay is hard to control. The participants felt despair and mental anguish when they failed. But at the same time, the malleable properties of clay helped them to build patience and persistence in reworking their creations until they were happy with the outcome:

You need to have patience to create a clay artwork, do not get discouraged about the failure and do it over again. – Participant 3

Acknowledging the discrepancies between the ideal and the real and learn to accept those imperfections. As a new learner of pottery art, the artist may find it hard to express what they had imagined through the medium of clay, which causes a discrepancy between the ideal and the real. Through the time and effort they had expended on their clay work, they started to accept the flaws, understand the imperfect but unique nature of their artwork, and attached personal feelings and meanings to it.

Eventually, they learned to forego chasing ultimate perfection:

I have changed my mentality. Previously, I was always aiming for precision and delicateness. But I can now accept the imperfect product that I made, it is unique and cannot be recreated by others. – Participant 4 (figure 4).



Figure 4. A flute created by Participant 4, she accepted that the final product was broken.

Recent social events and issues have undermined the previous understanding and ideology of our society; many of us are experiencing stress as we face the discrepancies between our ideal and actual society. CAT, as a symbolic experience, can increase the acceptance of such discrepancies, as people could start to learn how to acknowledge, accept, withstand, and overcome those differences, at the same time as enhancing their inner strength and developing the persistence necessary to combat the current situation.

Theme 3: *Clay art products as representations of instilled new meanings of life and positive self-image.*

Clay art products as self-representation. Many of their artworks are representations of the participants in some way (e.g., their personalities, emotions, personal experiences, and self-expectations). The art making process could be a valuable moment that allows the students to experience new self-discoveries about who they are. These new discoveries often facilitate their sense of connectedness with another person and with life:

There is famous Roly-poly, he is ambitious and motivated in life. When he faces adversities, he never falls ... I want to be like roly-poly, never falling. – Participant 5 (figure 5)



Figure 5. Roly-poly miniature created by Participant 5.

I was born at Dongbei ... Sunflower... is a unique flower from Dongbei, which symbolizes braveness, strength and happiness ... there are a lot of sunflowers at Dongbei, so it represents my personality... It is also a medicine to me when I am facing failures/adversities, brightens my future and teaches me to move on. – Participant 6 (figure 6)



Figure 6. Sunflower miniature that Participant 6 created.

Existential therapeutic effects of clay making.

Art creation is a process of meaning creation; the students create positive self-expectations and ideal self-images embodied in the ceramic miniatures. Alongside the created ceramic pieces, the stories they have written based on their artworks as a narrative represent new goals and meanings in face the challenges of today.

Where positive values and meanings are added to their present challenging and devastating situation, some have experienced change in their attitude toward the future:

... it is yellow in colour and yellow gives me a feeling of warmth and brightness...it brings me into the light, the light that shines through the darkness of my life. – Participant 7 (figure 7)



Figure 7. Clay miniature created by Participant 7

Once upon a time, there is a penguin, he is separated from his parents, he grows up well independently with his great effort. For example, being alone during birthdays and Chinese New Year, hunt by himself. After all those experiences, he becomes very optimistic and turns into a penguin with positive energy. – Participant 8 (figure 8).



Figure 8. Penguin miniature created by Participant 8.

The animal forms embodied in the sculptures represent both personal stories and connections to shared experiences on a collective level (see figure 9).



Figure 9. Clay miniatures created by participants embedded with existential stories.

Traumatic experience and challenging situation have an existential possibility to direct new meanings of life and promote psychological positivity (Thompson & Walsh, 2010). To maximize this existential effect, it is important to have a safe and effective method to promote the creation of

positive values, life goals and meanings (Corbett & Milton, 2011). In the art therapy sessions, art activities are personally assigned to participants to best match their working pace and personal needs to optimize learning and emotional experience. Both art making processes and finished personally meaningful products can create powerful therapeutic effects in reorganizing and integrating traumatic memories, mastering one's own feelings, and instilling new meanings to struggles, conflicts, and life issues (Elbrecht & Antcliff, 2014; Nan, 2020) (Figure 9).

Conclusion

Human beings have an innate nature to express via artistic manners (Carroll, 2004). In face of all the overwhelming traumatic experiences under this socio-political turmoil, the expressive and aesthetic qualities of clay art making would be a powerful channel to sooth and transform emotions. Face-to-face verbal counselling may be challenged with self-disclosure when mutual trust is discredited after serious socio-political events happened. At times, verbal messages may carry strong or unprocessed emotions (Hendrick, 2013). To complement verbal expressions, the nonverbal process as guided art activities allow participants to process and express emotion via other modalities, such as visual, bodily (kinaesthetic-sensory), perceptual, symbolic, and cognitive processes, which facilitate mutating emotional learning (Basros et al., 2013; Haeyen et al., 2018).

Discussion, & Limitations

Art is an instrument that allows tapping into inner resources, establishes existential life meanings, and affirms a positive self-image embodied in the three-dimensional ceramic products. Apart from expressing personal meanings, Jung (1991) has pointed out that abstract symbols may simultaneously carry unconscious meanings that is connected to a deeper level of emotional experience and emotional energy. The emotions are the driving power which motivate and revitalize thoughts; support one's beliefs and behaviour. The energy forged by emotions is as vital as the ability derived from logical analysis of facts. Emotions even transcend logical analysis (Jung, 1975). In the qualitative research findings, specifically those findings being exemplified by the ceramic products of the participants, the typical form of three-dimensional symbols created are animal sculptures (Figs. 7-9). Animal symbols significantly and interestingly connect with a wider collective experience or consciousness as archetypes or ideas-symbols that often represent forces of life and spiritual elements as found in many indigenous cultures (Carrette. 2004; James, 1985; Proudfoot, 2004). Thus, the making of the symbols may embrace a more sophisticated psychological cycle of charging emotions, externalizing ideas, internalizing meanings embodied in these symbols, and connecting personal experience to the collective experience. These processes

can support the evolvement of the ego that transcends growth for the youngsters. As a future research direction, the meanings represented by the various animal symbols shed light on further investigation on the realm of spirituality in clay art making.

The CAT intervention protocol is designed to allow the participants to go through and integrate different inner processes during the various treatment processes, ranging from the various forms of physically interacting with clay, expressing feelings via glazing of the clay works, mindfully observing the clay form in the various art making procedures, reorganizing thoughts and expressing them in a symbolic way in the embodied pottery products. All these processes synergize in enabling the development of more effective emotion regulation strategies. However, as reflected from the qualitative research results, we did not find the participants mention so much about the effects of colouring or glazing of the semi-products as regulating emotions. In the use of relatively fluid media in art therapy practice, such as watercolour and soft pastels, the strong visual-sensual stimulation of colours may trigger stronger and intense emotional reactions instantly. However, in glazing or colouring the surface of the semi-products in clay art making, the effect is quite different. For the real colours of a ceramic piece only appear after the semi-product is fired, there is a delayed effect of the visual sensation upon the artist's emotional reactions; the visual stimulation is, however, much stronger when viewing the glamorous glazes as a finished ceramic artwork.

As a developmental stage, adolescence is a challenging period. Apart from facing demanding competition in academic life, adolescents are rapidly developing in the physical, cognitive, and social aspects that may challenge their adaptation abilities and bring them tremendous stress. Adolescence is also a stage seeking for a self-identity and recognition from the peers. At times, they would struggle who they are, the important values of life, and their future direction. All these issues may pose difficulties for the adolescents to comprehend their complex thoughts and emotions. The artistic clay art making process and visual form of expressing themselves in the embodied form of pottery art products can create space to meditate and reflect upon who they are and wrestle with their challenges in a symbolic manner (Nan, 2021). The clay art making process is thus both a challenge and an empowerment. We speculate these are the very reasons for clay art making to become one of the favourite art media among many youngsters.

As art is a universal language and art training has been included into various professions, not limited to art therapy, art therapists and other professionals, such as art educators, social workers and psychologists, can collaborate in contributing unique perspectives and methods into the helping process. Under the attack of the pandemic, art intervention takes the advantages of both the verbal and nonverbal components that allow individuals to make art on individual basis and share their artworks via an online platform, no matter on a one-to-one or group format. In face of the ongoing

challenge of the pandemic, Hong Kong government may still ban normal schooling ranged from kindergarten to university students if the situation turns worse again in late 2020 or early 2021. Thus, this study points toward a future research direction by exploring the feasibility of an online mode of clay art therapy treatment.

Despite a growing literature on the use of clay in psychotherapy, clay as an art therapy medium is still under-practiced and under-researched. This study endeavoured as a pilot study to investigate the therapeutic components of CAT. It is deemed valuable to explore each of these themes more in depth by replicating this project to another study. Another limitation for the study is that it has only involved female participants in this current stage, which the qualitative findings reported might be colluded by gender-biased confounding factors. It is also essential to apply the treatment methods of CAT to a larger sample of youth and other population groups for enhancing the treatment protocol.

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Declaration of Interest statement: none

Authors' contribution

Joshua K.M. Nan is the principal investigator of the study, he assisted with concept, study design, intervention, manuscript writing and manuscript editing; Wendy W.T. Wong assisted with the generation of the initial draft of the whole manuscript, manuscript editing, data collection, analysis and interpretation. Both authors contributed to and have approved the final manuscript.

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