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<th>Creative paperclay and Parkinson’s Disease: shaping identities, enriching lives. (Main Article)</th>
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Creative Paperclay and Parkinson’s Disease: Shaping Identities, Enriching Lives
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Introduction: Prevalence of Parkinson Disease in Singapore and Issues
Parkinson’s disease (PDSS) is an age-related chronic progressive neurodegenerative disorder. The disease invariably manifests with motor symptoms, which are related to loss of dopaminergic neurons in the substantia nigra. In its early stages, Parkinson’s disease usually presents with asymmetric tremor, bradykinesia and rigidity. During the later stages of the disease, non-motor features, including autonomic dysfunction, falls, sleep disturbances and cognitive abnormalities appear, as neuronal loss in non-dopaminergic areas become apparent (MOH, 2007). The prevalence of Parkinson’s disease in Singapore was found to be around 0.3% for the population aged 50 and above (L. C. S. Tan, Venketasubramanian, Jamora, & Heng, 2007); this equates to 3 persons in every 100000. Contrary to previous supposition that PD occurred less amongst Asians than Caucasians, study (L. C. S. Tan, Venketasubramanian, N., Hong, C.Y., Sahadevan, S., Chin, J.J., Krishnamoorthy, E.S., Tan, A.K.Y., Saw, S.M., 2004) has indicated that the prevalence of PD in Singapore is comparable with that in North America and Europe which stands between 0.98% to 0.194% (age adjusted to US 1970 census). As the disease is relatively common amongst the aged, researchers have anticipated that the prevalence of this disease is likely to rise in Singapore given the increasing greying demographic (L. C. S. Tan, Tan, A.K.Y., Tjia, H.T.L., 1998).

The impact of Parkinson’s disease is extensive. Beyond the immediate physical inconvenience caused by ones diminishing motor ability, other complications resulting from the onset of PD may include cognitive decline, dementia (Stern in Simpson, Haines, Lekwuwa, Wardle, & Crawford, 2006), depression and anxiety (Simpson, et al., 2006), phobia and obsessive-compulsive disorder (Goldblatt, Elks-Abuhoff, Gaydos, & Napoli, 2010). The occurrence of such conditions inevitably compromises ones mood and quality of life. People with PD do not only experience distress with their own movement, but the increasing motor deficit also diminishes their ability to express, communicate and interact with others (Doyle Lyons, Tickle-Degnen, Henry, & Cohn, 2004). Phobia has been found to be a main characteristic in PD (Schneider in Goldblatt, et al., 2010). Fear of falling and loss of postural control in PD is a main component to present phobias and can negatively affect an individual’s ability to function socially (Adkin, Frank, & Jog in Goldblatt, et al., 2010). Restriction of activities due to the fear of falling can lead to social phobia in patient with PD (Goldblatt, et al., 2010). Being fearful within one’s environment can significantly affect an individual’s quality of life and lead to further psychiatric features (Chaudhuri, Healy, & Schapira in Goldblatt, et al., 2010). Depression has been identified to be one of the most common psychiatric complications in PD affecting up to 40% of patients; common in patients’ depression attributions were the perceived lack of self-efficacy, perceived loss of control over life in general, inability to engage in interests, embarrassment over PD symptoms, concern for the future secondary to disease progression, and concern about becoming a burden to others (Oehlberg et al., 2008). The effect of PD can be isolating, but with proper support and knowledge in managing and care for the illness, life with PD can still be a rich and meaningful one. In Singapore, individuals with PD have several avenues to turn to for support, the Parkinson’s Disease’s Society (Singapore) or PDSS1 would be one of the key organization for this purpose. Formed in 1996 by a group of doctors and caregivers, the society’s endeavour to promote awareness and understanding of PD and related disorders by educating patients, caregivers and their communities, and to support them holistically in their journey with the illness. Since its inception, the society has organized a range of programmes and activities to enrich the life of individuals. These include annual public forums, therapeutic programmes and social outings. The society also works closely with support groups in various hospitals and informs the public on PD by publishing newsletters and books on PD. Over the years, the society’s membership has grown steadily from 150 in the early years to over 200 currently (PDSS, 2010).

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1 http://www.parkinsonsingapore.com/
Creative Paperclay Workshop Program at Parkinson’s Disease Society (Singapore)

As part of PDSS’s continual effort to create program to help enrich the life for individuals with PD, I was engaged to develop and facilitate a creative paperclay program for Society. It emerged from a conversation on Arts in healthcare that I had with Dr. Louis Tan—Senior Consultant, Neurology at the National Institute of Neuroscience Singapore. After learning about my previous arts in health work with the PD support group at the Singapore General Hospital, Dr Tan who happens to be a committee member of the society and connected me to the Society’s manager, Ms Tina Tan to propose the program. The program builds on understandings that modeling clay has beneficial quality for individuals with Parkinson’s Disease; the benefits includes decreasing somatic dysfunction and emotional distress (Elkis-Abuhoff, Goldblatt, Gaydos, & Corrato, 2008), decreasing depression, obsessive-compulsive behaviors and phobic anxiety (Goldblatt, et al., 2010). While acknowledging the positive qualities of clay manipulation for people with PD, the study of this program attempts to examine the therapeutic qualities emerging from a structured art program- where emphasis is placed on developing visual literacy. We believe through a structured program, individual can have opportunity to discover and building on that, an opportunity to develop their artistic capability where they could gain mastery over the visual language, which may enable to better express themselves eventually. And as a result, an artistic identity could emerge from this process hence giving new meaning to the individual. The therapeutic outcome would evolve from the sense of empowerment that comes as the individual gain awareness and mastery of artistic skills, knowledge and sensibility. On the other hand, the program is also interested to consider creative clay activity as an alternate approach to assist people with PD to maintain their physical and social well being on a daily basis outside the formal program setting. And instead of using modeling clay, Japanese paperclay appeals as the choice of medium for participants in the program for various reasons. Unlike modeling clay, which often leaves a sticky, oily residue and a petroleum scent on the hands after use, Japanese paperclay is a non-toxic, non-fragrant, soft and malleable modeling material made of paper and clay. It is not expensive and can be easily purchase at local art supply shops. Its white appearance allows colour and decorative materials to be applied on its surface hence it offers creative potential. It is easy to use; it does not need firing- it hardens by evaporation when the work is left out at normal room temperature overnight or several days depending on its size. To maintain malleability, water need to be sprayed on the surface of the clay periodically as one work on it. Due to the presence of water content in the clay, it gives a cooling effect on the hand. Its smooth texture and surface feels soothing. In a warm and humid environment like that of Singapore, this sensation would seem favorable.

The program proposes to offer three different levels for participants: Introductory, Intermediate and Advance. Each level will operate under a theme and is expected to run for 6 consecutive weeks. The introductory level is designed to introduce participant to paperclay and to help them familiarize with the medium. Basic tools and clay manipulation technique and basic colour theory would be introduced. The introductory level is designed for people who have no prior experience with the medium or even art and projects are largely guided. The intermediate level intends to offer participants greater imaginative exploration and respond based on a theme. Participants can expect to be exposed to other creative use of paperclay. At this stage, participants will be encouraged to create work outside the session and to bring finished pieces back into session. The Advanced level model after advanced studio session where individual participants will be able to proposal and pursue a self proposed project and be guided to realize it over the course of the program. This writing shares with its reader the program design of the introductory level and findings following its implementation on 1 June 2011. For 6 weeks, 5 participants (3 male and 2 female) met weekly for 90 minutes. Participants were existing members of the society and registered for the program after learning about it through the society’s website and information leaflet.

Program description for Introductory level Creative Paperclay workshop

Titled Discover Paperclay: Nature, Art and Self, the introductory workshop engages nature as a theme. It is designed to suit anyone who is interested to explore working with paperclay or art for that matter. The program has requires participants to realize 2 projects, each project is designed to complement and reinforce skills and knowledge acquired at various phases of the workshop. The program was facilitated by myself with the help of one student assistant. Accompanying caregivers of participants and staff of the society also contributed to the smooth running of the program. The room
was prepared to ensure that participants’ safety is priority. People with PD may develop anxiety and phobia about fall and freezing hence ample space for the participants to move around with ease, comfort and safety is key. Disposable aprons, gloves and wet towels were made available to participants. Tools such as brushes, sponge and texturing tools, cloths and water supply in small buckets were placed within the participants’ reach. To enhance the recreational atmosphere, a combination of Oldies and Jazz music were played over the course of each session. To minimize cleaning, work surfaces were covered using disposable plastic sheets.

Project One – Tree of life took place in the first 3 weeks of the workshop. It focuses on exploring shapes, texture and pattern. This is regarded as a discovery and familiarization phase. Participants are invited to imagine and create as many shapes, texture and patterns with paperclay using the range of tools (basic texturing tool and cookie cutters) available to them. These pieces that will be use to create a hanging mobile at the end of Project One. On Week One, for a start participants were each given a lump of paperclay measuring about 4.5 cm in diameter. For the first 10 minutes, participants were instructed and guided through a ‘warm up’ session that includes the following actions: 1) Use palm to roll the lump of clay into a spherical form 2) Use palm to flatten the spherical form into a flat round form 3) Use hand to squeeze flat round form to form a lump, 4) Use fingers to pinch lumps to create conical points on surface of lump, 5) Squeeze abstract form back into lump of clay, 6) Use palm to roll lump of clay into a rod like shape, and 7) Twirl rod-like shape to create form. While going through this activity, participants had an opportunity to be acquainted with the feel and texture, and the characteristic of paperclay. They were prompted to moisten the surface of the clay with a bottle spray to maintain its malleability. Following this activity, participants were then given a fresh lump of paperclay that is similar in size to the previous one and were asked to flatten the lump with their palm to produce flat sheet of paperclay each measuring about 0.5cm in thickness. They were then asked to create shapes using cookie cutters that are made available to them as part of the tools provided in the workshop. Basic texturing tools were also introduced at this point and participants were allowed to explore on the surface of the cut out shapes. Paperclay pieces were left to dry over the week until the group reconvened on Week Two.

Colour was introduced to participants on Week Two. Acrylic paints were chosen for use as it is non-toxic, convenient and economical. Its glossy and vibrant color lends itself readily to engage visual interest and it is a forgiving medium – undesired colour can be ‘removed’ by applying a new layer fresh colour on the dried undesired layer of colour. Being a water-soluble medium, it offers great convenience when it comes to cleaning up. For a start, colour wheel worksheets were given to participants for them to paint in with acrylic colour. They were introduced to concepts of primary and secondary colours through this process. Following this they were introduced to various techniques of painting with acrylic e.g. Brush, sponging, finger painting and were given opportunity to explore on paper. The session ended with the participants applying colour to their paperclay pieces that they made on previous week. Coloured pieces were left out to dry over the week in the room. The individual coloured paperclay pieces were assembled into a hanging mobile on Week 3 with the help of my student assistant. Participants were allowed to create more pieces or to color the remaining piece.

Figure 1. Participants working on colour wheel.
Figure 2. Participants colouring dried paperclay pieces for Project One.

Figure 3. Examples of work from Project One by participants in Creative paperclay workshop.

Figure 4. Participant with Student Assistant showing off hanging mobile created from Project One.

Project Two– Birdsongs
Expanding on the theme of nature, Project Two of the workshop invited participant to imagine the types of bird that exists in the Tree of life. Project Two runs from week 3 to week 6 of the program. This phase targets to stimulate imagination and creative play among participants and engages conceptual responses. The ‘warm up’ session used in at the beginning of Project One was repeated to
ease participants into the process. A brief demonstration on using the hands to create a simple bird form was given by me. Participants were shown simple clay manipulation techniques such as rolling, squeezing and pinching to create and define the bird-like form. They were also taught how to join pieces of clay together by texturing the surface and adhering them using water. Basic texturing tools were also introduced to offer participants an option to enhance the visual effect of their creation by giving it a textured appearance. Images of an assortment of birds were provided as visual cues for participants who may need reference. Participants were encouraged to simply create the bird they have in mind and were reminded to not to worry the realistic quality of their bird. The clay pieces were left to harden at room temperature over the week.

When the group reconvened in the following week, participants were allowed to colour their dried and hardened creations with acrylic paint. They had the option to work with brushes, sponge or even their fingers if they wish to. Disposable gloves were made available to them should they wish to use their fingers, this prevents their hand from being tainted by the paint. They were initially encouraged to explore different way of colouring, before they settle for a technique that that feel most at ease with eventually for the rest of the session. The coloured pieces were left out to dry at room temperature.

In the concluding session of the program, participants were given the opportunity to finish up colouring the remaining uncoloured pieces before the group gathered for a work sharing where all works created during the course of the workshop was put out for display. Their creations were kept with the society with the intent to display them publicly to promote the program and also for educational outreach purposes.

![Figure 5. Participants working on paperclay.](image)

![Figure 6. Participants colouring pieces of their creations for Project Two.](image)
Figure 7. Participants with their creations for Project Two.

Figure 8. A selection of participants’ creations for Project Two.

Response to Questionnaire
As a mean of measure the program, a questionnaire with 12 questions was prepared and were given to participants to complete on at the end of the program on week Six. The questionnaire wish to ascertain the program’s efficacy in the following aspect: 1) Its ability to stimulate and promote cognitive skill development, 2) Its ability to promote socialization, 3) Its ability to offer a space for relaxation, 4) The therapeutic quality of paperclay and 5) The participants’ desire to pursue a continual program. The following are their responses.

Table 1. Questions and Responses for questionnaire from participants who have participate in the workshop.

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<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>Q1: Have you participated in any art workshop before this introductory clay workshop?</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Q2: I find this introductory creative clay workshop enjoyable.</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Q3: I have learnt new skills and knowledge from this workshop.</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Q4: This workshop allows me to meet people.</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Q5: I enjoy the opportunity to socialize with others through the workshop.</td>
<td>2</td>
<td>3</td>
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Q6: This workshop provides a focus and helps me in taking things off my mind.  
Q7: I find the feel and texture of paperclay relaxing.  
Q8: I find manipulating paperclay in during the workshop helps reduce tremor.  
Q9: I find manipulating paperclay in during the workshop improves flexibility in my hand and fingers.  
Q10: Given the opportunity, I would be interested to further explore working with paperclay.  
Q11: I find myself feeling more relaxed at the end of each workshop.  
Q12: I would consider attending other art related activities and would like the society to offer in future the following?

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<th>Activity</th>
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<tr>
<td>Photography</td>
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<td>Horticulture</td>
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<tr>
<td>Music</td>
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<td>Chinese Ink Painting</td>
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<tr>
<td>Digital/ computer Art</td>
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<td>Speech and Drama</td>
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<td>Poetry writing</td>
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<tr>
<td>Others</td>
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<tr>
<td>• Reading</td>
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<tr>
<td>• Guitar lesson</td>
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<tr>
<td>• Cooking class</td>
</tr>
<tr>
<td>• Drawing</td>
</tr>
<tr>
<td>• Oil painting (still life painting/ outdoor painting)</td>
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Although the sample size is less than ideal, the data gathered does provide us with several useful indications in terms of participants’ satisfaction of the workshop, their opinion on the therapeutic quality they have experienced from the medium (paperclay) and the workshop as a whole, their interest for future programs.

3 out of the total 5 participants indicated that they had never attended any art workshop prior to this workshop whereas the remaining 2 have participated in painting and drawing classes that was organized by the society previously. Participants were asked to rate their experience of the workshop and the paperclay medium using a five points rating scale that varies from “Strongly Agree” to “Strongly Disagree”. Participants consistently rated “Strongly agree” or “Agree” when asked if they had enjoyed the program, felt that they have learnt new skills and knowledge and the socializing aspect of the workshop, the relaxing quality of the paperclay and the workshop and their interest to further their exploration of paperclay. They also indicated that manipulating clay helps improve the flexibility in their hands and finger. Data were less convincing when they were asked if the manipulation of clay was able to help them reduce tremors. When asked what other artistic activities they would like the society to offer in future, Music and Chinese painting were highly popular, followed by horticulture, digital/ computer art. Photography, Speech and Drama and Poetry writing were least popular. Other artistic activities suggested includes: Cooking lesson, Drawing and painting, Guitar lesson. Other comments given by participants include finding the instructor and assistant “helpful”, “attentive” and “care for members”; one hopes the class will continue on a regular basis.

Discussion
Despite their lack of formal training in visual arts, all participants in the workshop did not show any sign of inhibition to explore the medium and tools nor did they express any anxiety about not being able to cope with the program. We managed to consistently maintain a casual and laid back mood for the workshop. A selection of jazz and old were played over the duration of the workshop. Being attentive to the need of the participants played a key role in helping us maintain the relaxed atmosphere. Constant communication with participants and their caregiver remain key. Facilitators and assistant constantly ensure that participants understood the instructions given, and were able to follow the assigned activity. Appropriate words of encouragement to acknowledge effort by participants were given. This seems to further motivate them and encourage interaction betweeness participants. They were able to take things in stride. While facilitating the program, several observations and reflections surfaced.

Creative clay as alternate physical therapy for individuals with PD
Clay manipulation is a physical activity that requires a person to engage their hands. Given ones continued interest in creative clay, this could motivate and encourage individual with PD to actively engage the use of their hands. The squeezing, rolling and pinching action required to manipulate clay could help maintain if not improve dexterity and also the muscular contraction from the manipulation
could also help improve blood flow. Although these effects have not been verified clinically, study on these could be further examined. Another consideration arising from the workshop is a plan to collaborate with an occupational therapist to ascertain the feasibility to further conceptualize and develop the ‘warm up’ exercise so that it could be targeted to yield benefit for people with PD and serve as an alternate physical therapy.

**Art pieces as evidence for severity of PD**

Despite not having information about the participants condition, we were able to get a sense of the severity of the participants’ condition in this process of art making. The severity of the participants’ condition revealed themselves readily in the creative process (e.g. Manipulating and shaping paperclay and colouring). Their range of movement, dexterity, alertness and mood were easily observed through out the workshop session. The intricacy and finesse of their work also revealed the challenges and limitation they faced with the degree of severity. Figure 10 is a selection of work by participants who are physically dependent, while Figure 11 shows a selection of work created by participants who are physically independently. The reduced mobility also suggests a deficient in motor ability. Due to the diminishing dexterity, participants with greater degree of severity face more challenge to be able to achieve a defined bird like form. Due to the occurrence of tremor, some participants felt it was challenging for them to perform colouring activities. These were easily resolved by showing them improvised ways of colouring or pointing out techniques to help them gain more control.

![Figure 9. Selection of Artwork by participants who are physically dependent.](image1)

![Figure 10. Selection of Artwork by participants who are physically independent.](image2)

**Sense of control through art**

For those who experience tremor, colouring can be a daunting task. So in order to reduce the stress among these participants, facilitators shared with them improvised way of colouring, this include using their fingers, sponging, dabbing, and dipping. Other advice given to participants to minimize the effect of the tremor were 1) to rest their wrist and arm on work surface to gain more stability by
limiting movement, 2) to hold their brushes close to the brush tip to minimize the degree of distortion and to increase accuracy 3) creating awareness about brush sizes, brush tips and using these to make adjustment to help the have control over the surface that they are working on. Because Acrylic is a forgiving medium, participants are reminded that it is fine to make mistakes as they can easily change the color scheme by painting a fresh coat of paint over dried ones. Although most of these may appear to be technical concerns, by being informed and learning how they use utilize these techniques and think creatively to find alter solutions to work around their challenges could offer the participant a sense of control and confidence.

**Bonding moments with caregiver**

Although the workshop was meant for people with PD, the workshop observed a dynamic surfacing between participants and their caregivers (spouse, relative or domestic helper). At the beginning period of the workshop, we see caregiver providing support to the participants by helping them clean their tools, replenish colors and assisting them in assembling tools. But this relation subsequently changed as the session proceeded. We observed that caregivers started to get more involved in the participants’ work process. In an almost collaborative manner, the caregivers would either assist the participants in touching up their work, or help participants create details parts which may be too intricate for the participant to create. Conversations and discussions were happening between the caregivers and participants on color choices, mark making etc. Hence the creative workshop provided an opportunity for people with PD and their caregiver a different context to interact and relate to each other. The change in place and space could present experience that renew or even build relation between participants and caregiver by enabling to discover new avenue to enrich their relations in this process by being able to come together to create work together.

![Figure 11. Some participants and caregiver in action.](image)

**Conclusion**

The effect of PD can be isolating, but with knowledge in managing and care for the illness, appropriate support can enable people with PD to lead a rich and meaningful life. In discussions about management of illness and coping strategy, art has constantly surfaced as an avenue of care, and is frequently advocated as an activity for its ability to encourage expression, communication and relaxation. From the response gathered through this workshop, we learnt that the opportunity to socialize, relax and learn new skills were factors that contributed to the participants enjoyment of the creative papercraft workshop. Given the fact that all participants have expressed their continued interest in exploring papercraft; this is a good indication suggesting that the activity and program have offered a sense of value and meaning to the participants. These reinforcing attributes also suggest that there is perhaps a need to further investigate the efficacy of the program in developing artistic
ability amongst individual and to determine the effect of the developing artistic self on the patient’s quality of life. Other areas noteworthy for further exploration includes efficacy of creative paperclay in maintaining muscle suppleness and looking at how artwork can cue us to the severity of PD.

References: