Factors associated with successful outcomes (completion, engagement, and wellbeing) in an Arts for Health primary care intervention

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Arts on Prescription

• Art for art’s sake

• Have been associated with increases in quality of life, health and general wellbeing (Crone et al., 2012; Hacking et al., 2008; Lipe et al. 2012).

• One AoP programme has resulted in a 37% decrease in GP visits, 27% decrease in hospital admissions (All-Party Parliamentary Group on Arts, 2017).
The present study

• As the evidence base increases, it is necessary to understand more about how AoP interventions are accessed, and what factors relate to their adherence and outcome.

• We wanted to focus on:
  – Attendance
  – Engagement
  – Wellbeing change
Methods

• Sample: n=1297 from AoP programme in the South West
• Demographic variables: age, sex, IMD (postcode), occupation
• Patient-specific variables: referral reason (continuous)
• Outcomes:
  – attendance (objective: attenders vs non-attenders)
  – engagement (artist rated: engaged vs non-engaged)
  – wellbeing (WEMWBS: Tennant et al. 2007; responders vs non-responders)
Referral reasons

- Reduce stress/anxiety/depression
- Improve self-esteem/confidence
- Improve social networks
- Help alleviate symptoms of chronic pain or illness
- Distraction from behaviour related health issues
- Improve overall wellbeing
- Support following loss or major life change
Analysis

• Group differences assessed with chi-square or one-way ANOVA
• Associations with group membership analysed using binary logistic regression
  – Baseline wellbeing (WEMWBS) was included as an IV in the models as well
  – The final model (WEMWBS responders vs non-responders also included engagement as an IV)
Results – Demographics

• Majority female – 77.3%
• Mean age 51.1±15.87
• Mostly not working – 50%
• Mostly from the least deprived quintile of the IMD – 25.4%
• Mean number of referral ratings: 3.7±1.62
• Baseline wellbeing: 37.3±1.62 (normative 50.7)
Group differences - Attendance

Attenders: 651 (51.7%), Non-Attenders: n=607 (48.3%)

• Data for 1258 participants (97%)
• Attenders more likely to be retired, and non-attenders more likely to be not working ($\chi^2(2)=19.01, p<.001$)
• Significantly more reasons for referral in non-attenders ($F_{(1, 1225)}=19.87, p<.001$)
• Baseline wellbeing lower in non-attenders ($F_{(1, 785)}=12.89, p<.001$)
Group differences - Engagement

Engaged: n=701 (74.7%), Non-Engaged: n=238 (25.3%)

- Data for 939 participants (72.4%)
- Higher proportion of not working in non-engaged ($\chi^2(2)=11.80, p=.002$)
- Engaged group slightly older ($F_{(1, 768)}=4.04, p=.045$)
- Engaged referred for less reasons ($F_{(1, 907)}=10.03, p=.002$)
- Engaged had both higher baseline ($F_{(1, 793)}=14.45, p<.001$), and follow-up wellbeing ($F_{(1, 565)}=5.40, p=.021$)
Group differences – Outcome wellbeing

Responders: n=418 (76.4%), Non-responders n=129 (23.6%)

• Data for 547 participants (42.2%)
• Responders were younger ($F_{(1, 464)}=10.74, p=.001$)
• Responders start with lower wellbeing ($F_{(1, 546)}=22.96, p<.001$)
## Associations with outcome

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<thead>
<tr>
<th></th>
<th>Attendance</th>
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<th>Engagement</th>
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<th>Wellbeing</th>
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<td>OR</td>
<td>95% CI</td>
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<td>95% CI</td>
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<tr>
<td>Male</td>
<td>0.907</td>
<td>0.540-1.524</td>
<td>.713</td>
<td>0.738</td>
<td>0.437-1.245</td>
<td>.255</td>
<td>0.846</td>
<td>0.456-1.570</td>
<td>.596</td>
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<tr>
<td>Age</td>
<td>1.001</td>
<td>0.984-1.020</td>
<td>.872</td>
<td>0.997</td>
<td>0.978-1.016</td>
<td>.743</td>
<td>0.981</td>
<td>0.959-1.004</td>
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<td>Retired</td>
<td>1.133</td>
<td>0.579-2.218</td>
<td>.715</td>
<td>1.397</td>
<td>0.688-2.837</td>
<td>.355</td>
<td>0.883</td>
<td>0.398-1.957</td>
<td>.883</td>
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<tr>
<td>In work/education</td>
<td>0.951</td>
<td>0.556-1.628</td>
<td>.855</td>
<td>1.122</td>
<td>0.632-1.993</td>
<td>.694</td>
<td>0.570</td>
<td>0.298-1.093</td>
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<td><strong>IMD Quintile</strong></td>
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<td>Highest deprivation</td>
<td>0.762</td>
<td>0.394-1.472</td>
<td>.418</td>
<td>0.890</td>
<td>0.443-1.789</td>
<td>.744</td>
<td>0.887</td>
<td>0.357-2.199</td>
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<td>High</td>
<td>1.665</td>
<td>0.862-3.215</td>
<td>.129</td>
<td>1.654</td>
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<td>.146</td>
<td>1.296</td>
<td>0.594-2.826</td>
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<td>Medium</td>
<td>1.902</td>
<td>1.027-3.525</td>
<td>.041</td>
<td>1.787</td>
<td>0.947-3.371</td>
<td>.073</td>
<td>1.089</td>
<td>0.551-2.153</td>
<td>.807</td>
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<td>Low</td>
<td>1.067</td>
<td>0.602-1.888</td>
<td>.623</td>
<td>1.133</td>
<td>0.617-2.083</td>
<td>.687</td>
<td>0.776</td>
<td>0.379-1.590</td>
<td>.488</td>
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<tr>
<td>Lowest deprivation</td>
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<tr>
<td>Number of referral reasons</td>
<td>0.896</td>
<td>0.784-1.024</td>
<td>.108</td>
<td>0.897</td>
<td>0.779-1.032</td>
<td>.128</td>
<td>0.918</td>
<td>0.777-1.086</td>
<td>.319</td>
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<tr>
<td>Baseline wellbeing</td>
<td>1.030</td>
<td>1.006-1.054</td>
<td>.012</td>
<td>1.032</td>
<td>1.007-1.057</td>
<td>.012</td>
<td>0.961</td>
<td>0.933-0.989</td>
<td>.007</td>
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<tr>
<td>Engagement</td>
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The curious case of baseline wellbeing...

Higher wellbeing at baseline was associated with both attendance and engagement, however lower baseline wellbeing was associated with increased outcome wellbeing.

<table>
<thead>
<tr>
<th>Attendance</th>
<th>Engagement</th>
<th>Wellbeing change</th>
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<tbody>
<tr>
<td></td>
<td>Attenders</td>
<td>Engaged</td>
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<tr>
<td>Baseline wellbeing (SD)</td>
<td>38.1 (9.79)</td>
<td>38.0 (9.57)</td>
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<tr>
<td>Outcome wellbeing (SD)</td>
<td>44.6 (9.85)</td>
<td>44.6 (9.79)</td>
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Discussion

• Previous analyses of these data show that in those that attend, the intervention has a beneficial effect on wellbeing generally, and in the multimorbid (Crone et al., under review)

• Here, we have shown that this beneficial effect on wellbeing is more likely in those that start off with lower baseline wellbeing, even though those with lower wellbeing are less likely to attend or engage.
Future Directions

• Baseline wellbeing is critically important in terms of potential benefit, as well as likelihood to adhere.
• No data as yet to understand the specific mechanisms that drive wellbeing change.
• RCTs required to understand causative factors.
Thank you – any questions?

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