Pilot study: Dance and anxiety in Primary Care

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“Dance therapy or dance movement therapy (DMT) is defined as the psychotherapeutic use of movement as a process which furthers the emotional, social, cognitive, and physical integration of the individual”.
• DMT is used for:
  – “Social, physical or psychological impairments”.
  – “Health promotion programmes”.

ANXIETY OR DEPRESSION DISORDER
ANXIETY DISORDERS

- Chronic course
- Recurrence after remission
- High prevalence, specially in women

- Impacting on quality of life, work and relationships.
- Physical and Mental Health consequences.
- Economical cost

P : 6,20 (IC 95%: 4,63-7,77)

Men 2,53 (1,74-3,31)

Women 7,61 (6,41-8,80)
<table>
<thead>
<tr>
<th>Age Group</th>
<th>Mental Disorder</th>
<th>Anxiety Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24 years</td>
<td>10.1 (7.3-12.9)</td>
<td>7.8 (5.3-10.4)</td>
</tr>
<tr>
<td>25-34 years</td>
<td>8.5 (6.3-10.8)</td>
<td>4.2 (2.9-5.6)</td>
</tr>
<tr>
<td>35-49 years</td>
<td>8.4 (6.6-10.2)</td>
<td>4.5 (3.2-5.8)</td>
</tr>
<tr>
<td>50-64 years</td>
<td>9.1 (6.8-11.3)</td>
<td>6 (4.3-7.7)</td>
</tr>
<tr>
<td>&gt; 65 years</td>
<td>6.6 (5.1-8.1)</td>
<td>3.9 (2.8-5.0)</td>
</tr>
</tbody>
</table>

Prevalence of Anxiety Disorder in women aged 60-65 years:

Data from Catalan Health Institute 2014.

15% Catalan Health Institute

20% Chafarinas Primary Care Centre (Nou Barris neighbourhood)
Prevalence of Anxiety Disorder in women aged 60-65 years:

Data from the Public Health Agency of Barcelona 2013.

12.7 % Barcelona city

15.4% Nou Barris neigbourhood
Women aged 60-65 years from Chafarinas (Nou Barris) **higher risk** of Anxiety Disorder than the general population in Barcelona or Catalonia.
Pubmed research:

Mesh “Dance Therapy” AND “Anxiety”


Objectives

PRIMARY
• To estimate the efficacy of a dance programme in order to reduce the anxiety level with women group aged 55-65 years.

SECONDARY
• To assess whether there are significant changes in the Goldberg Questionnaire score before the intervention, immediately it finishes and 3 months after.
• To assess whether there are significant changes in the self perception of health status using the visual analogic Euroqol scale before the intervention, immediately it finishes and 3 months after.
• To estimate whether the dance programme is accepted by the population.
Methods

• **Design:**
  – *Randomised controlled trial* \( (n=30) \): 2 groups (*control vs intervention*).

• **Participants:**
  – **Inclusion criteria:**
    • Women aged 55-65 years with a diagnostic of anxiety disorder registered.
    • Confirmed by a clinical interview and Goldberg questionnaire positive for anxiety subscale.
  – **Exclusion criteria:**
    • Severe Mental Disorders, active oncologic process, inestable angina.
    • Patients who have same GP as the therapist are excluded.
Enrolment:

Enrollment

Assessed for eligibility (n=112)
- Excluded (n=82)
  - Not meeting inclusion criteria (n=31)
  - Declined to participate (n=5)
  - Other reasons (n=46)
- Randomized (n=30)

Allocation

Allocated to control group (n=15)
- Allocated to intervention group (n=15)
  - Received allocated intervention (n=10)
  - Did not receive allocated intervention (n=5) (motius: operació recent, hospitalitzada, canvi horaris feina)

Follow-Up

Lost to follow-up (give reasons) (n=0)
- Follow up >90% intervention (n=7)
- Follow up <50% intervention (n=1)
- Stop intervention for medical problems (n=2)

Analysis

Analysed (n=15) (analysis intention to treat)
Intervention

1h group sessions once per week during 3 months.

✓ Dance as a non verbal communication to express yourself, without a purpose to copy a choreography.

✓ Creative movement with music support
– Be aware of the **wild range of movement** possibilities, individual and in group, different quality movement, focus.

✓ **Breath**: to control stress and anxiety.
• Both groups follow up 3 times:

with:
Clinical interviews:
Goldberg and EuroQol

by:
Doctors/nurses
Blinded
Differents from the 1st phase
INTERVENTION (yes/no)

Variables

Socio-demographic:
- Age
- Gender
- Education
- Marital status
- Occupation
- Living alone (yes/no)

Chronic diseases:
- HTN, Diabetes, Cholesterol
- Coronary heart disease
- Lung disease

Chronic pain:
- Back pain
- Neck pain
- Shoulder pain

Self perception of walking difficulty (yes/no)

Mental Health Care:
- (yes/no)

Psychiatric drugs:
- Antidepressant (1)
- Anxiolytic (2)
- Other (3)

Result:
Goldberg Anxiety Subscale
EuroQol visual scale

Satisfaction on the intervention:
- Agree to participate (yes/no)
- Engaged up to 80% sessions (yes/no)
• Informed consent

• Private and confidential data information.

• Approved by the Scientific Research Ethics Committee IDIAP Jordi Gol with the number: P14/100
Goldberg questionnaire

Anxiety scale
(Score one point for each “Yes”)
1 Have you felt keyed up, on edge?
2 Have you been worrying a lot?
3 Have you been irritable?
4 Have you had difficulty relaxing?
(If “Yes” to two of the above, go on to ask:)
5 Have you been sleeping poorly?
6 Have you had headaches or neck aches?
7 Have you had any of the following:
   trembling, tingling, dizzy spells, sweating,
   frequency, diarrhoea?
8 Have you been worried about your health?
9 Have you had difficulty falling asleep?

Score of 5 or above:
Risk of Anxiety

EuroQol visual scale (EQ-5D)

• Multidimensional description of health*.

• A standardized measure of health status, applicable to a wide range of health conditions and treatments which provides a simple descriptive profile and a single index value for health status.**

• Validated in Spain by Xavier badia in 1999.***

* Casañas et al. BMC Psychiatry 2012, 12:230


<table>
<thead>
<tr>
<th>SOCIO DEMOGRAPHIC VARIABLES</th>
<th>INTERVENTION n=15</th>
<th>CONTROL n=15</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>20%</td>
<td>0%</td>
<td>0.376</td>
</tr>
<tr>
<td>Primary school</td>
<td>60%</td>
<td>87%</td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>20%</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>0%</td>
<td>20%</td>
<td>0.212</td>
</tr>
<tr>
<td>Married</td>
<td>60%</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Divorced/Widow</td>
<td>40%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Living alone</td>
<td>20%</td>
<td>7%</td>
<td>0.59</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>27%</td>
<td>20%</td>
<td>0.96</td>
</tr>
<tr>
<td>Unemployed</td>
<td>20%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Housewife/Retired</td>
<td>53%</td>
<td>60%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHRONIC DISEASES</th>
<th>INTERVENTION n=15</th>
<th>CONTROL n=15</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTN</td>
<td>60%</td>
<td>20%</td>
<td>0.025</td>
</tr>
<tr>
<td>Diabetes</td>
<td>6.7%</td>
<td>6.7%</td>
<td>0.99</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>33.3%</td>
<td>73.3%</td>
<td>0.028</td>
</tr>
<tr>
<td>Lung disease</td>
<td>6.7%</td>
<td>6.7%</td>
<td>0.99</td>
</tr>
<tr>
<td>Coronary heart disease</td>
<td>0%</td>
<td>6.7%</td>
<td>0.309</td>
</tr>
<tr>
<td>VARIABLE</td>
<td>INTERVENTION n=15</td>
<td>CONTROL n=15</td>
<td>p</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------</td>
<td>--------------</td>
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</tr>
<tr>
<td><strong>CHRONIC PAIN:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back pain</td>
<td>73.3%</td>
<td>73.3%</td>
<td>0.99</td>
</tr>
<tr>
<td>Neck pain</td>
<td>60.0%</td>
<td>80.0%</td>
<td>0.232</td>
</tr>
<tr>
<td>Shoulder pain</td>
<td>73.3%</td>
<td>66.7%</td>
<td>0.69</td>
</tr>
<tr>
<td><strong>MENTAL HEALTH CARE:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiolytic</td>
<td>46.7%</td>
<td>40.0%</td>
<td>0.713</td>
</tr>
<tr>
<td>Andepressant</td>
<td>60.0%</td>
<td>53.3%</td>
<td>0.7</td>
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<tr>
<td>Other psychoactive drug</td>
<td>13.3%</td>
<td>0%</td>
<td>0.483</td>
</tr>
<tr>
<td>Self perception of walking difficulty</td>
<td>26.7%</td>
<td>0%</td>
<td>0.032</td>
</tr>
</tbody>
</table>
Median Goldberg Subscale Anxiety

- **Inici**: 6.00
- **3 meses**: 5.00
- **6 meses**: 6.00

- **P=0.03**
- **P=0.20**
Median EuroQol score
Discussion

• Pilot study with positive results.
• Limitations of the study’s sample size.
• Many women excluded before starting the intervention.
• High enrolment, participants engaged during the intervention with few lost.
• Positive feedback from the participants in the intervention group.
• Low cost. No side effects.
• Cochrane interested in dancetherapy and try to find out more evidence.
Conclusions

• A dance therapy programme could be a useful method to decrease the score of the anxiety disorder measured through Goldberg’s questionnaire in women aged 55-65 years.

• No significant differences in the EuroQol score before and after the dance intervention.

• High engagement in the intervention: 70% participants in the intervention group attended 90% of the sessions.
Thank you

Any questions?
Bibliografía I


Influencing self-rated health among adolescent girls with dance intervention: a randomized controlled trial.

OBJECTIVE: To investigate whether dance intervention influenced self-rated health for adolescent girls with internalizing problems.

DESIGN: Randomized controlled intervention trial with follow-up measures at 8, 12, and 20 months after baseline.

SETTING: A Swedish city with a population of 130 000.

PARTICIPANTS: Girls aged 13 to 18 years with internalizing problems, ie, stress and psychosomatic symptoms. A total of 59 girls were randomized to the intervention group and 53 were randomized to the control group.

INTERVENTION: The intervention comprised dance classes twice weekly during 8 months. Each dance class lasted 75 minutes and the focus was on the joy of movement, not on performance.

MAIN OUTCOME MEASURES: Self-rated health was the primary outcome; secondary outcomes were adherence to and experience of the intervention.

RESULTS: The dance intervention group improved their self-rated health more than the control group at all follow-ups. At baseline, the mean score on a 5-point scale was 3.32 for the dance intervention group and 3.75 for the control group. The difference in mean change was 0.30 (95% CI, -0.01 to 0.61) at 8 months, 0.62 (95% CI, 0.25 to 0.99) at 12 months, and 0.40 (95% CI, 0.04 to 0.77) at 20 months. Among the girls in the intervention group, 67% had an attendance rate of 50% to 100%. A total of 91% of the girls rated the dance intervention as a positive experience.

CONCLUSIONS: An 8-month dance intervention can improve self-rated health for adolescent girls with internalizing problems. The improvement remained a year after the intervention.