Check for updates

RESEARCH ARTICLE

# Determinants of potential cultural engagement and the case for a cross-national cultural needs database

[version 1; peer review: 2 approved with reservations, 1 not approved]

Veni Arakelian[1], Konstantinos Chalioris[2], Roido Mitoula[3]

[1]Ministry of Finance, Council of Economic Advisers, Athens, 10180, Greece
[2]Department of Economics and Sustainable Development, Harokopio University of Athens, Kallithea, Attica, 17676, Greece
[3]Department of Economics and Sustainable Development, Harokopio University of Athens, Kallithea, Attica, 17676, Greece

**v1** **First published:** 26 Aug 2025, **5**:255
https://doi.org/10.12688/openreseurope.20680.1
**Latest published:** 26 Aug 2025, **5**:255
https://doi.org/10.12688/openreseurope.20680.1

## Abstract

### Background

Cultural engagement is widely recognized for its contributions to mental health, cognitive development, and social cohesion. However, while much research has examined actual participation, the concept of potential cultural engagement—individuals' intentions or openness to engage more—remains underexplored. Understanding this latent demand is crucial for informing inclusive cultural policies. Yet, internationally standardized data on cultural needs remain scarce, hindering cross-national comparisons and evidence-based planning.

### Methods

This study investigates the determinants of potential cultural engagement in Greece using an adapted version of the *2019 Survey on Cultural Participation and Needs in Barcelona*. The questionnaire was distributed online and included demographic questions, past and intended cultural behavior, and attitudinal items. We constructed indices of current and potential engagement and applied an ordered probit model to examine how sociodemographic factors, parental background, prior cultural activity, and attitudes (summarized through principal component analysis) influence anticipated participation.

### Results

The strongest predictor of potential engagement was current cultural intensity, indicating a self-reinforcing dynamic in cultural behavior.

**Open Peer Review**

**Approval Status** ? ? ✗

| | 1 | 2 | 3 |
|---|---|---|---|
| **version 1** 26 Aug 2025 | ? view | ? view | ✗ view |

1. **Damiano Fiorillo**, University of Naples "Parthenope", Naples, Italy
2. **Malamatenia Panagiotou**, University of the Aegean, Lemnos, Greece
3. **Orian Brook**, University of Edinburgh, Edinburgh, UK

Any reports and responses or comments on the article can be found at the end of the article.

Regional location (prefecture) was also significant, highlighting spatial disparities in access to cultural opportunities. Demographic variables such as gender and age, along with parental engagement, were not statistically significant. One latent attitudinal component (PC2) showed marginal significance, suggesting motivational factors may also shape potential engagement.

**Conclusion**

Our findings underscore the importance of actual cultural habits and geographic context over background traits in shaping future participation. From a policy perspective, identifying populations with high engagement potential can guide more effective and equitable investment. We advocate for the broader adoption of standardized cultural needs surveys across countries, facilitating the creation of a robust international database to inform targeted, data-driven cultural policy and foster cross-national learning.

**JEL Classification**

Z10, Z19

**Keywords**
Culture, Likert scale, Ordered probit model, Survey data

This article is included in the COST Actions gateway.

**Corresponding author:** Veni Arakelian (VENIARAKELIAN@YAHOO.COM)

**Author roles: Arakelian V**: Conceptualization, Formal Analysis, Investigation, Methodology, Software, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **Chalioris K**: Conceptualization, Data Curation, Formal Analysis, Investigation, Project Administration, Resources, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **Mitoula R**: Writing – Original Draft Preparation, Writing – Review & Editing

**Competing interests:** No competing interests were disclosed.

**Grant information:** This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825215 (A FINancial supervision and TECHnology compliance training programme project name [H2020 FIN-TECH])) and COST Action, CA19130, Fintech and Artificial Intelligence in Finance.

**Copyright:** © 2025 Arakelian V *et al*. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**How to cite this article:** Arakelian V, Chalioris K and Mitoula R. **Determinants of potential cultural engagement and the case for a cross-national cultural needs database [version 1; peer review: 2 approved with reservations, 1 not approved]** Open Research Europe 2025, **5**:255 https://doi.org/10.12688/openreseurope.20680.1

**First published:** 26 Aug 2025, **5**:255 https://doi.org/10.12688/openreseurope.20680.1

## 1 Introduction

Cultural engagement—ranging from attending theater performances and visiting museums to participating in creative workshops—has emerged as a key determinant of individual and societal well-being. It is increasingly recognized for its positive effects on mental health, cognitive development, social inclusion, and community resilience (Crossick & Kaszynska (2016); Fancourt & Finn (2019)). As public policy shifts toward non-pharmacological interventions, cultural participation is being reframed not merely as leisure but as a strategic investment in human capital. Studies consistently link cultural activities to improved psychological outcomes, reduced stress and loneliness, and enhanced cognitive function across the life course (Creech *et al*. (2013); Fancourt & Steptoe (2019)). Additionally, cultural engagement fosters educational achievement, emotional intelligence, and civic participation, particularly when integrated into schools and community programs (Catterall *et al*. (2012); Winner *et al*. (2013)).

In this context, understanding not only who participates in cultural activities but also who has the potential or intention to do so becomes crucial. While prior research has focused on existing patterns of participation, the concept of *potential cultural engagement* —individuals' openness or desire to engage more—remains under- explored. Yet, this latent capacity holds important policy implications: it can reveal where barriers exist, identify underserved groups, and guide investment in infrastructure, education, and outreach (Belfiore & Bennett (2007); Grossi *et al*. (2020)). Additionally, despite the important benefits of cultural engagement, comprehensive cross-national data on citizens' cultural needs and aspirations remain scarce. For instance, Eurostat data[1] do not span the same time period, reflecting the limited institutional emphasis on the cultural dimensions of well-being.

To help address this gap, our study adapts the 2019 *Survey on Cultural Participation and Needs in Barcelona*[2]—a detailed instrument designed to assess individuals' cultural habits, preferences, and barriers, aiming to examine the determinants of potential cultural engagement intensity in Greece. Using the data obtained from the survey and estimating an ordered probit model, we explore how demographic characteristics, parental background, previous cultural behavior, and attitudinal factors influence anticipated cultural participation. The findings offer both theoretical insight and practical recommendations for designing responsive and evidence-based cultural policies. Additionally, our broader goal is to emphasize the importance of collecting comparable data across countries using standardized tools. Doing so would enable the construction of a robust international database on cultural needs—one that not only benefits researchers but also empowers policymakers to design targeted and inclusive cultural programs. Such data could support cross-country comparisons, track engagement trends over time, and inform equitable investment strategies that reflect the diverse needs of citizens at various life stages.

The rest of the paper is structured as follows. Section 2 reviews the literature on the benefits and societal impacts of cultural engagement. Section 3 presents the data and survey instrument. Section 4 outlines the methodological approach. Section 5 discusses the empirical findings. Section 6 concludes with policy implications and suggestions for future research.

## 2 Literature review on cultural engagement

### 2.1 Mental and physical health

Cultural engagement is increasingly recognized as a contributor to both mental and physical well-being. Whether through active participation (e.g., music-making, painting) or passive involvement (e.g., attending performances or visiting museums), individuals benefit psychologically and physiologically. Research has highlighted its role in reducing anxiety and depression, improving cognitive function, and supporting overall health.

A systematic review by Viola *et al*. (2024) found strong associations between arts participation and lower levels of psychological distress, with regular participants reporting greater life satisfaction and resilience. Similarly, Fancourt and Tymoszuk (2019), drawing on data from the English Longitudinal Study of Ageing, showed that older adults who engaged in cultural activities had a significantly reduced risk of depression over a ten-year period.

Cultural participation also supports cognitive health, particularly in older populations. Activities such as reading, music, and crafts are linked to improved memory, reasoning, and delayed cognitive decline (Fancourt & Steptoe (2018); Fancourt *et al*. (2019)). These outcomes are partially attributed to increased social interaction, which reduces the risk of neurodegenerative conditions. The WHO, through Fancourt and Finn (2019), has acknowledged these effects and advocates incorporating cultural participation into public health strategies.

Beyond psychological and cognitive benefits, cultural engagement positively affects physical health and longevity. A report from the UK's Department for Culture, Media and Sport estimates that cultural participation contributes approximately £8 bil- lion annually in health-related benefits (Department for Culture, Media and Sport (2024)). Activities such as attending concerts or participating in dance have been shown to reduce cortisol levels, enhance cardiovascular function, and boost immune responses—further underscoring the role of cultural activities in holistic well-being.

### 2.2 Social impacts

Cultural engagement plays a central role in promoting social cohesion, reducing isolation, and strengthening community ties (National Academies of Sciences, Engineering and Medicine (2022)). Through activities such as performances, museum visits, or creative workshops, individuals connect with

[1] https://ec.europa.eu/eurostat/databrowser/explore/all/popul?lang=en&subtheme=cult&display=list&sort=category

[2] Survey on Cultural Participation and Needs in Barcelona, undertaken by the Technical Secretariat of the Barcelona Institute of Culture (Barcelona Cultural Data Observatory): https://barcelonadadescultura.bcn.cat/wp-content/uploads/2020/04/CulturalSurvey2019 Report EN.pdf

others, share experiences, and foster a sense of belonging. In diverse societies, these activities also enhance intercultural understanding and inclusivity.

Initiatives incorporating diverse cultural expressions—such as indigenous story- telling, migrant art, or LGBTQ+ theater—promote mutual respect and challenge stereotypes. These efforts have demonstrated value not only in community settings but also across institutions like schools, healthcare facilities, and urban planning.

One widely documented benefit is the reduction of loneliness, especially among older adults and marginalized populations. According to Fancourt *et al*. (2019), regular attendance at cultural events is associated with a 32% lower likelihood of experiencing loneliness. Cultural settings provide structured, low-pressure environments that encourage social interaction, making them especially beneficial for individuals with social anxiety or limited networks.

Beyond individual benefits, cultural participation strengthens community infrastructure. Museums, libraries, and community arts centers serve as inclusive civic spaces for dialogue and shared identity. Participatory initiatives, such as community theater or public art projects, have been shown to enhance civic trust, engagement, and volunteerism—particularly in socially fragmented areas.

In institutional contexts, cultural interventions like music therapy and visual arts programs have been linked to improved health outcomes and emotional recovery. Similarly, urban environments enriched with public art and cultural spaces are associated with greater neighborhood satisfaction and lower crime rates, illustrating the broader social value of cultural infrastructure.

### 2.3 Educational and professional development

The relationship between cultural engagement and educational outcomes is well established. DiMaggio's foundational study (DiMaggio (1982)) introduced the concept of cultural capital, proposing that participation in high-status cultural activities aligns with the values of educational institutions and enhances academic performance. Sub- sequent research has confirmed that students involved in the arts tend to perform better academically and are more likely to pursue higher education (Catterall *et al*. (2012); Freeman & Shifrer (2023); Ishiguro *et al*. (2023)).

Engagement in music, theater, and visual arts strengthens key cognitive skills such as memory, reasoning, and problem-solving, contributing to better outcomes in core subjects (Schellenberg (2004); Winner *et al*. (2013)). Additionally, cultural activities support emotional and social growth by fostering confidence, empathy, collaboration, and communication (Deasy (2002); Goldstein & Winner (2012); Karkou & Glasman (2004)). These competencies are especially valuable in multicultural educational settings and for broader personal development.

Cultural engagement also contributes significantly to professional development. Participation in the arts is linked to higher creativity, adaptability, and leader- ship—traits increasingly valued in today's knowledge-based economies (Bridgstock (2011); McCarthy *et al*. (2004)). Arts education nurtures critical thinking, innovation, and reflective judgment, preparing individuals for success in complex, dynamic work environments (Winner *et al*. (2013)).

To realize these benefits, equitable access to cultural education must be ensured. Integrating the arts into curricula can enhance academic success and promote social mobility (Bamford (2006); Kisida *et al*. (2016)). Similarly, employers can foster inclusive and innovative workplaces by supporting cultural initiatives. Together, these investments help cultivate well-rounded individuals equipped for the demands of education, employment, and civic life.

## 3 Data

### 3.1 Questionnaire description

The *Survey on Cultural Participation and Needs in Barcelona (2019)* is a structured, interviewer-administered questionnaire developed to assess individuals' cultural habits, interests, and perceived barriers to participation in the cultural life of the city. It captures both actual engagement with and potential interest in a broad range of cultural activities, alongside relevant sociodemographic and attitudinal variables.

The questionnaire consists of the following main sections:

- **Sociodemographic Information:** Includes questions on age, gender, nationality, education level, employment status, and household composition.
- **Cultural and Leisure Preferences:** Respondents are asked to identify their preferred leisure activities and cultural spaces in their local neighborhood.
- **Cultural Participation Frequency:** Covers activities such as attending theater, concerts, museums, and participation in reading, writing, painting, music, and local festivals.
- **Desire for Increased Participation:** Respondents indicate which cultural activities they would like to do more frequently.
- **Barriers and Incentives:** Measures agreement with statements related to common facilitators or obstacles to participation (e.g., cost, accessibility, time availability, social company).
- **Perceived Importance of Culture:** Respondents rate the importance of different cultural domains (e.g., music, literature, cinema, dance) in their lives.
- **Cultural Infrastructure Impact:** Assesses the perceived consequences of the closure of cultural facilities such as libraries or civic centers in the neighborhood.

- **Intergenerational and Familial Engagement:** Includes questions on the cultural practices of parents and children within the household.
- **Cultural Training and Digital Habits:** Covers formal training in artistic disciplines and the use of digital platforms to access, share, or create cultural content.
- **Attitudes Toward Culture:** Respondents express agreement with statements regarding the social and personal value of culture, including its role in education, community interaction, and personal development.

This comprehensive survey design enables in-depth analysis of both actual and potential cultural engagement, providing valuable insights for the formulation of inclusive and responsive cultural policies.

### 3.2 Greek survey data

We conducted the survey using Google Forms, reaching participants through a combination of targeted distribution strategies to ensure demographic diversity. Undergraduates from an Athens university, where students from all over the country study, played an important part in achieving diversity. They, in turn, distributed the questionnaire link via email and social media (mostly Facebook) to their family and fellow villagers. To ensure representativeness, the questionnaire was distributed through a variety of online channels, including social media groups, community forums, and professional networks, to reach people of all ages, genders, educational levels, and geographic locations. We tracked response rates in real time and, as needed, increased outreach efforts to balance underrepresented demographic groups.

We received 1502 responses, with 899 responses from females and 575 responses from males. The remaining respondents did not answer the question. The responses were received from 68 municipalities in Greece, dividing the sample into two subsamples, that of urban and rural areas[3]. Therefore, if we divide the responses into those within and outside of Attica, we obtain 1026 and 476, respectively (in the model, it is noted as "prefecture"). Regarding the age of the respondents, we have received 185 responses from individuals between the ages of 16 and 24, 76 from individuals between the ages of 25 and 34, 119 from individuals between the ages of 35 and 44, 187 from individuals between the ages of 45 and 54, 93 from individuals between the ages of 55 and 64, and 22 from individuals over the age of 65. Furthermore, eight individuals were under 16, and three declined to respond.

The questionnaire included a series of statements answered using Likert-type scales (Likert (1932)). These scales are widely used in social research to measure attitudes, perceptions, and self-reported behaviors. Unlike traditional 5-point Likert scales that typically range from "strongly disagree" to "strongly agree," several questions in our survey employed a 10-point Likert scale, where respondents rated their agreement or engagement on a continuum from 1 (indicating the lowest level of agreement or involvement) to 10 (indicating the highest). This extended scale was intentionally chosen to provide greater sensitivity and allow respondents to express more nuanced views. A 10-point scale captures a broader range of intensity, helping to differentiate between moderate and strong agreement or between low and very low levels of participation. While this increases the resolution of the data and allows for more detailed descriptive analysis, the underlying nature of Likert data remains ordinal. That is, although higher numbers represent greater agreement or engagement, the intervals between adjacent values (e.g., between 3 and 4 or between 7 and 8) cannot be assumed to be equal. As such, parametric methods that assume interval-level measurement may not be appropriate unless such assumptions are justified empirically.

Given this, our analysis treats the Likert responses as ordinal data. For descriptive purposes, we present distributions using frequencies, percentages, and visualizations such as histograms and bar charts. For inferential analysis, we employ statistical techniques suited to ordinal data, including ordinal logistic regression and, where appropriate, more flexible approaches such as copula-based models that can capture dependencies between ordinal variables without requiring strong assumptions about linearity or equal spacing. This methodological rigor ensures that our findings are both statistically valid and substantively meaningful, supporting robust conclusions about how individuals and their families engage with cultural activities across different social and demographic contexts.

### 3.3 Engagement to activities questions

We select two questions to reveal the engagement in cultural activities. Figure 1 presents the responses to the first question, in which we ask, *"Would you like to spend more time doing any of the activities? Give a score from 1 to 10."*

- Activities related to arts, crafts, gardening, traditional cooking, etc.
- Going to discos, clubs, dance halls, etc.
- Going to fairs and markets
- Going to restaurants, bars, etc.
- Participating in traditional or folk collective events or other community activities
- Practicing team games or sports (not with a federation or professionally)
- Visit to religious places or places of worship
- Walking around the city
- Walking in nature

[3] The classification follows Eurostat methodology, https://ec.europa.eu/eurostat/web/rural-development/methodology.

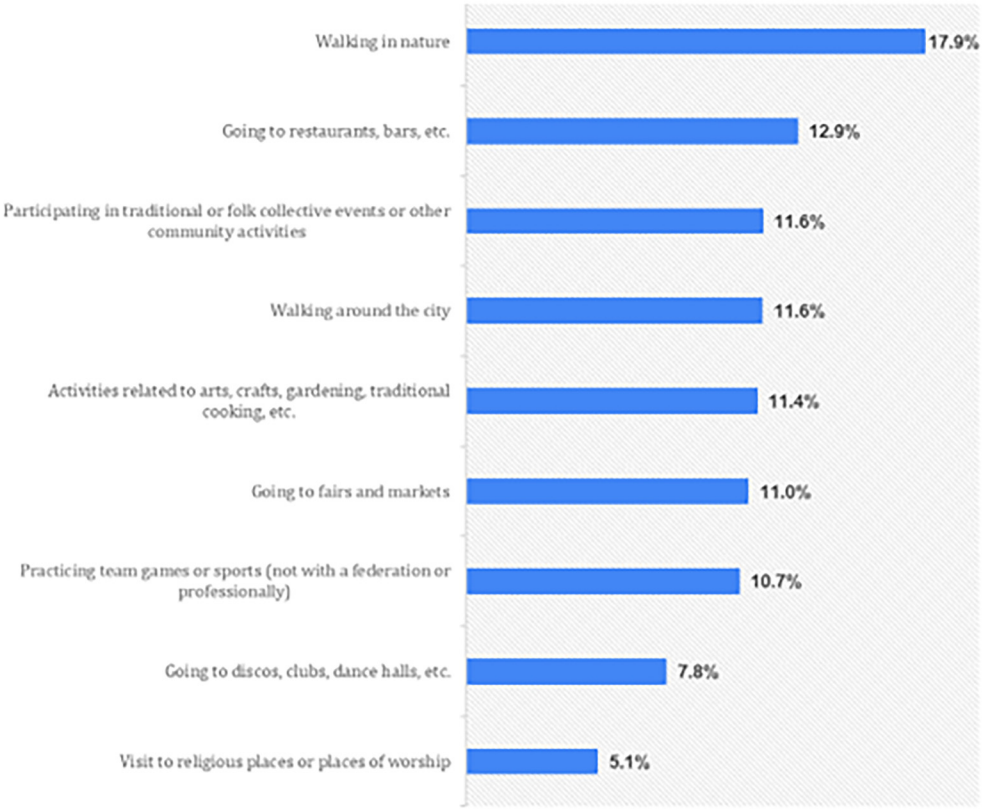


**Figure 1. Responses obtained to the question: "Would you like to spend more time doing any of the activities?".**

revealing notable differences in preferences. The most desired activity is walking in nature, with 17.9% of respondents expressing a wish to do so more often, suggesting a strong interest in outdoor and recreational experiences. Social activities such as going to restaurants, bars, and cafes also rank high, with 12.9% of people wanting to increase their participation, reflecting the importance of socializing in everyday life. Traditional and cultural activities, including participating in folk events (11.6%) and engaging in arts, crafts, and gardening (11.4%), also receive considerable interest, highlighting an appreciation for heritage and creative pastimes. Similarly, walking around the city (11.6%) and visiting fairs and markets (11.0%) indicate a desire for exploration and engagement in local culture. Meanwhile, 10.7% of respondents wish to spend more time practicing team sports recreationally, suggesting a moderate interest in physical activities outside of professional or organized sports settings. Nightlife activities, such as going to discos or dance halls, are less popular, with only 7.8% wanting to engage in them more frequently. Finally, visits to religious places or places of worship receive the least interest, with just 5.1% of respondents indicating a desire to increase their participation. These results suggest that people generally prioritize outdoor, social, and cultural activities over religious or nightlife engagements when considering how they would like to allocate their leisure time.

Figure 2 shows the responses to the second question, in which we ask *"Do you think you participate in the following cultural activities more or less than others your age? Give a score from 1 to 10."*

- Engage in activities related to reading, poetry, literature
- Get involved in painting, drawing, making sculptures, etc.
- Get involved in photography, artistic creations related to audiovisual culture, etc.
- Go to a dance
- Go to a theater performance
- Go to concerts
- Go to dance performances
- Play a musical instrument, singing, music
- Read books
- Visit exhibitions, museums, etc.
- Watch a movie

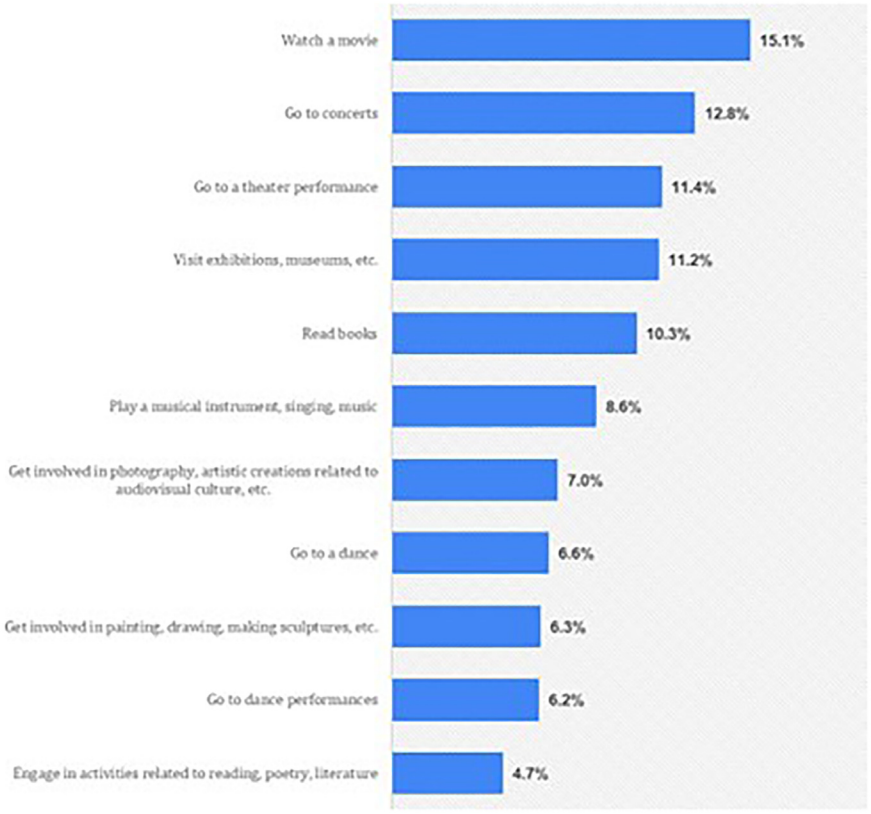


**Figure 2. Responses obtained to the question: "Do you think you participate in cultural activities more or less than others your age?".**

revealing a varied level of engagement across different activities. Watching movies emerges as the most common cultural activity, with 15.1% of respondents believing they engage in it more than their peers, suggesting that film remains a widely accessible and popular form of entertainment. Concert attendance follows at 12.8%, reflecting a strong interest in live music events. Theater performances (11.4%) and visits to exhibitions and museums (11.2%) also rank high, indicating a significant portion of respondents see themselves as more engaged in performing and visual arts than their counterparts. Reading books, an individual cultural activity, is recognized by 10.3% of respondents, emphasizing the role of literature in personal enrichment. Musical practice, including playing an instrument or singing, is noted by 8.6%, while activities related to audiovisual culture, such as photography and artistic creations, stand at 7.0%. Participation in dance-related activities, whether attending performances (6.2%) or going to a dance (6.6%), remains moderate. Meanwhile, active involvement in the visual arts, including painting, drawing, and sculpture, is acknowledged by 6.3% of respondents. Finally, only 4.7% feel they engage in reading, poetry, or literature- based activities more than their peers, making it the least recognized area of increased participation. These findings suggest that while film, music, and performing arts are common cultural interests, more specialized or creative pursuits such as literature and fine arts see comparatively lower levels of engagement relative to others of the same age group.

### 3.4 Cultural participation and potential cultural participation indices

Like before, here we gather the questions that will help us uncover the willingness to start a new activity or to intensify their participation in one of the existing ones. The questionnaire structure allows respondents to choose multiple responses to each question. Therefore, we ask them the following questions:

1. *Have you done any of these activities in the last six months? 1: Never, 2: Sometimes, 3: Often or very often*
    - Going to concerts
    - Going to dance shows
    - Going to see a film
    - Going to the theatre
    - Taking part in theatre productions
    - Watch a film (at home)

2. *Would you participate in more cultural activities?*

   *Question: How important are these activities in your life? 0: Not important, 10: Very important.*

   - Cinema, photography
   - Dancing
   - Music (listening, singing, playing instruments, etc.)
   - Painting, drawing, visual arts, arts and crafts
   - Popular events (such as traditional cultural festivals, gatherings, or activities, etc.)
   - Reading, books, literature, poetry (or other forms of oral or written expression)
   - Theater

We define the total number of their engaged activities as the Cultural Participation Index, which measures the participation in cultural activities from 1 (lowest) to 10 (highest), and the total number of the intended cultural activities to be engaged in as the Potential Cultural Participation Index. Figure 3 shows the histograms of the indices, where it is clear that they are right-skewed distributions with a mode of one, showing that most of the respondents engage in only one activity.

### 3.5 Parental engagement to cultural activities questions

We examine the influence of parental habits through the following questions:

1. *Does your mother practice (or used to practice) any activity related to*
   - Acting or taking part in theatre productions
   - Dancing, taking part in dance groups
   - Filming, artistic photography, making films, short films, etc. (audiovisuals)
   - Instruments, singing, music
   - Painting, drawing, arts and crafts (making clothes, pottery, etc.), sculpture, etc. (visual arts)
   - Reading or writing (blogs, prose, poetry, articles, etc.)
2. *Does your father practice (or used to practice) any activity related to* what was described in the question before.

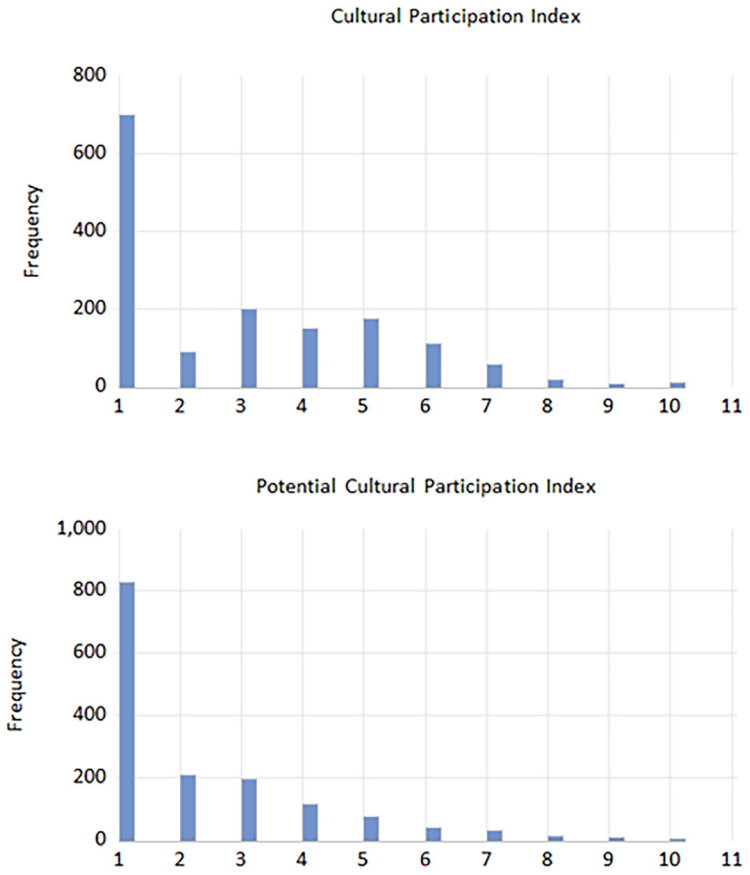


**Figure 3. Histogram of Cultural Intensity and Potential Cultural Intensity indices.**

Figure 4 presents responses to the question of whether the respondent's mother practiced or used to practice any activity related to various cultural and artistic fields. The data shows that the most common form of engagement among mothers was in visual arts, including painting, drawing, arts and crafts, pottery, and sculpture, with 26.48% reporting participation in such activities. This was closely followed by dancing or participation in dance groups, with 24.96%, and reading or writing, such as blogs, prose, poetry, or articles, with 20.81%. A moderate share of mothers, 16.24%, engaged in musical activities, such as playing instruments or singing. On the other hand, fewer mothers were involved in theatrical activities, with only 6.94% participating in acting or similar productions, and even fewer, 4.57%, had experience in audiovisual activities like filming, artistic photography, or filmmaking.

In contrast, Figure 5 refers to the respondent's father and their cultural or artistic engagement. The results indicate that the most prevalent form of activity among fathers was music, including instruments and singing. These patterns suggest some gender-based differences in cultural participation within the family background, with mothers more engaged in hands-on creative and expressive arts (like visual arts and dance), while fathers are more associated with music and audiovisual pursuits.

### 3.6 Perception of cultural activities' importance questions

A group of questions will be used to capture the importance of cultural activities, including the following:

1. *"Primary and secondary school pupils have visual arts and music classes, and in some cases film and drama classes as well." Give a score from 1 to 10 based on how important you think these classes are for children and young people's education [0 - they're a waste of time / 10 - they're essential].*
2. *How much do you agree with the following statements? Give a score from 1 to 10*[4]*.(Figure 6)*
   - Through arts and culture, I have learned to appreciate points of view different from mine.
   - Participating in cultural activities has allowed me to interact with others and get to know people.
   - Arts and culture are necessary for society.
   - Cultural activities contribute to community harmony.
   - Sports activities contribute to community harmony.
3. *How important are these activities in your life? 0: Not important, 10: Very important*[5]*. (Figure 7)*
   - Cinema, photography
   - Music (listening, singing, playing instruments, etc.)
   - Painting, drawing, visual arts, arts and crafts
   - Dancing
   - Theater
   - Popular events (such as traditional cultural festivals, gatherings, or activities, etc.)

[4] See, Figure 6.

[5] See, Figure 7.

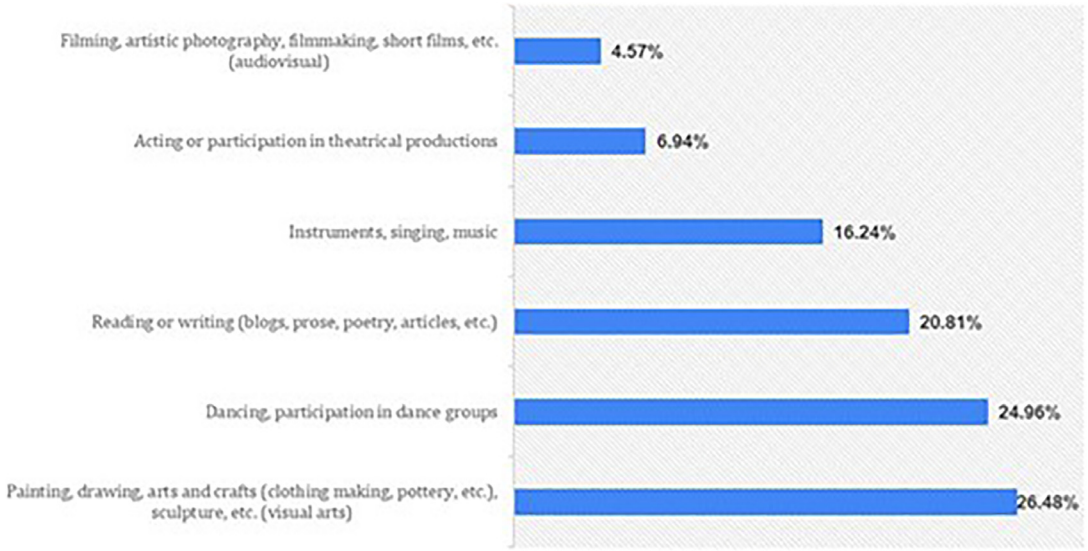


**Figure 4. Responses obtained to the question: "Does your mother practice (or used to practice) any activity related to…".**

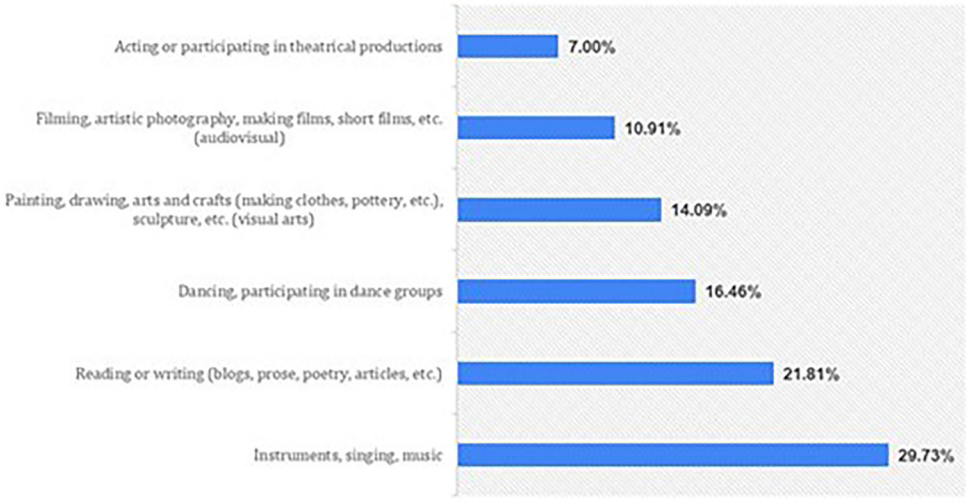


**Figure 5.** **Responses obtained to the question: "Does your father practice (or used to practice) any activity related to…".**

| | Through arts and culture, I have learned to appreciate views different from my own. | Participating in cultural activities has given me the opportunity to interact with others and meet people. | Arts and culture are essential to society. | Cultural activities contribute to community harmony. | Sports activities contribute to community harmony. |
|---|---|---|---|---|---|
| 1 | 0.68% | 0.69% | 0.41% | 0.41% | 0.68% |
| 2 | 1.92% | 1.85% | 0.54% | 0.54% | 1.22% |
| 3 | 1.85% | 1.92% | 1.36% | 1.36% | 1.84% |
| 4 | 3.01% | 3.22% | 1.70% | 1.70% | 2.04% |
| 5 | 7.40% | 7.82% | 4.90% | 4.90% | 7.55% |
| 6 | 9.93% | 7.06% | 5.24% | 5.24% | 8.70% |
| 7 | 14.32% | 14.68% | 10.14% | 10.14% | 12.10% |
| 8 | 20.82% | 17.97% | 14.36% | 14.36% | 16.59% |
| 9 | 13.84% | 16.60% | 15.66% | 15.66% | 13.80% |
| 10 | 26.23% | 28.19% | 45.68% | 45.68% | 35.49% |

**Figure 6.** **Responses obtained to the question: "To what extent do you agree with the following statements?" 0: Completely disagree, 10: Completely agree.**

| | Cinema, photography | Music (listening, singing, playing instruments, etc.) | Painting, drawing, visual arts, arts and crafts | Dance | Theater | Popular events (such as traditional cultural festivals, gatherings or activities, etc.) | Reading, books, literature, poetry (or other forms of oral or written expression) |
|---|---|---|---|---|---|---|---|
| 1 | 2.01% | 1.44% | 5.49% | 5.09% | 4.12% | 2.78% | 3.64% |
| 2 | 3.81% | 2.88% | 7.73% | 6.62% | 6.25% | 3.41% | 4.76% |
| 3 | 5.13% | 3.64% | 8.95% | 8.37% | 5.97% | 4.52% | 6.16% |
| 4 | 5.06% | 4.32% | 8.88% | 7.86% | 7.74% | 7.59% | 7.28% |
| 5 | 11.23% | 9.19% | 14.15% | 14.12% | 13.21% | 12.04% | 14.57% |
| 6 | 11.43% | 9.12% | 12.71% | 10.70% | 11.36% | 10.44% | 12.82% |
| 7 | 17.88% | 13.65% | 13.29% | 11.21% | 12.43% | 15.24% | 14.85% |
| 8 | 18.92% | 18.38% | 12.06% | 12.01% | 14.84% | 18.16% | 14.50% |
| 9 | 10.26% | 14.13% | 8.01% | 8.44% | 11.08% | 13.15% | 8.96% |
| 10 | 14.28% | 23.25% | 8.74% | 15.57% | 13.00% | 12.67% | 12.46% |

**Figure 7.** **Responses obtained to the question: "How important are these activities in your life?" 0: not important, 10: very important.**

- Reading, books, literature, poetry (or other forms of oral or written expression)

4. *In your opinion, can the sports and cultural associations that exist in your area support entrepreneurship? 0: No, 1: Yes.*

5. *Do you know if there are social enterprises in your area that provide sports-related services and activities? 0: No, 1: Yes.*

6. *If yes, do you believe that they contribute to the economic development of the region? If not, do you believe that it is important to create such a type of social enterprises so that they become a lever for the economic development of the region? 0: No, 1: Yes.*

7. *Do you know if there are social enterprises in your area that provide services and activities related to culture? 0: No, 1: Yes.*

8. *If yes, do you believe that they contribute to the economic development of the region? If not, do you believe that it is important to create such a type of social enterprise so that they become a lever for the economic development of the region? 0: No, 1: Yes.*

We apply categorical principal components analysis, which can be used for data with heterogeneous measurement levels, including nominal, ordinal, and numeric variables that may not have a linear relationship.

## 4 Model

Ordinal response data is notoriously difficult to work with statistically for several rea- sons. The core concept is that under the structured answer lies a latent, continuously distributed random variable indicative of the inclination to concur. The distributional parameters of the latent variable are calculated by maximum likelihood, and these parameters are likely to provide valuable insights to the researcher. An instance of ordered probit application is in elucidating degrees of "life satisfaction." In the study by Clark *et al.* (2001), participants evaluated their life satisfaction on an 11- point Likert scale, with 0 indicating extreme dissatisfaction and 10 indicating extreme satisfaction.

The benefits of the ordered probit model are best understood by contemplating the implications of evaluating ordered outcomes using linear regression techniques. Fielding (1999) and Greene (2000) addressed some of these difficulties. The first dis- advantage of using linear regression is that it implicitly implies that, for example, the difference between a strongly disagree and a disagree response is the same as that between a disagree and a neither disagree nor agree response. The categories merely represent ordinality; therefore, there is no logical reason to predict similar differences. The same assumption is not implied in ordered probit. This is an important fact, since the interpretation of a linear regression coefficient is based on the number of units by which we expect the dependent variable to change in response to a one-unit rise in an explanatory variable. Clearly, this interpretation is incorrect if the dependent variable is ordinal. Second, linear regression presupposes that two respondents with the same response have the same attitude. This is not the case; a specific reaction is compatible with a variety of perspectives. Although attitudes about a specific response are plainly unobservable, a model should account for the fact that such differences exist. It is widely acknowledged (Stewart (1983)) that neglecting such disparities in the context of grouped data results in erroneous estimation. This issue may be more severe when there are fewer categories. Gibbons and Hedeker (1994) discussed floor and ceiling distortions. For example, if a responder now responds with the greatest feasible value and their circumstances change in a way that is supposed to increase response, their response will not increase; it will remain constant. This is likely to lead to a bias toward zero in each regression coefficient. Third, because replies to a question are partially determined by its language, and because linear regression models responses directly, the results cannot be invariant to the wording of the question. However, the distribution of the underlying attitude, which is the subject of the analysis, should be unaffected by the question's wording. Because the ordered probit model predicts the parameters of the underlying distribution rather than the response itself, framing effects are unlikely to occur. As explained later in this article, the cut points, rather than the distribution, are predicted to shift as the language of the question changes. Let $i$ index respondent $i$, $i = 1, \ldots, n$, where $n$ is the sample size. $y_i$ denotes individual $i$'s response to the survey question, and assume that this can take one of the integer values 1, 2, 3, . . . , $J$. Let $y^*$ $(-\infty < y^* < +\infty)$ be the underlying latent variable representing respondent $i$ 's propensity to agree with the statement advanced.

Let $x_i$ be a vector of characteristics relevant in explaining the attitude of a respondent. The ordered probit model is based on the assumption that $y_i^*$ depends linearly on $x_i$, according to the following:

$$y_i^* = x_i'\beta + u_i, \quad \text{where } i = 1,\ldots,n;$$
$$u_i \sim N(0,1)$$

where $\boldsymbol{\beta}$ is a vector of parameters not containing an intercept. These parameters will ultimately be interpretable in the same way as slope parameters in linear regression. $y^*$ is unobserved, but the relationship between $y^*$ and the observed variable $y$ is:

$$y = 1 \text{ if } -\infty < y^* < \kappa_1$$
$$y = 2 \text{ if } \kappa_1 < y^* < \kappa_2$$
$$y = 3 \text{ if } \kappa_2 < y^* < \kappa_3$$
$$\vdots$$
$$y = J \text{ if } \kappa_{J-1} < y^* < \infty.$$

The parameters $\kappa_j$, $j = 1, \ldots, J - 1$, are known as cut points or threshold parameters and determine the marginal effect for an independent variable $x_k$ on $P(y = j)$

$$\frac{\partial P(y=j)}{\partial x_k} = [f(k_{j-1} - X\beta) - f(k_i - X\beta)]\beta_k$$

where $f(z)$ is the PDF of the logistic distribution.

In our setting, our goal is to establish a relationship between the potential cultural engagement and factors obtained from the questionnaire. We use demographic factors like age, prefecture, and gender, along with the Cultural Intensity Index and the principal components obtained by applying the categorical principal component analysis on the set of questions that capture the perception of cultural activities' importance. Therefore, the model is formed as

$$\begin{aligned}\text{Potential Cultural Intensity Index}_i &= \beta_1 age_i + \beta_2 gender_i + \beta_3 prefecture_i \\ &+ \beta_4 mother_i + \beta_5 father_i \\ &+ \beta_6 \text{Cultural Intensity Index}_i \\ &+ \sum_{j=1}^{k} \beta_j PC_j + u_i\end{aligned}$$

Our specification is in line with previous studies, like that of Fancourt and Mak (2020) and National Endowment for the Arts (2013) examine the impact of demographics, Chan and Goldthorpe (2007) and Roose *et al.* (2012), which examine the intergenerational transmission of cultural capital.

## 5 Results

The ordered probit model was employed to examine the predictors of potential cultural engagement across a sample of 1,474 respondents. Table 1 presents the estimates from the ordered probit model analyzing the determinants of potential cultural engagement intensity. The first column reports the results of the current cultural intensity and potential by using only demographic characteristics. The model fit statistics indicated a good overall fit, with a McFadden pseudo $R^2$ value of 0.2329 and a highly significant likelihood ratio test (LR statistic = 1002.459, $p < 0.001$). This suggests that the included covariates substantially improve the model compared to a null specification. Additionally, the model's fit is consistent with previous research (O'Brien *et al.* (2020)), acknowledging the complexity of cultural behavior, which is shaped by numerous, often intersecting, social and psychological variables.

**Table 1. Estimation results of the multilevel ordered probit model.**

| | | Potential Cultural Intensity |
|---|---|---|
| **Variable** | **Model 1** | **Model 2** |
| Gender | 0.0538 | 0.054 |
| Age | -0.0195 | -0.0169 |
| Prefecture | 0.8543*** | 0.8592*** |
| Mother | 0.0958 | 0.0864 |
| Father | -0.0955 | -0.1130 |
| Cultural Intensity Index | 0.4557*** | 0.4537*** |
| PC1 | | -0.008 |
| PC2 | | 0.051* |
| Pseudo-$R^2$ | 0.2329 | 0.2344 |

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

Among the predictors, the prefecture exhibited the largest and most significant positive effect ($\beta = 0.8543$, $p < 0.001$), suggesting that geographical and contextual factors—such as regional cultural infrastructure—play a meaningful role in shaping cultural aspirations, aligning with earlier findings emphasizing the role of place-based opportunity structures (Bourdieu (1984); DiMaggio & Mukhtar (2004)). Similarly, current cultural intensity was strongly associated with increased potential engagement ($\beta = 0.4557$, $p < 0.001$), indicating that individuals who are already actively engaged culturally are more likely to envision themselves participating even more intensively in the future.

In the second exercise, we enrich the model with the first two principal components obtained from the questions that capture the importance of cultural activities. The estimation results are reported in the second column of Table 1. Regarding the principal component scores, the second principal component ($PC_2$) was marginally significant ($\beta = 0.051$, p = 0.054). This result suggests that certain latent attitudes or values captured in the questionnaire may modestly influence potential cultural engagement, even if the first component ($PC_1$) did not achieve significance. Demographic characteristics, such as gender and age category, did not exhibit statistically significant associations with potential cultural engagement. Likewise, parental cultural background variables (mother and father) did not significantly predict respondents' cultural aspirations, although the coefficients were generally in the expected directions. Overall, the results underscore the importance of current cultural behaviors, regional factors, and latent attitudinal patterns in shaping cultural engagement trajectories.

Table 2 presents the average marginal effects of the cultural intensity across the ten response categories of the outcome variable. As shown, increases in cultural engagement are associated with a marked shift in the predicted probabilities across the ordinal scale. Specifically, a one-unit increase in cultural intensity decreases the likelihood of being in the lowest category (Category 1) by approximately 11.08 percentage points. The negative marginal effect at the lower end of the scale suggests that individuals with higher actual cultural engagement are less likely to report minimal potential for cultural participation. Conversely, the probabilities of being in Categories 2 and 3 increase by 1.56 and 2.31 percentage points, respectively. Similarly, the marginal effects are positive in the higher categories. Moderate positive effects are also observed for Categories 8 through 10, ranging from 0.4 to 0.5 percentage points. These findings suggest a positive and monotonic relationship between actual cultural involvement and perceived cultural potential. Individuals more actively involved in cultural activities are more likely to see themselves as having greater capacity or opportunity for future cultural participation. This

**Table 2. Average marginal effects of Cultural Intensity Index and predicted probabilities across all observations.**

| Category | Average marginal effects | Average predicted probabilities |
|---|---|---|
| 1 | -0.1108 | 0.5625 |
| 2 | 0.0156 | 0.1403 |
| 3 | 0.0231 | 0.1196 |
| 4 | 0.0199 | 0.070 |
| 5 | 0.0117 | 0.0456 |
| 6 | 0.010 | 0.0229 |
| 7 | 0.011 | 0.0197 |
| 8 | 0.0053 | 0.0083 |
| 9 | 0.0038 | 0.0054 |
| 10 | 0.0043 | 0.0051 |

reinforces the idea that cultural engagement may have a self-reinforcing character and may also play a role in shaping personal well-being, motivation, or perceived access to cultural resources.

## 6 Discussion and conclusions

This study provides important insights into the factors shaping individuals' potential for cultural engagement in Greece. Consistent with previous research, current cultural activity emerged as the strongest predictor of anticipated future participation (Fancourt & Tymoszuk (2019); Winner *et al*. (2013)). This finding supports the self-reinforcing nature of cultural habits, whereby individuals already engaged with cultural life are significantly more likely to foresee continued or increased involvement. Theoretically, this result aligns with DiMaggio's (DiMaggio (1982)) application of Bourdieu's concept of cultural capital (Bourdieu (1984)), which posits that familiarity with culturally valued forms facilitates success in institutional environments, including education and civic life.

The analysis also revealed a significant association between regional location and potential engagement, suggesting that access to cultural infrastructure continues to influence participation trajectories (Bennett *et al*. (2009); Peterson & Kern (1996)). Respondents from certain prefectures were more likely to report high engagement potential, highlighting persistent spatial disparities and reinforcing the need for regional cultural investment and policy decentralization.

In contrast, demographic variables such as gender, age, and parental cultural background did not exhibit significant effects. While prior studies have documented intergenerational patterns in cultural participation (Chan & Goldthorpe (2007); Roose *et al*. (2012)), their limited role in this analysis may reflect broader democratization of cultural access or the increasing influence of personal behavior and attitudinal dimensions. The marginal significance of the second principal component ($PC_2$), likely capturing values and motivation, further supports emerging literature on the psycho- logical drivers of cultural engagement (Fancourt & Steptoe (2019); Purhonen *et al*. (2010)).

These findings carry important policy implications. Understanding potential engagement, particularly among those who are not currently active but show willing- ness—enables more effective targeting of cultural programs and outreach strategies. Investing in early exposure, improving regional access, and supporting attitudinal change through education and public messaging may foster long-term increases in participation. Moreover, focusing on potential engagement allows policymakers to identify underserved populations and design interventions that address both structural barriers and latent demand.

Despite these contributions, several limitations must be acknowledged. First, the study relies on self-reported data, which may introduce recall or social desirability bias. Second, the online distribution of the survey may have resulted in a sample skewed toward younger, more educated, or more digitally literate individuals. Third, the use of "potential" cultural engagement as an outcome captures subjective intention rather than actual behavior, which may not always translate into participation. These limitations suggest caution in generalizing the findings and underscore the need for future research using longitudinal and mixed-method approaches to validate and deepen understanding.

In sum, this study highlights the importance of moving beyond assessments of current cultural participation to explore individuals' perceived potential for future involvement. It offers new evidence on the behavioral, geographic, and attitudinal determinants of engagement, and provides a foundation for more inclusive and forward- looking cultural policy design.

## Ethical approval

This study was conducted in accordance with the principles of the Declaration of Helsinki. Ethical approval was not required, as the research involved an anonymous, voluntary questionnaire distributed online to adult participants, with no collection of sensitive personal data. According to the ethical guidelines of Harokopio University of Athens, formal review was not mandatory for studies posing minimal risk. All participants were informed about the purpose of the study and provided informed consent prior to completing the questionnaire.

## Informed consent

All participants were adults and took part in the study voluntarily. Prior to beginning the questionnaire, participants were presented with an online information page outlining the purpose of the research, their rights as participants, the anonymous nature of the survey, and data usage. Consent was implied through the act of proceeding with the questionnaire.

No identifying or sensitive personal data were collected, and participants could withdraw at any time by closing the survey. For participants under the age of 18, parental consent and presence of at least one parent were required prior to completing the survey.

## Data availability

Data are available (in English and Greek format) under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0) at DOI: 10.17632/k5bg2d8z8r.2 Arakelian *et al.* (2025)

## References


Arakelian V, Chalioris K, Mitoula R: **Cultural survey Greece.** Mendeley Data, V2, 2025.
**http://www.doi.org/10.17632/k5bg2d8z8r.2**

Bamford A: **The wow factor: global research compendium on the impact of the arts in education.** Münster: Waxmann Verlag, 2006.
**Reference Source**

Belfiore E, Bennett O: **Rethinking the social impacts of the arts.** *Int J Cult Policy.* 2007; **13**(2): 135–151.
**Publisher Full Text**

Bennett T, Savage M, Silva E, *et al.*: **Culture, class, distinction.** Routledge, 2009.
**Publisher Full Text**

Bourdieu P: **Distinction: a social critique of the judgment of taste.** Harvard University Press, 1984.
**Reference Source**

Bridgstock R: **Skills for creative industries graduate success.** *Educ Train.* 2011; **53**(1): 9–26.
**Publisher Full Text**

Catterall JS, Dumais SA, Hampden-Thompson G: **The arts and achievement in at-risk youth: findings from four longitudinal studies.** Technical Report 55, National Endowment for the Arts, 2012.
**Reference Source**

Chan TW, Goldthorpe JH: **Social stratification and cultural consumption: music in England.** *Eur Sociol Rev.* 2007; **23**(1): 1–19.
**Publisher Full Text**

Clark A, Georgellis Y, Sanfey P: **Scarring: the psychological impact of past unemployment.** *Economica.* 2001; **68**(270): 221–241.
**Publisher Full Text**

Creech A, Hallam S, Varvarigou M, *et al.*: **Active music making: a route to enhanced subjective well-being among older people.** *Perspect Public Health.* 2013; **133**(1): 36–43.
**PubMed Abstract** | **Publisher Full Text**

Crossick G, Kaszynska P: **Understanding the value of arts and culture: the AHRC cultural value project**. *Arts and Humanities Research Council*. 2016.
**Reference Source**

Deasy RJ: **Critical links: learning in the arts and student academic and social development.** Washington, DC: Arts Education Partnership, 2002.
**Reference Source**

Department for Culture, Media and Sport: **Culture and heritage capital: monetising the impact of culture and heritage on health and wellbeing.** Technical report, DCMS, 2024.
**Reference Source**

DiMaggio P: **Cultural capital and school success: the impact of status culture participation on the grades of U.S. high school students.** *Am Sociol Rev.* 1982; **47**(2): 189–201.
**Publisher Full Text**

DiMaggio P, Mukhtar T: **Arts participation as cultural capital in the United States, 1982–2002.** *Poetics.* 2004; **32**(2): 169–194.
**Publisher Full Text**

Fancourt D, Finn S: **What is the evidence on the role of the arts in improving health and well-being? A scoping review.** Technical report, World Health Organization. Regional Office for Europe, 2019.
**Reference Source**

Fancourt D, Mak HW: **What predicts arts engagement in the united states? Findings from the general social survey.** *Brit J Sociol.* 2020; **71**(1): 85–110.

Fancourt D, Steptoe A: **Cultural engagement predicts changes in cognitive function in older adults over a 10 year period: findings from the English longitudinal study of ageing.** *Sci Rep.* 2018; **8**(1): 10226.
**PubMed Abstract** | **Publisher Full Text** | **Free Full Text**

Fancourt D, Steptoe A: **Cultural engagement and mental health: does socio-economic status explain the association?** *Soc Sci Med.* 2019; **236**: 112425.
**PubMed Abstract** | **Publisher Full Text** | **Free Full Text**

Fancourt D, Steptoe A, Cadar D: **Cultural engagement and dementia risk: evidence from the English longitudinal study of ageing.** *J Gerontol Series B.* 2019; **75**(1): 160–168.

Fancourt D, Tymoszuk U: **Cultural engagement and incident depression in older adults: evidence from the English longitudinal study of ageing.** *Br J Psychiatry.* 2019; **214**(4): 225–229.
**PubMed Abstract** | **Publisher Full Text** | **Free Full Text**

Fielding A: **Why use arbitrary points scores? Ordered categories in models of educational progress.** *J R Stat Soc Ser A.* 1999; **162**(3): 303–328.
**Publisher Full Text**

Freeman J, Shifrer D: **Arts learning and academic achievement: evidence from the secondary longitudinal study of 2002.** *Arts Educ Policy Rev.* 2023; **124**(2): 63–75.

Gibbons RD, Hedeker D: **Application of random-effects probit regression models.** *J Consult Clin Psychol.* 1994; **62**(2): 285–296.
**PubMed Abstract** | **Publisher Full Text**

Goldstein TR, Winner E: **Enhancing empathy and theory of mind.** *J Cogn Dev.* 2012; **13**(1): 19–37.
**Publisher Full Text**

Greene WH: **Econometric analysis (4th ed.).** Upper Saddle River, NJ: Prentice Hall, 2000.
**Reference Source**

Grossi E, Tavano Blessi G, Sacco PL, *et al.*: **The interaction between culture, health and psychological well-being: data mining from the Italian culture and well-being project.** *J Happiness Stud.* 2020; **21**(5): 1673–1691.

Ishiguro C, Ishihara T, Morita N: **Extracurricular music and visual arts activities are related to academic performance improvement in school-aged children.** *NPJ Sci Learn.* 2023; **8**(1): 7.
**PubMed Abstract** | **Publisher Full Text** | **Free Full Text**

Karkou V, Glasman J: **Arts, education and society: the role of the arts in promoting the emotional wellbeing and social inclusion of young people.** *Support Learn.* 2004; **19**(2): 57–65.
**Publisher Full Text**

Kisida B, Bowen DH, Greene JP: **Measuring critical thinking: results from an art museum field trip experiment.** *J Res Educ Eff.* 2016; **9**(sup1): 171–197.
**Publisher Full Text**

Likert R: **A technique for the measurement of attitudes.** *Arch Psychol.* 1932; **22**(140): 5–55.
**Reference Source**

McCarthy KF, Ondaatje EH, Zakaras L, *et al.*: **Gifts of the muse: reframing the debate about the benefits of the arts.** Santa Monica, CA: RAND Corporation, 2004.
**Reference Source**

National Academies of Sciences, Engineering and Medicine: **The role of arts and culture in fostering social cohesion and community well-being.** Technical report, NASEM, 2022.

National Endowment for the Arts: **How a nation engages with art: highlights from the 2012 survey of public participation in the arts.** Technical report, NEA, 2013.
**Reference Source**

O'Brien D, Laurison D, Miles A, *et al.*: **Are the creative industries meritocratic? An analysis of the 2014 British labour force survey.** *Cult Trends.* 2020; **29**(1): 3–18.

Peterson RA, Kern RM: **Changing highbrow taste: from snob to omnivore.** *Am Sociol Rev.* 1996; **61**(5): 900–907.
**Publisher Full Text**

Purhonen S, Gronow J, Rahkonen K: **Nordic democracy of taste? Cultural omnivorousness in musical and literary taste preferences in Finland.** *Poetics.* 2010; **38**(3): 266–298.
**Publisher Full Text**

Roose H, Van Eijck K, Lievens J: **Culture and participation: a complex relation.** *Poetics.* 2012; **40**(5): 491–516.

Schellenberg EG: **Music lessons enhance IQ.** *Psychol Sci.* 2004; **15**(8): 511–514.
**PubMed Abstract** | **Publisher Full Text**

Stewart MB: **On least squares estimation when the dependent variable is grouped.** *Rev Econ Stud.* 1983; **50**(4): 737–753.
**Publisher Full Text**

Viola E, Martorana M, Ceriotti D, *et al.*: **The effects of cultural engagement on health and well-being: a systematic review.** *Front Public Health.* 2024; **12**: 1369066.
**PubMed Abstract** | **Publisher Full Text** | **Free Full Text**

Winner E, Goldstein TR, Vincent-Lancrin S: **Art for art's sake? The impact of arts education.** Paris: OECD Publishing, 2013.
**Publisher Full Text**

# Open Peer Review

## Current Peer Review Status: ? ? ✗

**Version 1**

Reviewer Report 16 March 2026

https://doi.org/10.21956/openreseurope.22370.r59747

© **2026 Brook O.** This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

✗

**Orian Brook**
University of Edinburgh, Edinburgh, UK

In short, you need to improve your explanation of your analysis, so that it is possible to understand properly what you did. There are also probably changes that you should make to the modelling, as discussed above. You also need to improve your survey of the relevant literature and how it links to your analysis.

The concept of cultural capital was introduced by Pierre Bourdieu in 1977 not Dimaggio. Also, your engagement with this theory misses the point by arguing that it enhances academic performance, without mentioning social stratification of cultural consumption, misrecognition or distinction. Your references to cultural engagement supporting social mobility should be given a page reference, I don't recognise this argument from either the book or the article that you cite.

The construction of the potential cultural activity index is not clear, which given how central this is to the paper, is a problem. It is mentioned just after the questions "2. Would you participate in more cultural activities? Question: How important are these activities in your life?" are introduced, but the authors don't say which if any of these contribute to the index, and what the count would be based on if they did.

I'm not sure why under 18s are included in the sample, will they have income and agency to determine their own cultural participation in the same way as a 35 year old? Will their current cultural participation not be heavily influenced by school and parents?

I appreciate the detailed and clear explanation of the probit modelling. Given that the outcome (as far as I can understand it) is a count (number of possible cultural activities of interest) was a negative binomial model considered? Alternatively, perhaps factor analysis to understand which cultural activities were likely to be selected together? (maybe some people said film at the cinema, other people chose concerts and theatre, both might be quite different from those who said watch films at home? Also, do the authors anticipate a major difference between those who chose 8 versus those who chose 9? What is the substantive meaning of these differences? I would suggest using theory to construct different outcome variables and then model to attempt to explain them,

probably as binary outcomes – agreeing that they would like to engage in culture more frequently, vs not, agreeing that they would like to do any that involve attending a venue, vs not, perhaps excluding film as this has a much larger audience than anything else (and generally wider availability) and so on.

I would also suggest when modelling the outcome, that it would be valuable to model the responses from people who do participate in culture separately from those who do not. This has very significantly different policy implications. For example, analysis of the Arts in England survey from Arts Council England some years ago found that ticket prices were a significant barrier for those who already attended and would like to do so more often, but not for those who weren't already attending.

In terms of the model results, the significance of the prefecture is interesting and should perhaps have been foreshadowed in the literature review, if you are going to consider cultural participation. You might want to look at Brook, O. (2016).

Given the focus in the cultural participation literature, having no independent variable related to education or occupational status is an important omission. It is also surprising that the parental cultural engagement variables were not significant. However, there are several possible reasons for this. It may be that they are so strongly correlated with the respondent's own current cultural participation that they provide no significant further explanatory value. But also, there is no indication of how these are specified in the model. Is it a binary variable, for whether the given parent participated in any cultural activity? If they are included as continuous variables, that is a very significant error in the model specification. Either way, this should be explained in the methods section (and possibly they should be combined unless there is a theoretical reason why the fathers and mothers cultural participation are expected to have different relationships with the outcome). Also, I assume that age is included as a continuous variable – you might find that it is not significant if specified this way, but is significant if grouped into categories according to life stage.

There is a lot of descriptive analysis of variables which is problematic for two reasons. One, this is not a representative survey, so knowing what proportion of people gave different answers isn't all that revealing except as a data distribution for the modelling. Comparing the characteristics of people who gave different answers is fine, in my view, but comparing the number who gave this is not. Second, there is a lot of description of variables which are quite incidental to the analysis, with not much prioritisation. Eg figures 1 and 2 relate to interesting questions but as far as I can see they are not included in the analysis? Parental participation in culture – if the point was to discuss the difference that mothers and fathers make, or a difference in types of participation, then this would be justified, but otherwise just chose the measure most useful/relevant to the study and justify it.

There is also no explanation of the principal components analysis at all....

**References**

1. Brook O: Spatial equity and cultural participation: how access influences attendance at museums and galleries in London. *Cultural Trends*. 2016; **25** (1): 21-34 Publisher Full Text

**Is the work clearly and accurately presented and does it engage with the current literature?**
Partly

**Is the study design appropriate and is the work technically sound?**
Partly

**Are sufficient details of methods and analysis provided to allow replication by others?**
No

**Are all the source data and materials underlying the results available?**
No

**If applicable, is the statistical analysis and its interpretation appropriate?**
Partly

**Are the conclusions drawn adequately supported by the results?**
Partly

***Competing Interests:*** No competing interests were disclosed.

***Reviewer Expertise:*** Quantitative analysis of social and spatial inequalities in cultural consumption. Social mobility and intersectional inequalities in creative employment

**I confirm that I have read this submission and believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.**

Reviewer Report 10 October 2025

https://doi.org/10.21956/openreseurope.22370.r61605

**© 2025 Panagiotou M.** This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

?

**Malamatenia Panagiotou**
University of the Aegean, Lemnos, Greece

Summary:
The article proposes a cross-national Cultural Needs Database and examines determinants of potential cultural engagement as a motivation for such an infrastructure. It outlines the problem space (fragmented data, policy demand for comparable indicators), sketches a conceptual framework linking *cultural needs* to *engagement/participation*, and presents an initial design for data collection and harmonisation. The topic is timely and policy-relevant; a shared, interoperable database would be valuable across research and practice.

Comments:
The original questionnaire could be added to the dataset available for transparency purposes.
Footnote 2: The link does not work.
1 It would be helpful to define "cultural needs".
2.1 Correct word "bil- lion"
2.3 Correct word "sub- sequent", "leader- ship"
3.2 Was the questionnaire translated into Greek or adapted to the Greek reality especially as regards the options provided for selection?
3.2 Likert-type scales: This paragraph is confusing in the way the methodological decision made is explained.
3.3 "These results suggest ... their leisure time." The question was "*Would you like to spend MORE time ...*". So, the participants were actually stating what they needed more of, compared to current habits.
3.3 2nd question: could the difference between "Read books" and "Engage in activities related to reading, poetry, literature" be explained? Was the difference clear to participants?
3.4 I understand that the questionnaire was used as in another study, but frequency words without specific frequency quantification (e.g., sometimes = 2-3 times a month) leave room for subjective interpretations. What is *sometimes* for one person can be *often* for another. This could be mentioned as a limitation.
3.4 Figure 3: Remove "11" on horizontal axis. Better present frequency in percentages (vertical axis).
3.4 "*Would you participate in more cultural activities?*" No results provided for this one?
3.5 It would be interesting to see gender-related inherited habits through generations by comparing son-father/son-mother/daughter-father/daughter-mother patterns if there.
3.6 Figures 6 and 7 should be replaced by graphs for visualization.
4 Correct words "rea- sons", "dis- advantage", "con- text"
4 "implicitly implies" should be "implicitly states" or just "implies"
5 Not all questionnaire sections mentioned in 3.1 are presented in Results and Discussion. It would be interesting to see, for example, how barriers affect engagement.
6 "This study provides ... for cultural engagement in Greece." Were the participants invited to add activities not listed? If not, then this sentence should be "This study ... insights into factors ...".
6 The literature cited in this part is a bit old. The authors should look for newer studies to cite.
6 Correct word "willing- ness".

For replicability purposes, a Replication package could be added to the public repository with codebook, transformation rules, scripts, and sample or synthetic data.

The conclusions are a bit far fetched based on the results presented in the paper. It would be safer to scale back claims accordingly and maybe propose an extension for the study for safer conclusions.

**Is the work clearly and accurately presented and does it engage with the current literature?**
Partly

**Is the study design appropriate and is the work technically sound?**
Partly

**Are sufficient details of methods and analysis provided to allow replication by others?**
Partly

**Are all the source data and materials underlying the results available?**
Partly

**If applicable, is the statistical analysis and its interpretation appropriate?**
I cannot comment. A qualified statistician is required.

**Are the conclusions drawn adequately supported by the results?**
Partly

***Competing Interests:*** No competing interests were disclosed.

***Reviewer Expertise:*** applied linguistics, consumer studies, sensory science, lexicography, terminology

**I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.**

Reviewer Report 10 October 2025

https://doi.org/10.21956/openreseurope.22370.r59743

**© 2025 Fiorillo D.** This is an open access peer review report distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

?

**Damiano Fiorillo**
University of Naples "Parthenope", Naples, Italy

Review of “Determinants of potential cultural engagement and the case for a cross-national cultural needs database”.

The paper studies the determinants of potential cultural engagement in Greece using a version of the 2019 Survey on Cultural Participation and Needs in Barcelona (collected by the authors) and ordered probit model. Results highlight a strong positive and statistically significant correlation between current cultural and potential cultural intensity.

**Overall impressions.** Thank you for the opportunity to read this paper. I have major concerns, some of them I detail below.

**Major Concerns**
**Introduction**
The paper starts with the statements: “*Cultural engagement—ranging from attending theater*

*performances and visiting museums to participating in creative workshops—has emerged as a key determinant of individual and societal well-being.*" I suggest that the authors include the appropriate references.
Authors need to add more references concerning the link between cultural participation and subjective well-being (SWB).
From the Introduction Section it does not emerge undoubtedly what is the motivation of the manuscript. While it is clear that the paper intends to study the determinants of "potential cultural engagement," it is not clear how it contributes to collecting comparable data across countries.

**Literature review**
The literature on the topic should be improved highlighting the contributions of the economists on the link between cultural participation and SWB. See, for example, the articles published on the Journal of Cultural Economics.
The statement pages 3-4 "*Through activities such as performances, museum visits, or creative workshops, individuals connect with others, share experiences, and foster a sense of belonging. In diverse societies, these activities also enhance intercultural understanding and inclusivity*" need more references!
This is true for all the Sub-Section 2.2. See also page 4: "*Beyond individual benefits, cultural participation strengthens community infrastructure. Museums, libraries, and community arts centers serve as inclusive civic spaces for dialogue and shared identity. Participatory initiatives, such as community theater or public art projects, have been shown to enhance civic trust, engagement, and volunteerism—particularly in socially fragmented areas*". What are the references?
I found in page 4 the citation: *Francourt et al.* (2019) that I think is in the references: Fancourt D, Steptoe A, Cadar D: Cultural engagement and dementia risk: evidence from the English longitudinal study of ageing. *J Gerontol Series B.* 2019; **75**(1): 160–168. Unfortunately, I did not find it in the *Journals of Gerontology Series B.*
Again, I found in page 4 the citation: *Freeman & Shifrer (2023)*; i.e. Freeman J, Shifrer D: Arts learning and academic achievement: evidence from the secondary longitudinal study of 2002. *Arts Educ Policy Rev.* 2023; **124**(2): 63–75, that I did not find in the journal *Arts Educ Policy Rev*.
In summary, I suggest to improve this section.

**Data**
The section on Greek survey data is well described.
More information on how are built the key dependent and independent variables are suggested.

**Results**
In Table 1, omitted variables, such as education level and income, may bias the results.
See: Falk, M., & Katz-Gerro, T. (2016). Cultural participation in Europe: Can we identify common determinants? *Journal of Cultural Economics*, 40, 127-162.

**Conclusions**
Any further limitations of the research are not provided, such as the problem of endogeneity in terms of omitted variables.

**Is the work clearly and accurately presented and does it engage with the current literature?**
Partly

**Is the study design appropriate and is the work technically sound?**

Partly

**Are sufficient details of methods and analysis provided to allow replication by others?**
Partly

**Are all the source data and materials underlying the results available?**
No source data required

**If applicable, is the statistical analysis and its interpretation appropriate?**
Yes

**Are the conclusions drawn adequately supported by the results?**
Partly

***Competing Interests:*** No competing interests were disclosed.

***Reviewer Expertise:*** Cultural economics, Institutional economics, Health economics, Behavioural economics.

**I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.**