

Report for Creative Arts East**Canterbury Wellbeing Scales (CWS) Results April 2019****Prepared by:**

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For each of the different data collection time points, the average scores on the composite score (sum of all subscales) as well as the five subscales of the CWS were compared before and after the activity using a t-test statistic to determine whether there was a statistically significant difference in average scores. Please note, missing data of any not completed or only partially completed scales were removed.

For the composite scale there was a statistically significant increase in average scores after the sessions compared to before the sessions, before and after all sessions except for session 8. However, this is possibly likely due to the small sample ($N = 3$). See Table 1 for mean (average) increase in CWS scores for the eight timepoints data was collected.

Table 1: *Mean increase in CWS composite scores before and after sessions*

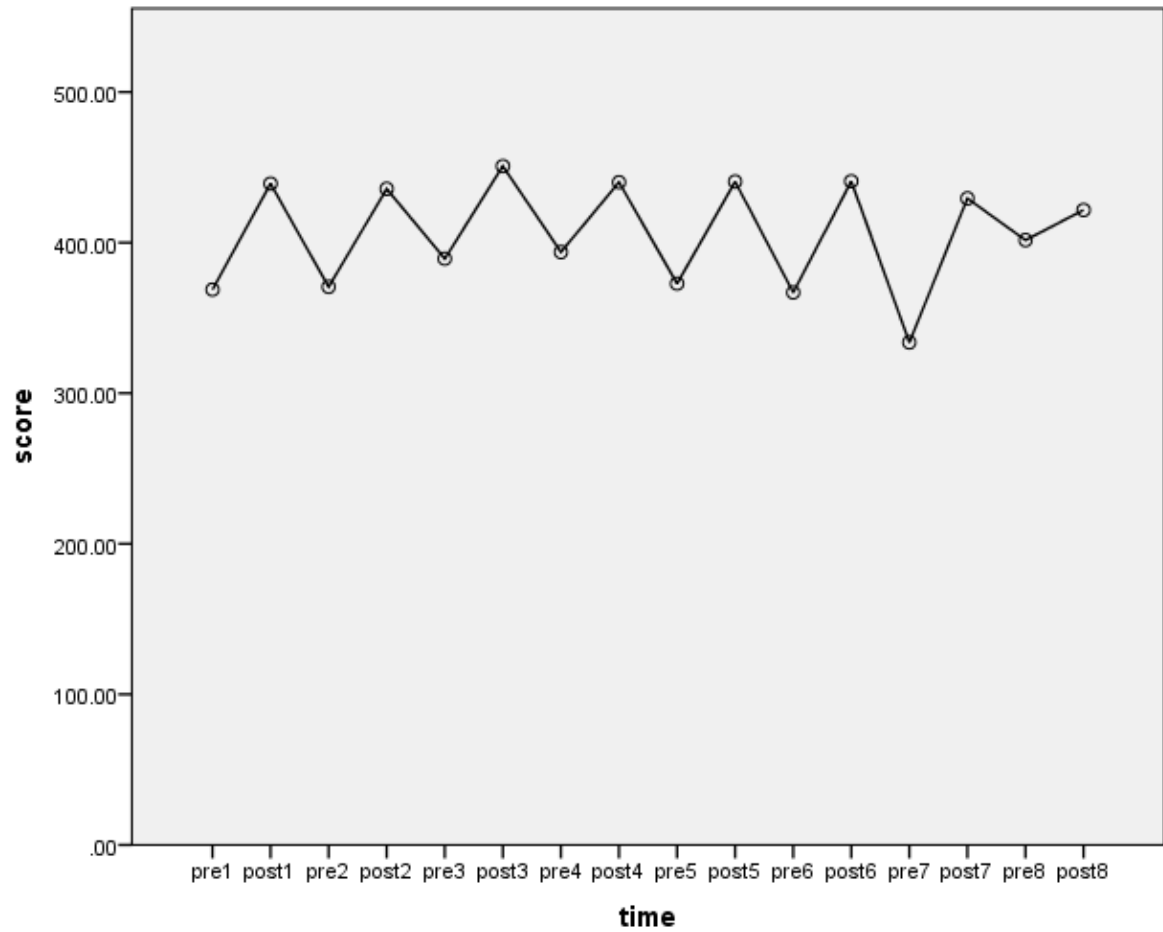
Session	Average increase on CWS from pre to post	Significance (<i>p</i> -value)	Number of participants
Before and after session 1	79.89	<.0001	121
Before and after session 2	65.61	<.0001	90
Before and after session 3	61.48	<.0001	54

Before and after session 4	46.36	<.0001	44
Before and after session 5	67.76	<.0001	29
Before and after session 6	73.85	.004	13
Before and after session 7	95.63	.013	8
Before and after session 8	20	.184	3

Note: Significant results in bold ($p < 0.05$).

Figure 1: The mean (average) composite scale scores across the four data collection points.

Figure 1: *Average total scale scores across the four data collection points*



In addition to the composite score we also examined the mean difference between scores before and after the sessions on the five subscales.

Interest

For the interested-bored subscale, there was a statistically significant increase in average scores after the sessions compared to before the sessions on all time points of data collection except for session 8. See Table 2 for average increase in interest scores.

Table 2: *Mean increase in interest scores before and after sessions*

Session	Average increase	Significance (<i>p</i> -value)
Before and after session 1	15.49	<.0001
Before and after session 2	14.02	<.0001
Before and after session 3	14.26	<.0001
Before and after session 4	9.67	<.0001
Before and after session 5	14.14	<.0001
Before and after session 6	19.23	.003
Before and after session 7	18.89	.003
Before and after session 8	6.25	.08

Note: Significant results in bold ($p < 0.05$).

Confidence

For the confident-not confident subscale, there was a statistically significant increase in average scores after the sessions compared to before the sessions on all time points of data collection except for session 8. See Table 3 for average increase in confidence scores.

Table 3: *Mean increase in confidence scores before and after sessions*

Session	Average increase	Significance (<i>p</i> -value)
Before and after session 1	15.93	<.0001
Before and after session 2	14.35	<.0001
Before and after session 3	11.94	<.0001
Before and after session 4	10.78	<.0001
Before and after session 5	16.55	<.0001
Before and after session 6	16.15	.011
Before and after session 7	18.89	.037
Before and after session 8	8.75	.133

Note: Significant results in bold ($p < 0.05$).

Optimism

For the optimistic-not optimistic subscale, there was a statistically significant increase in average scores after the sessions compared to before the sessions on all time points of data collection except for session 8. See Table 4 for average increase in optimism scores.

Table 4: *Mean increase in optimism scores before and after sessions*

Session	Average increase	Significance (<i>p</i> -value)
Before and after session 1	13.26	<.0001
Before and after session 2	14.63	<.0001
Before and after session 3	11.76	<.0001
Before and after session 4	8.41	<.0001
Before and after session 5	10.52	<.0001
Before and after session 6	10.38	.006
Before and after session 7	18.13	.025
Before and after session 8	3.75	.215

Note: Significant results in bold ($p < 0.05$).

Happiness

For the happy-sad subscale, there was a statistically significant increase in average scores after the sessions compared to before the sessions on all time points of data collection except for session 8. See Table 5 for average increase in happiness scores.

Table 5: *Mean increase in happiness scores before and after sessions*

Session	Average increase	Significance (<i>p</i> -value)
Before and after session 1	14.11	<.0001
Before and after session 2	13.28	<.0001
Before and after session 3	11.94	<.0001
Before and after session 4	10.44	<.0001
Before and after session 5	12.24	<.0001
Before and after session 6	13.08	.023
Before and after session 7	18.75	.011
Before and after session 8	2.5	.391

Note: Significant results in bold ($p < 0.05$).

Well

For the well-unwell subscale, there was a statistically significant increase in average scores after the sessions compared to before the sessions on all time points of data collection except for session 8. See Table 6 for average increase in well scores.

Table 6: *Mean increase in well scores before and after sessions*

Session	Average increase	Significance (<i>p</i> -value)
Before and after session 1	15.91	<.0001
Before and after session 2	14.36	<.0001
Before and after session 3	11.57	<.0001
Before and after session 4	8	<.0001
Before and after session 5	14.31	<.0001
Before and after session 6	15	.008
Before and after session 7	17.78	.028
Before and after session 8	8.33	.199

Note: Significant results in bold ($p < 0.05$).

Although not significantly, scores before and after session 8 still increased after having participated in the session on all subscales. It is therefore likely that this would have been significant if there were more participants in session 8.

Results based on amount of sessions attended

A statistically significant difference was not found when comparing participants' scores based on whether they had attended 1 - 2 sessions or 5 - 8 sessions. However, as can be seen in Figure 1 above, participants' scores on the CWS did not vary largely at every post-intervention time point with the exception of session 8, however, there were only three participants in session eight which is too small a sample to be able to confidently conduct statistical analysis.

In some ways it is not surprising that a statistically significant difference was not found on CWS composite wellbeing scores based on number of sessions attended. The Canterbury Wellbeing Scales (Johnson et al, 2015; Camic et al., 2017) were developed to assess "in the moment" changes in wellbeing specifically for an early to middle stage dementia population. It is well documented that the dementias are a progressive set of syndromes where decline in one or more areas (e.g. cognition, attention, hearing, eyesight, gait, memory) occurs over the course of the disease. In the moment wellbeing is a theoretical concept (reference) to help understand what a person with a dementia is experiencing after relatively brief time periods (e.g. 1 -3 hours). The results of this evaluation can

confirm that wellbeing was enhanced at a statistically significant level after each of the first 7 sessions.

Summary

The results of this evaluation provide important evidence that even within a progressive disease, such as any type of dementia is, wellbeing can be enhanced after relatively short-term activities such as offered by Creative Arts East for the participants in this evaluation. Across 7 sessions, wellbeing increased at a statistically significant level (comparing pre and post scores) for each session. Although whether attending 1 - 2 sessions versus attending 5 -8 did not statistically differ in overall (composite) wellbeing changes, the results confirm the ongoing wellbeing benefits of attending 7 out of 8 sessions based on the Canterbury Wellbeing Scale measure. The CWS, like all questionnaires, has limitations. One important limitation, which ironically can be argued is also a strength, is that it is a subjective measure of wellbeing that is completed by the individual based on his/her feelings and not based on objective measures. However, recent research has shown promise that CWS increases may be positively correlated with physiological measures taken during arts activities (Bourne et al., 2019).

Recommendations

The authors of this report are aware that funding for dementia activity programmes varies across the country and across different funding and commissioning bodies. What happens far too often, however, is that activities and programmes in dementia care are single session ‘one off’s, which do not allow for creative engagement (Camic et al., 2018) continuity, building skills and confidence, developing social networks or new learning to occur. Based on the results of this evaluation we would recommend that multiple session activity programmes be made more widely available for people with a dementia. Organisers of such programmes based on the Creative Arts East approach, can feel confident that across 7 sessions of arts-based activities, before and after wellbeing can be enhanced.

References

- Bourne, P., Camic, P. M., Crutch, S. J., Hulbert, S., Firth, N. C. & Harding, E. (2019). Using psychological and physiological measures in arts-based activities in a community sample of people with a dementia and their caregivers: A feasibility study and pilot study. *Journal of Ageing Studies & Therapies*, 1(1) Open access: <https://www.sciforschenonline.org/journals/aging-studies-therapies/JAST102.php>
- Camic, P. M., Hulbert, S. & Kimmel, J. (2017). Museum object handling: A health promoting community-based activity for dementia care. *Journal of Health Psychology*. Advanced access: doi: 10.1177/1359105316685899
- Camic, P. M., Crutch, S. J., Murphy, C., Firth, N. C., Harding, E., Harrison, C. R., Howard, S., Strohmaier, S., Van Leewen, J., West, J., Windle, G., Wray, S. & Zeilig, H. (2018). Conceptualising artistic creativity in the dementias: Interdisciplinary approaches to research and practice. *Frontiers in Psychology*, 9 (article 1842), 1-20. Open access: <https://doi.org/10.3389/fpsyg.2018.01842>
- Johnson, J., Culverwell, A., Hulbert, S., Robertson, M. & Camic, P.M. (2015/2017). Museum activities in dementia care: Using visual analogue scales to measure subjective wellbeing. *Dementia: The International Journal for Social Research and Practice*, 16, 591-610. doi: 10.1177/1471301215611763
- MacPherson A, Bird M, Anderson K, et al. (2009). An art gallery access programme for people with dementia: 'You do it for the moment'. *Aging & Mental Health*, 13, 744–752. doi: 10.1080/13607860902918207