A(N)ESTHETICS
AND THE ANALGESIC MUSEUM
Pain = biopsychosocial phenomenon
Pain = physiological phenomenon

Art = an object of beauty
Art = an experience
…and the analgesic museum
Dual Public Health Crises: Pain & Its Management

- 100 million Americans suffer from chronic pain
- More Americans suffer from chronic pain than those with heart disease, cancer, and diabetes combined
- Annual medical cost and lost productivity over $600 billion a year


Dual Public Health Crises: Pain & Its Management

91 AMERICANS die every day from an opioid overdose (that includes prescription opioids and heroin).

Each day, more than 1,000 PEOPLE are treated in emergency departments for not using prescription opioids as directed.

Accessed 5.15.17 - https://www.cdc.gov/drugoverdose/data/overdose.html
An unpleasant **sensory and emotional experience** associated with actual or potential tissue damage, or described in terms of such damage.

Pain is a distressing experience associated with actual or potential tissue damage with sensory, emotional, cognitive, and **social components**.

Source: [http://www.iasp-pain.org/Taxonomy#Pain](http://www.iasp-pain.org/Taxonomy#Pain)

Social Connection

“a person’s subjective awareness of being in close relationship with the social world *in toto.*”

One’s opinion of self in relation to other people, both friends and society

- Feeling understood by others
- Perception of social engagement
- Sense of closeness to other people


Social & Physical Pain: An Evolutionary Perspective

- Prolonged and existential reliance on social bonding
- Pain signal may prevent social separation and promote survival.


The Neural & Clinical Overlaps Of Physical & Social Pain

<table>
<thead>
<tr>
<th>TYPE OF MANIPULATION</th>
<th>TYPE OF PAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social Pain</td>
</tr>
<tr>
<td>Increase Pain</td>
<td>Physical Pain</td>
</tr>
<tr>
<td></td>
<td>-Early social trauma</td>
</tr>
<tr>
<td></td>
<td>-Failure</td>
</tr>
<tr>
<td></td>
<td>-Social exclusion</td>
</tr>
<tr>
<td>Decrease Pain</td>
<td>Physical Pain</td>
</tr>
<tr>
<td></td>
<td>-Social connection</td>
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</tbody>
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Limitations To The Social-Physical Pain Evidence Base

- Experimental vs. Clinical Pain – Social & Physical
- Small number of small studies


Museums As Public Health Partners

- Restorative environments
- Sense of connection and belonging
- Provide opportunities for learning and acquiring new skills
- Can calm and reduce anxiety
- Provide new experiences that may be novel, inspirational and meaningful

PREVENTING CHRONIC PAIN

PHYSICAL FACTORS

• Vigorous weekly activity was protective against the development of chronic pain (odds ratio 0.74, standard error 0.07, 95% confidence interval 0.62-0.89)

• ...but moderate physical activity was not.

PSYCHOSOCIAL FACTORS

• Cultural engagement was protective against the development of chronic pain (OR 0.75, SE 0.07, 95% CI 0.63–0.91)

• ...but community group participation was not.

“It is notable that the ORs for cultural engagement were directly comparable with those of vigorous physical activity, suggesting a reduction of 25% to 26% in risk of chronic pain incidence.“

Museums’ Unique Value Propositions?

- Individuals with chronic pain often feel stigmatized
- Museums do not diagnose or treat; less likely to provoke experiences of shame or embarrassment
- However, little guidance exists for developing public health partnerships with museums
- None specifically targets individuals with chronic pain


Art Rx: Program Description

- Collaboration between the Crocker Art Museum & the Integrative Pain Management Program at UC Davis

- Trained docents provide free specialized 1-hour tours of the museum for individuals with chronic pain and their family/friends

Themes from Curating Care

Innovative
- Research
- Socially-based intervention

Perceived Impact
- Connecting individuals to the community
- Mitigating marginalization

Views on the partnership
- Mutual respect
- Shift perception
- Altruistic & adaptive
- Need

Assessment of success
- Champions
- Increase access
- Narrative, outputs & outcomes
Themes from the Art of Analgesia

Pain History

Experience of the Intervention

Perceived Impact of Intervention
The Art Of Analgesia - Results

- Pain History
  - Isolation
    - Disability
    - Mood
  - Self Critical
  - Health System Encounters
    - Positive
      - Integrative approaches
      - Patient centered
    - Negative
      - Onerous
        - Adverse effects
      - Marginalizing
Themes

- Pain History
- Experience of the Intervention
- Perceived Impact of Intervention
Experience of The Intervention

Experience of Art Rx

- Educational
- Engaging
- Restorative
- Group dynamic:
  - Docent’s role
  - Inclusivity
  - Dialogue
- Validating
- Aesthetic:
  - Museum
  - Art
Demographic Characteristics of Art Rx Participants

• N=54
• Average age of 59 years old (SD 14.5, 18-93)
• 65% female
• 78% white
• 87% reported having pain for longer than 1 year
• 68% of participants brought at least one guest
## Pain Relief During Art Rx Tour

<table>
<thead>
<tr>
<th>Did you experience pain relief during Art Rx?</th>
<th>N(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>31 (57.4)</td>
</tr>
<tr>
<td>No</td>
<td>16 (29.6)</td>
</tr>
<tr>
<td>Missing</td>
<td>7 (13.0)</td>
</tr>
</tbody>
</table>

If yes, what % pain relief?  
Mean [SD]  
46.9 [34.61]
### Outcomes – Change in Social Disconnection & Pain

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>P Value*</th>
<th>BCa 95% CI</th>
<th>Three-Week Follow-up</th>
<th>P Value*</th>
<th>BCa 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pain intensity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Mean [SD]</td>
<td>4.14 [2.24]</td>
<td>3.98 [2.41]</td>
<td>0.273</td>
<td>-0.17-0.55</td>
<td>3.51 [2.48]</td>
<td><strong>0.034</strong></td>
<td>0.07-1.25</td>
</tr>
<tr>
<td><strong>Pain unpleasantness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Mean [SD]</td>
<td>4.02 [2.42]</td>
<td>3.53 [2.61]</td>
<td><strong>0.016</strong></td>
<td>0.06-0.90</td>
<td>3.42 [2.79]</td>
<td>0.100</td>
<td>-0.09-1.28</td>
</tr>
<tr>
<td><strong>Social Disconnection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Mean [SD]</td>
<td>26.00 [9.86]</td>
<td>22.35 [9.86]</td>
<td><strong>0.000</strong></td>
<td>1.70-5.73</td>
<td>24.72 [10.39]</td>
<td>0.599</td>
<td>-1.71-2.89</td>
</tr>
</tbody>
</table>

*Paired t-tests
“I am proud of myself...I was not self-conscious the whole time I was there and I usually am wherever I am because of how much I have changed...not only did [I] do it but [I] had a wonderful time.”

“My pain got worse, but overall, in the big picture, I think [Art Rx] can reduce pain...If I am engaged in doing things, even if it means getting up and going out, even if it causes me a little bit more pain, when I go to bed at night I still feel better about things when I get up in the morning.”
Conclusion:

- Limitations -> Design
- First study to explore the feasibility and effect of a museum-based intervention to decrease social disconnection and pain among individuals with chronic pain
- Stakeholders found the Art Rx intervention to be feasible and potentially beneficial
- Program created the scaffolding for additional public health programming and research

**From program to public health partnership**
THANK YOU

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