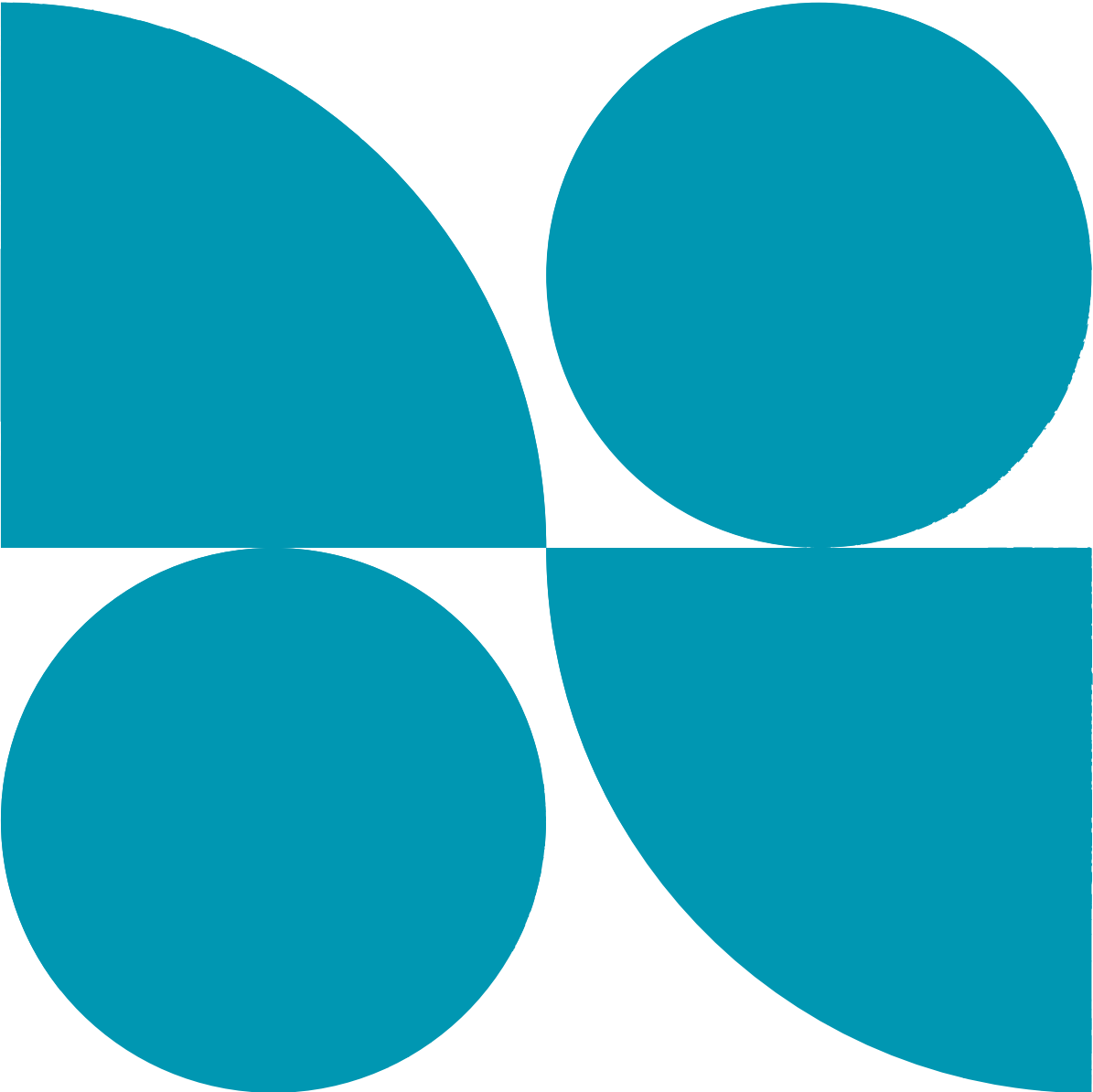


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# Core Art Museum Survey for Well-Being

*Research Summary and Guidelines for Use*



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## **Executive Summary**

How do art museums support well-being in visitors? It's difficult to answer this question with confidence since empirical art museum well-being research is just beginning to emerge and currently relies on disparate measurement strategies, limiting the ability to reach consensus. To further this work, the Humanities and Human Flourishing (HHF) team has created, tested, and made freely available a survey instrument to enable art museum professionals and researchers to understand visitor well-being and inform programming and outreach. This Core Art Museum Survey for Well-Being Research Summary and Guidelines for Use offers:

- A brief summary of research on art museums and well-being
- An overview of the development of the Core Art Museum Survey for Well-Being
- Information on the modules of the survey, which emphasize five dimensions of well-being
- The complete survey instrument, which can be used in full or by module, depending on assessment goals
- Usage instructions on how to implement and score the survey

## Background

Increasingly, art museums are being recognized for their unique ability to cultivate well-being. The OECD contends that a central role of art museums should be the promotion of visitor health and well-being.<sup>1</sup> Medical professionals in countries around the world can recommend visits to art museums to treat mental health conditions like anxiety, depression, and chronic stress.<sup>2 3</sup> Professionals working in art museums concur, naming it as a top priority for their organizations. Although growing evidence indicates art museum visits can increase well-being, what remains less clear to practitioners working in these spaces is the specificity and extent to which these effects occur.<sup>4</sup> A key issue is a lack of a standardized, accessible, empirical measurement for institutional assessment of the well-being impact art museums have on visitors.

The Humanities and Human Flourishing (HHF) Project at the University of Pennsylvania, with support from the Heinz Endowments and in collaboration with the Andy Warhol Museum, the Carnegie Museum of Art, the Philadelphia Museum of Art, and the Westmoreland Museum of American Art, has developed the Core Art Museum Survey for Well-Being (CAMSW) to ameliorate this issue and provide a freely accessible, easily usable survey instrument to museums for institutional measurement of visitors' flourishing outcomes. This will inform both future research and museum practices through a greater understanding of who visits museums and who benefits from their visits, shaping future visitor outreach and programming.

### What Is Flourishing?

Flourishing is a multi-faceted way of approaching overall quality of life in terms of two basic conditions: low ill-being and high well-being. It is important to consider both of these conditions, since flourishing is more than just the absence of ill-being. The World Health Organization defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”.<sup>5</sup> This emphasis on looking beyond the lack of illness as the only indicator of health provides an opportunity to consider a range of positive factors that contribute to a flourishing life.

*Low Ill-Being* concerns the absence of diseases, disorders, and other negative states and traits. The goal of focusing on ill-being related factors is to mitigate or reduce any existing ill-being and to prevent future occurrences of ill-being.

*High Well-Being* concerns the presence of strengths, meaning, and other positive states and traits. The goal of focusing on well-being related factors is to preserve existing well-being and to promote well-being in the future.<sup>6</sup>

## What Do We Know About Art Museums and Flourishing?

Although the arts may be encountered in a number of forms in a variety of contexts, art museums are a common way in which people engage with visual art.<sup>7</sup> They serve as unique contexts in which to view art, allowing visitors to reflect on their lives, their future, and the world in which they live.<sup>8</sup>

For these reasons, it is not surprising that researchers have become increasingly interested in understanding how art museum visitation may lead to flourishing outcomes. Research has tended to focus on four domains:

- **Mental and Physical Health:** Visiting art museums is associated with reductions in cortisol (a hormone related to stress),<sup>9</sup> <sup>10</sup> lower levels of anxiety<sup>11</sup> and depression,<sup>12</sup> and lower risk of being diagnosed with dementia.<sup>13</sup>
- **Subjective Well-Being and Health:** Visiting art museums has been linked to better subjective judgments of well-being,<sup>10</sup> <sup>12</sup> better quality of life,<sup>14</sup> <sup>15</sup> and better self-reported health.<sup>16</sup>
- **Emotional Well-Being:** Visiting art museums and engaging in museum programming is related to higher levels of positive emotions (e.g., happiness, cheerfulness)<sup>17</sup> <sup>18</sup> and is viewed as a rewarding experience.<sup>19</sup>
- **Social Connection and Loneliness:** Art museums can serve as community builders,<sup>15</sup> providing visitors with a sense of being able to connect with others<sup>17</sup> <sup>20</sup> and with feelings of greater inclusion.<sup>21</sup>

Although this research has been informative, it has not captured an extensive range of flourishing outcomes, including outcomes that are viewed as important by art museum professionals (e.g., empathy).<sup>4</sup>

## **About the Core Art Museum Survey for Well-Being**

### Development of the Core Art Museum Survey for Well-Being

To develop this survey, the HHF team reviewed existing museum studies<sup>22</sup> and consulted with its museum network to identify best research practices, including selecting flourishing outcomes for inclusion in the survey. HHF also queried art museum professionals about their views on well-being and how museums can foster well-being for visitors.<sup>4</sup> Once an initial draft of the CAMSW was developed, HHF solicited feedback from its art museum network and conducted an in-museum pilot test at the Philadelphia Museum of Art in Spring 2022. Upon finalizing the survey, HHF field tested the CAMSW in Summer 2022 at its partner museums, the Westmoreland Museum of American Art (WMAA), Andy Warhol Museum, and Carnegie Museum of Art, inviting visitors to participate in the study at the end of their visit.

## Overview of the Core Art Museum Survey for Well-Being

The CAMSW is designed as an English-language exit survey for adults over the age of 18 and takes approximately 5 to 10 minutes to complete. To understand visitor flourishing, we designed modules to assess five domains of flourishing: Psychological Distress, Positive Self-Regard, Meaning, Empathy, and Social Connection. These modules can be used collectively or independently of one another, depending on an institution's assessment goals.

## Core Art Museum Survey for Well-Being Modules

### *Psychological Distress*

Psychological distress is the experience of negative and unwanted states – this module focuses on feelings of depression, anxiety, and stress. Depression can be defined as persistent feelings of sadness and a loss of interest in activities one previously enjoyed as well as an overall lowering of an individual's mood. Anxiety is characterized by excessive feelings of worry, nervousness, and fear about situations. Stress is a manifestation of how one perceives the events in their environment (e.g., feeling pressured or a lack of control) and results in experiencing distress and anxiety. Visiting art museums has been shown to decrease symptoms of psychological distress. For example, individuals who visited art museums every few months had a reduced risk of developing depression and anxiety<sup>13</sup> and a brief visit has been associated with reductions in cortisol, a hormone indicative of stress.<sup>9</sup> Note that in this project, we did not focus on clinical indicators of these conditions but feelings and experiences related to these conditions. In initial testing, these items showed good internal consistency ( $\alpha = 0.82$ ).

Psychological distress is assessed using five items (rated from 1 - *Strongly disagree* to 5 - *Strongly agree*):

- I felt depressed.
- I felt the future is hopeless.
- I felt anxious.
- I was nervous.
- I felt stressed.

### *Positive Self-Regard*

Positive self-regard reflects how an individual perceives themselves and includes the concepts of self-acceptance and self-efficacy. Self-acceptance represents the extent to which an individual is able to embrace their thoughts, feelings, and qualities, both positive and negative, and understand that they are deserving of love and kindness. Self-efficacy represents the extent to which an individual feels capable of achieving their goals or performing a particular task. Culturally

or identity relevant art may help boost feelings of self-worth.<sup>23</sup> Further, the process of observing and deciphering a piece of art is a unique learning process<sup>9</sup> that allows individuals to create meaning for themselves, in turn validating their feelings, sense of identity, and intellectual or emotional capacity.<sup>24 25</sup> In initial testing, these items showed good internal consistency ( $\alpha = 0.72$ ).

Positive self-regard is assessed using five items (rated from 1 - *Strongly disagree* to 5 - *Strongly agree*):

- I felt I was deserving of love and kindness.
- I was able to accept the thoughts and feelings I had in response to the art.
- I felt comfortable with who I am.
- I believed I can make a contribution to the world.
- I felt capable of achieving my personal goals.

### *Meaning*

Meaning is the belief that your life has significance and purpose and can be broken into three components—coherence, purpose, and mattering.<sup>26</sup> Coherence is the ability to make sense of the world and your life experiences. Purpose is feeling as though you have a sense of direction and being motivated to achieve life goals in the future. Mattering is feeling as though you are able to make contributions in the world and that you matter to others. When we view art, we engage in personal reflection and attempt to integrate and understand multiple perspectives<sup>27</sup> that can enhance our ability to identify and clarify the meaning we feel we have in our lives.<sup>28</sup> In initial testing, these items showed good internal consistency ( $\alpha = 0.81$ ).

Meaning is assessed using six items (rated from 1 - *Strongly disagree* to 5 - *Strongly agree*):

- My life experiences made more sense.
- It was easy to find connections among experiences in my life.
- I felt my life had purpose.
- I felt inspired to set new goals.
- I felt that what I added to the world is important.
- I felt like my life had value.

### *Empathy*

Empathy is the capacity to observe the emotional experience of another and understand and share in their perspective. Neuroscience research supports the distinction of two kinds of empathy – affective and cognitive empathy – each with distinct brain processes<sup>29</sup>. Affective empathy refers to the emotional response to another person’s experience, while cognitive empathy refers to the

perspective-taking process that enables the inference and understanding of another person's mental state.<sup>30</sup> Empathy, often thought of as a fixed, inherent trait, is also a skill that can be trained or improved.<sup>31 32</sup> Visual art is frequently described as a mode of emotional expression, allowing viewers to see into the minds and emotional experiences of the artist or into the stories depicted in their artwork. Thus, visual art may be seen as a potential catalyst for the production or enhancement of empathy, with art museums serving as guides for this process. In initial testing, these items showed good internal consistency ( $\alpha = 0.72$ ).

Empathy is assessed using six items (rated from 1 - *Strongly disagree* to 5 - *Strongly agree*):

- I was emotionally invested in other people.
- I felt concerned for the welfare of other people.
- I was emotionally indifferent to other people. (Reverse scored)
- I was curious about other people's thoughts and feelings.
- I tried to imagine how I would feel if I was experiencing what was depicted in the art.
- I was interested in trying to understand people who are different from me.

### *Social Connection*

Social connection, a part of social well-being, is influenced by different elements of social relationships including a sense of belonging, social support, and feelings of loneliness. A sense of belonging is related to social integration and can be defined as an individual's perception of membership to a community or group. Social support refers to the sense that one is loved, cared for, and listened to. Loneliness can be defined as a negative state related to social isolation. Ultimately, social connection can be viewed as a subjective evaluation of the extent to which one has meaningful, close, and constructive relationships with others. Engagement with the visual arts has been found to facilitate social bonding,<sup>33</sup> as well as improve social engagement.<sup>34</sup> In particular older adults participating in visual art creation groups have also been associated with development of new friendships and allowed an opportunity to be seen differently by their family members.<sup>35</sup> In initial testing, these items showed good internal consistency ( $\alpha = 0.77$ ).

Social connection is assessed using seven items (rated from 1 - *Strongly disagree* to 5 - *Strongly agree*):

- I felt like I had a place in the world.
- I felt valued.
- I felt like I was part of a community.
- I felt connected to the people around me.
- I felt a deep connection to people in my life.
- I was thankful for the people in my life.
- I felt lonely (Reverse scored)



## Field Testing Results

A total of 613 adult visitors were recruited from the three museums (see Table 1 for demographic information). The sample was, on average, 43.85 years old (*range* = 18 - 87), White (81.11%), and educated (79.48% with at least a college degree). Approximately equal numbers of visitors were recruited from the three museums.

For each museum, we obtained average levels of the five flourishing modules (see Figure 1). Overall, visitors indicated low levels of psychological distress and relatively high levels of empathy, meaning, positive self-regard, and social connection. There were also some differences in flourishing between the three museums. Visitors to the Carnegie Museum of Art showed greater psychological distress than visitors to the WMAA. Visitors to the Carnegie Museum of Art and WMAA reported greater empathy than visitors to the Andy Warhol Museum. Visitors to the WMAA also reported greater meaning than visitors to the Andy Warhol Museum. No differences between the museums in positive self-regard and social connection were observed.

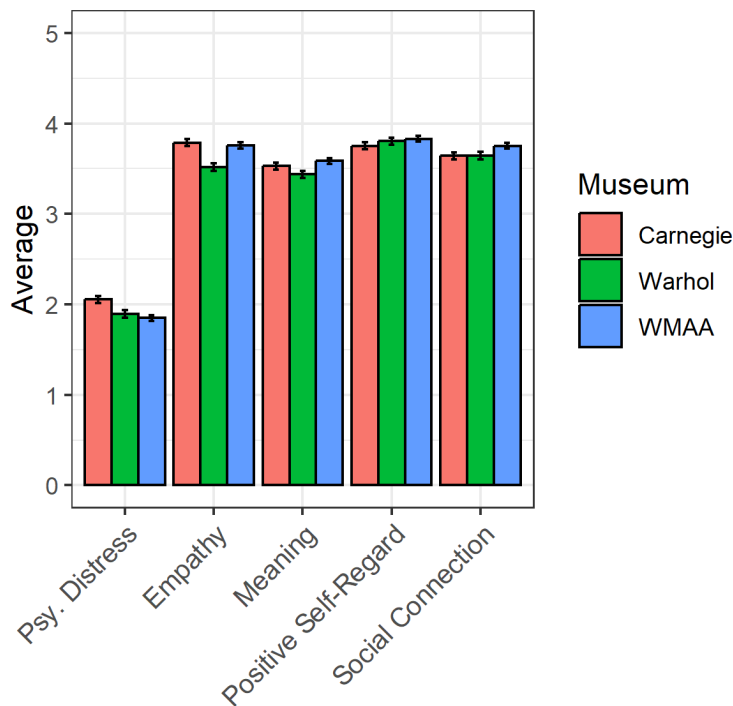


Figure 1. Average levels of flourishing across the three test museums with standard error bars

Finally, we examined the relationships between each flourishing module and people’s emotional experiences, visit satisfaction, sense of belonging, and feeling welcome in the museum (see Table 2). There were several notable relationships between flourishing and visit experiences:

Table 1. Demographic information for the field test sample

	<b>Full Sample (n = 613)</b>	<b>Carnegie (n = 196)</b>	<b>Warhol (n = 209)</b>	<b>Westmoreland (n = 208)</b>
<b>Age</b>	<i>M</i> = 43.85, <i>SD</i> = 18.97 <i>Range</i> = 18 - 87	<i>M</i> = 37.67, <i>SD</i> = 18.66 <i>Range</i> = 18 - 80	<i>M</i> = 43.10, <i>SD</i> = 16.21 <i>Range</i> = 18 - 76	<i>M</i> = 50.43, <i>SD</i> = 19.78 <i>Range</i> = 18 - 87
<b>Gender</b>	Female: 55.05% Male: 39.25% Other: 5.54%	Female: 54.08% Male: 40.82% Other: 5.10%	Female: 58.37% Male: 37.32% Other: 4.31%	Female: 52.63% Male: 39.71% Other: 7.18%
<b>Race/Ethnicity</b>	American Indian: 2.61% Asian: 10.10% Black: 4.07% Hispanic: 3.42% White: 81.11% Other: 1.47%	American Indian: 2.04% Asian: 18.88% Black: 4.59% Hispanic: 4.59% White: 73.47% Other: 1.53%	American Indian: 3.35% Asian: 11.48% Black: 4.78% Hispanic: 3.83% White: 75.60% Other: 2.39%	American Indian: 2.39% Asian: 0.48% Black: 2.87% Hispanic: 1.91% White: 93.78% Other: 0.48%
<b>Education</b>	Below HS: 0.16% HS: 5.70% Some college: 14.66% College: 30.46% Some grad.: 8.63% Grad.: 38.44% Other: 1.14%	Below HS: 0.00% HS: 6.12% Some college: 18.88% College: 31.63% Some grad.: 11.22% Grad.: 31.63% Other: 0.00%	Below HS: 0.00% HS: 4.78% Some college: 12.92% College: 26.79% Some grad.: 8.61% Grad.: 45.45% Other: 0.96%	Below HS: 0.48% HS: 6.22% Some college: 12.44% College: 33.01% Some grad.: 6.22% Grad.: 37.80% Other: 2.39%

	<b>Full Sample (n = 613)</b>	<b>Carnegie (n = 196)</b>	<b>Warhol (n = 209)</b>	<b>Westmoreland (n = 208)</b>
<b>Income</b>	< \$25k: 8.63%	< \$25k: 14.29%	< \$25k: 6.70%	< \$25k: 5.26%
	\$25k - \$49.9k: 11.40%	\$25k - \$49.9k: 12.24%	\$25k - \$49.9k: 9.09%	\$25k - \$49.9k: 12.92%
	\$50k - \$74.9k: 12.87%	\$50k - \$74.9k: 12.76%	\$50k - \$74.9k: 8.61%	\$50k - \$74.9k: 17.22%
	\$75k - \$99.9k: 10.59%	\$75k - \$99.9k: 9.69%	\$75k - \$99.9k: 10.05%	\$75k - \$99.9k: 11.96%
	\$100k – \$149.9k: 18.08%	\$100k – \$149.9k: 18.88%	\$100k – \$149.9k: 16.27%	\$100k – \$149.9k: 19.14%
	\$150k – \$199.9k: 9.28%	\$150k – \$199.9k: 8.16%	\$150k – \$199.9k: 12.92%	\$150k – \$199.9k: 6.70%
	\$200k - \$249.9k: 5.54%	\$200k - \$249.9k: 4.08%	\$200k - \$249.9k: 7.66%	\$200k - \$249.9k: 4.78%
	\$250k - \$299.9k: 2.61%	\$250k - \$299.9k: 2.04%	\$250k - \$299.9k: 4.31%	\$250k - \$299.9k: 1.44%
	> \$300k: 8.14%	> \$300k: 5.10%	> \$300k: 13.4%	> \$300k: 5.74%

- **Psychological Distress:** People experiencing greater psychological distress also reported feeling more angry, upset, and sad during their visit.
- **Empathy:** People experiencing greater empathy also reported feeling more excited and that they felt welcome and that they belong in the museum.
- **Meaning:** People experiencing greater meaning reported feeling more excited, happy, and a sense of wonder and that they felt they belong in the museum.
- **Positive Self-Regard:** People experiencing greater positive self-regard reported feeling more excited and happy and that they felt welcome and that they belong in the museum.
- **Social Connection:** People experiencing greater social connection reported feeling more excited and happy and that they felt welcome and that they belong in the museum.

Table 2. Correlations between flourishing and emotion, visit satisfaction, belonging, and feeling welcome.

	<b>Psychological Distress</b>	<b>Empathy</b>	<b>Meaning</b>	<b>Positive Self-Regard</b>	<b>Social Connection</b>
<b>Excited</b>	-0.06	0.31	0.39	0.35	0.34
<b>Happy</b>	-0.18	0.20	0.28	0.34	0.31
<b>Relaxed</b>	-0.27	0.14	0.15	0.21	0.19
<b>Angry</b>	0.47	0.06	0.00	-0.14	-0.10
<b>Upset</b>	0.44	0.06	-0.03	-0.18	-0.12
<b>Sad</b>	0.41	0.19	0.09	-0.05	-0.02
<b>Awe</b>	-0.04	0.27	0.26	0.25	0.23
<b>Wonder</b>	-0.05	0.32	0.31	0.26	0.25
<b>Chills</b>	0.14	0.24	0.21	0.17	0.12
<b>Surprised</b>	0.00	0.19	0.18	0.17	0.17
<b>Interested</b>	-0.12	0.26	0.23	0.19	0.19
<b>Confused</b>	0.32	0.01	-0.13	-0.17	-0.14
<b>Welcome</b>	-0.24	0.26	0.24	0.35	0.31
<b>Belong</b>	-0.12	0.39	0.45	0.45	0.46
<b>Visit Satisfaction</b>	-0.20	0.25	0.24	0.27	0.25

Note: Correlations around 0.20, 0.50, and 0.80 indicate small, medium, and large effects, respectively. Correlations near 0.00 indicate a lack of relationship between the factors.

For additional statistical analyses, please see <https://psyarxiv.com/vm7z8>

## Full Core Art Museum Survey for Well-Being

All items are rated on a five-point Likert scale, from 1 - *Strongly disagree* to 5 - *Strongly agree*

During my visit...

### Psychological Distress

- I felt depressed.
- I felt the future is hopeless.
- I felt anxious.
- I was nervous.
- I felt stressed.

### Meaning

- My life experiences made more sense.
- It was easy to find connection among experiences in my life.
- I felt my life had purpose.
- I felt inspired to set new goals.
- I felt like my life had value.
- I felt that what I add to the world is important.

### Empathy

- I was emotionally invested in other people.
- I felt concerned for the welfare of other people.
- I was emotionally indifferent to other people.\*
- I was curious about other people's thoughts and feelings.
- I tried to imagine how I would feel if I was experiencing what was depicted in the art.
- I was interested in trying to understand people who are different from me.

### Positive Self-Regard

- I felt I was deserving of love and kindness.
- I was able to accept the thoughts and feelings I had in response to the art.
- I felt comfortable with who I am.
- I believed I can make a contribution to the world.
- I felt capable of achieving my personal goals.

### Social Connection

- I felt like I had a place in the world.
- I felt valued.
- I felt like I was part of a community.
- I felt connected to the people around me.

- I felt a deep connection to people in my life.
- I was thankful for the people in my life.
- I felt lonely.\*

\*Reverse scored

**Scoring Instructions:** After reverse scoring the items indicated with an asterisk, average the responses together for items belonging to each module to obtain five module scores.

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- <sup>1</sup> Organisation for Economic Co-Operation and Development & International Council of Museums. (2019). *Culture and local development: Maximising the impact. Guide for local governments, communities and museums (OECD and ICOM)*.
- <sup>2</sup> Mercer, C. (2018). Primary care providers exploring value of “social prescriptions” for patients. *CMAJ*, 10(49), E1463–4. <https://doi.org/10.1503/cmaj.109-5689>
- <sup>3</sup> Thomson, L. J., Lockyer, B., Camic, P. M., & Chatterjee, H. J. (2018). Effects of a museum-based social prescription intervention on quantitative measures of psychological wellbeing in older adults. *Perspectives in Public Health*, 138(1), 28–38. <https://doi.org/10.1177/1757913917737563>
- <sup>4</sup> Cotter, K. N., Crone, D. L., & Pawelski, J. O. (2022). Well-being aims of art museums: A survey of art museum professionals. *Empirical Studies of the Arts*. <https://doi.org/10.1177/02762374221118528>
- <sup>5</sup> World Health Organization. (1948). *World health organization constitution*.
- <sup>6</sup> Pawelski, J. O. (2016). Defining the ‘positive’ in positive psychology: Part II. A normative analysis. *Journal of Positive Psychology*, 11(4), 146–159.
- <sup>7</sup> National Endowment for the Arts. (2018). *U.S. trends in arts attendance and literary reading: 2002-2017. A first look at results from the 2017 survey of public participation in the arts*.
- <sup>8</sup> Smith, J. K. (2014). *The museum effect: How museums, libraries, and cultural institutions education and civilize society*. Rowman & Littlefield.
- <sup>9</sup> Clow, A., & Fredhoi, C. (2006). Normalisation of salivary cortisol levels and self-report stress by a brief lunchtime visit to an art gallery by London city workers. *Journal of Holistic Healthcare*, 3(2), 29–32
- <sup>10</sup> Grossi, E., Blessi, G. T., & Sacco, P. L. (2019). Magic moments: Determinants of stress relief and subjective wellbeing from visiting a cultural heritage site. *Culture, Medicine, and Psychiatry*, 43, 4–24.
- <sup>11</sup> Binnie, J. (2010). Does viewing art in the museum reduce anxiety and improve wellbeing? *Museums & Social Issues*, 5(2), 191–201.
- <sup>12</sup> D’Cunha, N. M., McKune, A. J., Isbel, S., Kellett, J., Georgousopoulou, E. N., & Naumovski, N. (2019). Psychophysiological responses in people living with dementia after an art gallery intervention: An exploratory study. *Journal of Alzheimer’s Disease*, 72(2), 549–562.
- <sup>13</sup> Fancourt, D., Steptoe, A., & Cadar, D. (2018). Cultural engagement and cognitive reserve: Museum attendance and dementia incidence over a 10-year period. *British Journal of Psychiatry*, 213, 661–663.
- <sup>14</sup> Michalos, A. C. (2005). Arts and the quality of life: An exploratory study. *Social Indicators Research*, 71, 11–59.
- <sup>15</sup> Michalos, A. C., & Kahlke, P. M. (2010). Arts and perceived quality of life in British Columbia. *Social Indicators Research*, 96, 1–39.
- <sup>16</sup> Wilkinson, A. V., Waters, A. J., Bygren, L. O., & Tarlov, A. R. (2007). Are variation in rates of attending cultural activities associated with population health in the United States. *BMC Public Health*, 7, 226.
- <sup>17</sup> Roberts, S., Camic, P. M., & Springham, N. (2011). New roles for art galleries: Art-viewing as a community intervention for family carers of people with mental health problems. *Arts & Health*, 3(2), 146–159.
- <sup>18</sup> Thomson, L. J., Lockyer, B., Camic, P. M., & Chatterjee, H. J. (2018). Effects of a museum-based social prescription intervention on quantitative measures of psychological wellbeing in older adults. *Perspectives in Public Health*, 138(1), 28–38.
- <sup>19</sup> Camic, P. M., Baker, E. L., & Tischler, V. (2016). Theorizing how art gallery interventions impact people with dementia and their caregivers. *The Gerontologist*, 56(6), 1033–1041.
- <sup>20</sup> Koebner, I. J., Fishman, S. M., Patemiti, D., Sommer, D., Witt, C. M., Ward, D., & Joseph, J. G. (2019). The art of analgesia: A pilot study of art museum tours to decrease pain and social disconnection among individuals with chronic pain. *Pain Medicine*, 20(4), 681–691.
- <sup>21</sup> Herron, A., & Jamieson, A. (2020). Grandfathers at Melbourne Museum: Shining a spotlight on overlooked museum visitors. *Visitor Studies*, 23(2), 101–119.
- <sup>22</sup> Cotter, K.N. & Pawelski, J.O. (2022). Art museums as institutions for human flourishing. *The Journal of Positive Psychology*. Retrieved from: <https://doi.org/10.1080/17439760.2021.2016911>
- <sup>23</sup> Perera, K., & Chandra, D. (2010). *How museums in the digital age become more dynamic, visitor oriented?* International Conference on Qualitative Quantitative Methods in Libraries.
- <sup>24</sup> Emond, A.-M. (2006). Understanding how art museum visitors positively connect with artworks. *REencuentro. Análisis de Problemas Universitarios*, 46.
- <sup>25</sup> Fenton, H. (2013). Museums, participatory arts activities and wellbeing. *Teaching in Lifelong Learning*, 5, 5–12.

- 
- <sup>26</sup> Costin, V., & Vignoles, V. L. (2020). Meaning is about mattering: Evaluating coherence, purpose, and existential mattering as precursors of meaning in life judgments. *Journal of Personality and Social Psychology*, *118*(4), 864.
- <sup>27</sup> Hagtvedt, H., & Vohs, K. D. (2021). Viewing challenging art lends meaning to life by stimulating integrative complexity. *The Journal of Positive Psychology*, 1–12.
- <sup>28</sup> Wang, M. (2013). Enhancing self-awareness: Integrating Himalayan art in a career planning class. *Research in Higher Education Journal*, *20*.
- <sup>29</sup> Cox, C. L., Uddin, L. Q., Di Martino, A., Castellanos, F. X., Milham, M. P., & Kelly, C. (2012). The balance between feeling and knowing: Affective and cognitive empathy are reflected in the brain's intrinsic functional dynamics. *Social Cognitive and Affective Neuroscience*, *7*(6), 727–737.
- <sup>30</sup> Miller, C. A., & Hübner, R. (2022). The relations of empathy and gender to aesthetic response and aesthetic inference of visual artworks. *Empirical Studies of the Arts*.
- <sup>31</sup> Abramson, A. (2021). Cultivating empathy. *American Psychological Association*, *52*(8), 44.
- <sup>32</sup> Ratka, A. (2018). Empathy and the development of affective skills. *American Journal of Pharmaceutical Education*, *82*(10).
- <sup>33</sup> Tomlinson, A., Lane, J., Julier, G., Grigsby-Duffy, L. M., Payne, A., Mansfield, L., Kay, T., John, A., Meads, C., Daykin, N., et al. (2020). Qualitative findings from a systematic review: Visual arts engagement for adults with mental health conditions. *Journal of Applied Arts & Health*, *11*, 281–297.
- <sup>34</sup> Colbert, S., Cooke, A., Camic, P. M., & Springham, N. (2013). The art gallery as a resource for recovery for people who have experienced psychosis. *The Arts in Psychotherapy*, *40*(2), 250–256.
- <sup>35</sup> Gutheil, I. A., & Heyman, J. C. (2016). Older adults and creative arts: Personal and interpersonal change. *Activities, Adaptation & Aging*, *40*(3), 169–179.