## Supplementary Materials

## Supplementary Table 1. Secondary outcomes related to physical exercise

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| Physical domains | Measures and descriptions | References |
| *Gait speed and mobility* | Timed Up and Go (TUG) test | Botolfsen P, Helbostad JL, Moe-Nilssen R, Wall JC. Reliability and concurrent validity of the Expanded Timed Up-and-Go test in older people with impaired mobility. Physiother Res Int. 2008;13(2):94-106. <https://doi.org/10.1002/pri.394> |
| In the TUG test, the individual must rise from a chair without touching it, walk 3 metres away, and return as quickly as possible to the chair. A time score of ≤20 seconds indicates independence and sufficient mobility without any assistance, while a score of >30 seconds indicates difficulty walking and requires assistance. |
| *Balance* | Modified 4-stage Balance Test | Phelan EA, Mahoney JE, Voit JC, Stevens JA. Assessment and management of fall risk in primary care settings. Med Clin North Am*.* 2015;99(2):281-293. <https://doi.org/10.1016/j.mcna.2014.11.004>  |
| Individuals stand in four different positions (feet side-by-side; one foot placed next to the big toe of the other foot; tandem stand; one-foot standing) progressively for ten seconds each. Those who cannot hold the tandem stand for ten seconds are considered at risk of falling. |
| *Lower body strength* | 30-second Sit-to-Stand test | Rikli RE, Jones CJ. Senior Fitness Test Manual. Harrogate. Human Kinetics; 2013. |
| Individuals are required to sit comfortably on a chair (43 centimetres from the ground) with their hands across their chest and both feet flat on the ground. They must stand from a chair for 30 seconds and then return to a sitting position with their back straight. The individual’s score is compared to the norm to assess the risk of falling. |
| *Upper body strength* | Grip strength | Lino, V. T. S. *et al.* Handgrip strength and factors associated in poor elderly assisted at a primary care unit in Rio de Janeiro, Brazil. *PloS one* **11**, e0166373 (2016). https://doi.org/10.1371/journal.pone.0166373 |
| The individual is instructed to sit with their back straight, hold their arms straight by their sides, and squeeze as hard as possible with a dynamometer set at the second handle. Averages are calculated for each hand based on two trials |
| *Aerobic capacity* | 2-Minute Step Test | Johnston JE. The Validation of a 2-Minute Step Test in Older Adults. Fullerton. California State University; 1999. |
| The individual is asked to stand and march in place for two minutes. Their score on the test is determined by how often their right knee reaches halfway between the midpoint of their patella and the top of their iliac crest during the test. |

## Supplementary Table 2. Open-ended questions used in the focus group

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| Domains | Questions |
| Comment on the group activities | 1. What is your favourite and most memorable activity? |
| 2. What have you learned or gained from the activities? (Alternative questions and follow-up: What have you learned from various arts and crafts activities? What does it mean to you?) |
| 3. What activities do you find difficult, challenging, or hard to accomplish? |
| 4. If you have participated in other group activities, how is this program different from them, if any? (e.g., activity content and format) |
| Perceived influence on themselves | 5. What have the arts and crafts activities brought to you? (Alternative questions and follow-up: Have your life changed after participating in this program? Both good and bad examples are fine) |
| 6. What emotional and physical changes have you experienced during and after the program? (Please provide examples, whether positive or negative. Follow-up: Which parts of the program contributed to these changes?) |
| 7. How did the program impact your pain and daily life, if any? (Please provide examples, whether positive or negative. Follow-up: Which parts of the program contributed to these changes?) |
| 8. After participating in this program, have you changed your methods of coping with pain? Are you still using these newly-acquired methods to cope with pain now? |

## Supplementary Table 3. Descriptions of chosen art materials and rationales

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| Arts and crafts | *Descriptions* | *Rationale* | *Relation to Hong Kong older adults* | *ETC level* |
| *Origami* | “Origami” is a Japanese word for paper folding | The material is easy to obtain, and this technique can create various designs. Origami is often praised for its esthetic appeal, creativity, and meditative and calming effects. | It is popular in Hong Kong, and many older people have collective memories of creating colourful offerings such as hats, flowers, and other symbols with paper | K/S and C/S levels |
| Decoupage | “Decoupage” is derived from the French word *cut out*, which is characterized by gluing cut-out designs and pictures to a surface, followed by layers of varnish or lacquer. | There are endless possibilities for creative designs using this technique. It can be applied to various surfaces such as wood, glass, metal, and ceramics. The technique often transforms ordinary objects into unique and personalized works of art. | This art form is novel to most Hong Kong Chinese, but it is relatively easy to conduct and produces appealing results. | P/A, C/S and Creativity levels |
| Mosaic | Mosaic is an ancient art form that uses small fragments of rugged materials like glass, stone, and ceramic to create images or patterns. | Mosaic art can create various designs, from intricate images to abstract shapes. Due to the material's durability and longevity, the use of colour, texture, and light can create unique visual effects that last a long time. | This art form is visible in many daily life scenarios of Hong Kong older adults, for instance, in the decoration of MTR stations. | K/S, C/S, and Creativity levels |
| Collective collage | Collage is a less complicated approach than other art forms, requires few drawing skills from clients, and uses existing images. | Collective collage, i.e., working in groups to co-create collage, helps clients shift their perspective from negative self-criticism and deprecative self-appraisals to more positive and cheerful attitudes working with others and increasing their self-confidence. | It is not formally taught, but it is familiar to Hong Kong older adults as they may create family albums with old pictures.  | C/S, P/A, and Creativity levels |

## Supplementary Table 4. Rundown of each session (weeks two to eight) and examples of arts-based mindful and grounding activities

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| **A brief rundown of each session** |
| Time  | Contents | Materials |
| 10 mins | Welcoming, catch-ups, homework reviews (homework is optional; it is to record participants’ art appreciation or creating artwork during leisure time), and sharing | Homework sheets |
| 5 mins | Physical warm-up activities  |  |
| 20 mins  | Art warm-up activities and Mindful/Grounding activities | Materials |
| 20 mins | Art appreciation, art background knowledge | PowerPoint slides |
| 50 mins | Creating artwork and craft activities | Art materials |
| 10 mins | Sharing experiences and appreciating the art products |  |
| 5 mins | Tidying up |  |
| **Examples of arts-based mindful and grounding activities** |
| Pain drawing sketch (group) | 1. The facilitator invites the participants to pay attention to the parts of the body that are troubled by pain and their related emotional expressions.
2. The facilitator draws a body contour on a whiteboard and marks the parts of pain with different symbols.
3. The facilitator asks the participants how the pain would affect their daily lives and how long they have been feeling this way.
4. Before the session ends, the facilitator asks participants to notice whether their mood and pain have changed.
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| Pain drawing sketch (individual) | 1. The facilitator invites participants to draw a body contour on a piece of paper and pay attention to the parts of their bodies that are currently troubled by pain.
2. The facilitator asks participants to utilize coloured markers and pencils to mark the body parts currently troubled by pain and draw related emotional expressions.
3. The facilitator invites participants to share their drawings regarding their emotions and personal struggles caused by the pain.
4. The facilitator summarizes group members’ common experiences.
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| Paper tearing | 1. The facilitator invites participants to tear out a page from an old magazine and then tear it into small pieces.
2. The facilitator invites participants to pay attention to the sound of the paper being torn out and the physical sensation of tearing the paper at that moment.
3. The facilitator asks the participants how they feel.
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| Feel the glue | 1. The facilitator invites participants to close their eyes and bring out their hands; while the participants’ eyes are closed, the facilitator provides each with a bottle of white glue.
2. The facilitator asks participants what they feel in their hands, such as the shape, texture, temperature, etc.
3. After participants open their eyes, the facilitator invites them to share their thoughts and feelings while they remain closed and feel the material.
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| Create and feel the wrinkles | 1. The facilitator invites participants to crumple a piece of origami paper into a ball.
2. The facilitator then asks participants to unfold the paper to observe its texture, slowly touch the uneven parts with their hands, and carefully listen to the sound of crumpling paper.
3. The facilitator asks participants to fold a chopstick holder using the crumbled paper.
4. The facilitator invites participants to share their insights.
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| Hand drawing (individual) | 1. The facilitator asks participants to observe their hands and invites them to look at the scars/marks on their hands.
2. The facilitator invites participants to share what they did for a living, how they used their hands, and what they did to take care of their hands, if any.
3. The facilitator invites participants to trace the contour of either their dominant or non-dominant hand with colored pencils.
4. The facilitator asks participants to decorate the drawing of their hand.
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| Hands drawing (group) | 1. The facilitator invites participants to form pairs and draw each other’s hands, adding colours and patterns.
2. The facilitator invites participants to present their artwork as a gift to each other.
3. The facilitator invites participants to form a small group of 3-4 people and outline their hand shapes on a large piece of paper with each one’s hand interacting with one another. Participants can freely rotate the paper at different angles for added variety.
4. Group members collectively edit the images with colours, shapes, and symbols.
5. Group sharing of insights.
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## Supplementary Table 5. Focus group theme and code list with example statements

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| Themes | Codes | Example Statements |
| Acceptability and feasibility of the program | A new and novel experience |  “I never knew we could use paper to fold such complex objects; all activities are new to me.” |
| Fun and pleasing |  “I started working very young to support my family and did not have the opportunities to learn and play. This is so much fun, and I greatly like the artwork we made.” |
| Can integrate into usual activities in care centres for older people |  “I always liked arts-related activities provided in the centre, but nothing was related to the discussion about pain like this one. I think we can have more programs like this in the future.” |
| Perceived changes related to pain coping | More awareness of bodily sensations and higher acceptance |  “I noticed how I used dark colours to mark areas of pain in my body sketch. This made me feel even worse. So now I wear more colourful clothes, even though I cannot change the pain sensation, more colours make me feel better, and that is what I can do.” |
| A better locus of control - can direct attention away  |  “Time went so fast when we created artwork. I realized that I did not feel the pain while creating artwork.” “I have control over my attention to things I like and feel less of the pain.”  |
| Visualize pain and externalize the feelings | “It was interesting to sketch our bodies and mark areas where we felt pain. I noticed that sometimes, even when the pain is there, I can still do things I like.” |
| Effects of arts and crafts | Sense of achievement |  “I never knew I could make things so beautiful, and the procedures were not as hard as I thought they were; I felt I achieved so much.” |
| Empowered to learn/try new things |  “I started to appreciate the beauty of the little things around me; for instance, I collected some flowers and leaves and made a collage for my ‘homework’.” |
| Being seen and appreciated  |  “I showed my friends the coin bag we made, and they appreciated it so much and praised me for my skills. The artwork made me seen by other people.” |
| The esthetic value of art products |  “We made a big flower with different materials in the collective collage, which is so beautiful.”  |
| Effects of group and peers | Therapeutic alliance with facilitators |  “The facilitator is so kind and patient and teaches us new things; I felt welcomed and loved here, and I want to give back the love.” |
| Being heard, understood, and accepted |  “People in this group understand me, we have similar experiences, and I felt accepted.” |
| A non-judgmental and safe environment to share  |  “I talked too much about my pain at home, and my family may get bored and even annoyed sometimes. But I can say anything here.” |
| Sharing of resources |  “My group members shared some exercise and massage tips that I found useful.” |
| Harmonic group atmosphere |  “I enjoyed the collective art the most; we bonded, and our hand drawings formed a ‘blooming garden’.”  |
| Challenges | Comparison with others |  “Sometimes I felt everyone else in the group was doing better than me…” |
| Some activities require high dexterity |  “The paper cutting in decoupage requires steady hands, and it was difficult for me.” |
| Not all art materials are easy to get |  “I like decoupage and mosaic, but I cannot find the materials in stationery shops.” |