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RESEARCH PAPER

# Gender Differences and Physical Limitations in the Association Between Subjective Well-Being and Cultural Consumption Among Older People

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**Abstract**
The present study examines the association between patterns of cultural engagement and subjective well-being amongst older adults, with a focus on gender differences and physical limitations. We carried out a latent class analysis using Italian data from a 2018 survey to identify the profiles of cultural consumers, exploring the relationship between these profiles and life, leisure, and friendship satisfaction. The results show that allocating more time to diverse cultural experiences was associated with higher levels of subjective well-being, even in the presence of gender differences and physical limitations. Women who engaged in diverse cultural experiences with increased intensity and who participated in highbrow activities exhibited higher levels of leisure and friendship satisfaction than men. Moreover, the analysis emphasizes the potential of cultural participation for aging adults dealing with physical challenges documenting that their participation in a diverse range of cultural activities is positively associated with friend and leisure satisfaction. The findings highlight the importance of cultural participation in enhancing older adults' well-being; it is hoped that they will be used to inform the development of targeted welfare policies.

**Keywords** Subjective well-being · Cultural consumption · Older people · Physical limitations · Gender differences · Italy

## 1 Introduction

The growing number of older people worldwide and the subsequent strain on public finances have led to an increased focus on enhancing life satisfaction during older adulthood. While economic well-being alone does not fully capture the multidimensional nature of individual well-being, researchers in the social sciences have turned their attention to related concepts such as life satisfaction and happiness, moving beyond material factors

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and exploring other intangible and less observable drivers of subjective well-being (SWB). A growing body of research has highlighted the importance of psychological, social, and cultural factors in determining individual happiness and life satisfaction (Diener et al., 1999; Frey, 2010).

Social participation is a crucial aspect of successful older. Engagement in cultural activities provides opportunities to interact with others, fostering social connections and a sense of belonging (Toepoel, 2011). By participating in cultural activities, older adults can engage with their peers, expand their social networks, and combat feelings of loneliness and marginalization (Burnett-Wolle & Godbey, 2007; Findlay & Cartwright, 2002; Pettigrew, 2007). Such activities have also been found to enhance cognitive skills, improve mental health, foster psychological well-being, and contribute to a sense of meaning in life (Fancourt & Finn, 2020; McCarthy et al., 2001). However, the issue has received little scholarly attention; researchers in the field have tended to focus on a single cultural activity (or treat them in additive terms) and neglect the potential effects of different levels of participation on SWB amongst older individuals.

The present study aimed to complement the literature by exploring how different cultural consumption patterns, in terms of individual combinations of variety and frequency, related to different domains of SWB amongst an older population. Using data from the *Multipurpose Survey on Households: Aspects of Daily Life* (Italian National Institute of Statistics, 2018) we identified different profiles of cultural consumers based on their patterns of attendance and engagement in various cultural activities (Katz-Gerro, 2004; Sullivan & Katz-Gerro, 2007). To do so, we carried out a latent class analysis.

The study explores two distinct strands of the literature on SWB, using insights gained from them to investigate cultural participation amongst older individuals and its relationship with SWB across different domains of satisfaction – namely, life, leisure, and friendship. It also examines the potential of cultural participation for older adults dealing with physical limitations. While an extensive body of literature has acknowledged that individuals with long-term physical disabilities generally experience lower life satisfaction (Roes, 2008; van Campen & Schellingerhout, 2005), we set out to verify whether the quantity and quality of cultural participation are associated to SWB (Fiorillo & Sabatini, 2011). Finally, the study explores the role played by gender in cultural participation. To the best of our knowledge, an assessment of the combined contribution of these factors to differences in the relationship between SWB and cultural consumption is lacking, especially in an Italian context and amongst older populations; the study, therefore, contributes to advancements in knowledge across a variety of dimensions. It includes a literature review on SWB relating to cultural activities and cultural consumption amongst older adults; a section on methodology; a presentation of the findings; and some concluding remarks.

## 2 Theoretical Background

As was noted above, the present study brings together two strands of the literature: SWB as it relates to social activities and the more general topic of cultural consumption amongst older people. The former— which draws on social psychology and sociology— has included the investigation of contextual factors affecting SWB, but with a tendency to neglect the role played by participation in cultural activities. The latter has largely comprised quantitative and qualitative economic and sociological studies that have focused on

specific patterns of engagement in art and cultural forms amongst older people. The study also pays close attention to gender differences in SWB and cultural participation.

### 2.1 Understanding SWB in Relation to Cultural Activities

The definition of well-being and related terms has been widely debated over the past couple of decades (Brown et al., 2015; Galloway, 2006). Although numerous studies have investigated the influence of economic and social factors on well-being, a consensus on a definition of the term—one that incorporates the specific categories of quality of life and self-reported life satisfaction—has yet to be reached.

A starting point for a definition of well-being is the fundamental distinction between objective and subjective components (Organisation for Economic and Cooperative Development, 2013). The objective component focuses primarily on external factors, such as living in a healthy environment or an objective evaluation of quality of life. Conversely, the second component reflects a subjective evaluation of life circumstances (or SWB). It centers on personal experience and how individuals perceive their lives. Subjective well-being is associated with life satisfaction in two ways. The first is based on a unidimensional perspective, where SWB is closely tied to life satisfaction (Christoph & Noll, 2003). The second takes a multidimensional standpoint, positing that SWB tends to be connected to different domains of satisfaction (Galloway, 2006). In their definition of general SWB, Diener and Suh (1997) incorporated the interconnected elements of life satisfaction, positive affect, and negative affect and stressed the role of negative experiences in influencing individuals' assessments of their lives. Other studies have suggested that a comprehensive definition of SWB must consider cognitive aspects (e.g., satisfaction with life), short-term emotional components (e.g., perceptions of happiness; Fleche et al., 2012; Helliwell & Putnam, 2004), and affective components (e.g., a sense of belonging). The present study adopts a multidimensional definition of SWB that includes the individual's evaluation of their overall life satisfaction and relevant subdomains (i.e., leisure and friendship satisfaction; Diener, 2009; Diener et al., 1993). Recent studies on SWB are dispersed across multiple disciplines, and only a few reviews have distilled the theoretical and empirical principles identified in the literature (Galloway, 2006; Linton et al., 2016).

A large body of research has explored the effects of various aspects of life on well-being, including household income, labour conditions, and health status (Alderson et al., 2007). Recently, there has been a growing emphasis on the role of non-pecuniary factors, underscoring the influence of factors beyond financial considerations in shaping individuals' overall life satisfaction (Ngoo et al., 2015). These non-monetary components encompass social relationships, personal values, a sense of purpose, and subjective experiences (Arpino & de Valk, 2018). Strong social ties and leisure activities, for example, engagement in social and cultural gatherings, appear to have the capacity to positively impact life satisfaction and other relevant subdomains of SWB (Becchetti et al., 2008), though there is little substantive supporting evidence for this.

More research on the effects of leisure on SWB is needed because individuals arguably have more control over what they do in their free time than other sources of life satisfaction. Understanding how leisure activities and the allocation of free time influence SWB can offer insights into how individuals might enhance their own happiness and overall life satisfaction. However, studies on the leisure-well-being nexus remain scarce and tend to focus on the effects of physical activity on well-being (Mitchell, 2013; Pretty et al., 2007), rather than the role played by leisure activities centered on art and culture. A small

strand of the empirical literature has examined how engagement in art and culture impacts SWB (Brown et al., 2015; Grossi et al., 2012). The findings suggest a positive association between cultural participation and various facets of SWB, including enhanced cognitive skills, a sense of meaning in life, increased happiness, and the development of pro-social attitudes (Fancourt & Finn, 2020; Lee & Hao, 2020). Matrix (2010) identified a positive relationship between engagement in culture and sport and life satisfaction. Leadbetter and O'Connor (2013), using data from the Scottish Household Survey 2011, explored the relationship between engagement in cultural and sporting activities (including visiting cultural sites) and key quality of life indicators in Scotland. The findings consistently demonstrated that individuals who participated in culture and sport or attended cultural events reported higher levels of life satisfaction and perceived themselves to be in good health compared with those who did not participate. Notably, this association held true after accounting for factors such as age, economic status, income, geographical deprivation, education qualifications, and disability/long-standing illnesses. Similarly, Brown et al. (2015), using data from the United Kingdom Household Longitudinal Survey examined the relationship between the type, number, and frequency of participation in leisure activities and life satisfaction. The findings revealed a distinct and positive correlation between engagement in sports, heritage, and active-creative leisure activities and life satisfaction. High levels of life satisfaction were associated with participation in a variety of different activities rather than the frequency of participation in each individual activity.

The majority of these studies, however, focused on general populations and did not consider broader phenomena, such as the intricate relationships between increased participation in cultural activities and specific life satisfaction domains (Brown et al., 2015; Graham & Pozuelo, 2017). They evaluated the influence of single cultural activities or treated them as additive factors, overlooking the potential combined impact of variety and frequency. Ateca-Amestoy et al. (2008) argued that SWB is more likely to be associated with an individual's leisure experience, which is manifested as a lifestyle pattern and influenced by diverse consumption choices across various cultural activities.

### 2.2 Conceptualizing Patterns of Cultural Consumption Amongst Older People

We lack a comprehensive understanding of how SWB is impacted by the simultaneous combination of variety and frequency in cultural participation. To address this gap in the research, we consulted the sociological literature on the concept of cultural consumer profiles (Katz-Gerro, 2004). These profiles enabled us to identify prevalent cultural patterns emerging from specific consumption habits across a range of cultural activities.

Our starting point was Bourdieu (1984), who introduced the notion of highbrow and lowbrow cultural goods as a means of distinguishing individual cultural preferences and practices.[1] This framework allows for an exploration of how cultural preferences reflect and contribute to the stratification of social groups. Cultural consumption encompasses a wide range of activities and experiences, so defining and measuring its breadth can pose a challenge. To this end, Peterson (1992), moving beyond the simplistic high-culture mass-culture dichotomy, introduced the idea of the (cultural) omnivore and univore. The former has extensive and varied cultural interests; they engage in a wide array of highbrow and

[1] In Bourdieu's framework, the term highbrow refers to pure arts such as classical music, literature, and opera, while lowbrow encompasses more popular forms of culture.

lowbrow activities. The latter, by contrast, is more limited in their preferences, concentrating on specific cultural activities. Sullivan and Katz-Gerro (2007) extended our understanding of cultural consumption patterns by introducing the voracious omnivore, who actively and simultaneously engages in a diverse range of cultural activities. By incorporating this individual, a more comprehensive understanding of the interplay between the variety and frequency of cultural consumption in shaping individuals' experiences and preferences can be arrived at, thus making possible a more nuanced exploration of how a combination of different cultural activities influences SWB. Meanwhile, Bertacchini et al. (2023) used Italian data to identify the regional effect of heterogeneity in cultural participation on overall life satisfaction and specific subdomains. They concluded that life satisfaction tends to increase as the level of participation intensifies.

The present study complements the above findings by exploring the effect of engagement in arts and cultural activities on older adults' SWB. As was noted above, the literature in this area has concentrated on the consequences of social inclusion/exclusion on well-being. Generally speaking, the results showed that patterns of cultural consumption differed according to age (Goulding, 2018). Some of the authors noted that sociodemographic factors such as gender, ability/disability condition, and levels of education were important drivers of cultural engagement (Keaney & Oskala, 2007). While individuals with long-term physical disabilities tend to have a lower quality of life (regardless of age), various studies have identified social participation as a key determinant in improving their SWB (van Campen & van Santvoort, 2013). Participating in cultural activities can reduce social isolation for older adults, providing opportunities for connection, expanding social networks, and overcoming loneliness and marginalization (Burnett-Wolle & Godbey, 2007; Findlay & Cartwright, 2002; Pettigrew, 2007; Toepoel, 2011). Research has also shown that older adults can benefit from social interactions, in terms both of quality and quantity (Fiorillo & Sabatini, 2011). Participating in a diverse range of cultural activities can improve cognitive function, reduce feelings of isolation, and create more opportunities for socializing (Smith, 2020).

### 2.3 Gender Differences in SWB and Cultural Engagement

There is an ongoing debate in the literature regarding gender disparities in reported life satisfaction. While some studies have shown that women generally tend to report lower levels of satisfaction than men (Mroczek & Kolarz, 1998), others found that they are happier (Blanchflower & Oswald, 2004; Easterlin, 2003). Women exhibit higher levels of overall satisfaction but also self-report depression more frequently. This gender/overall satisfaction paradox might help explain some of the contrasting findings in the literature (Kessler et al., 1993; Weissman et al., 1996). Women have a natural proclivity for establishing and nurturing relationships with others, as well as investing time and effort into cultivating hobbies and leisure activities. Over time, they tend to develop strong social connections more readily than men (Scanlon, 2000). Moreover, women are known to prioritize their health and actively engage in activities that promote well-being (Lee & Russell, 2003). Nevertheless, women's life satisfaction is a complex and multifaceted concept, influenced by factors such as their marital status, level of education, and working conditions. Men's happiness, on the other hand, appears to be tied primarily to occupational status (Di Cesare & Amori, 2006).

Gender-related preferences have been acknowledged to be a crucial factor in cultural participation (Christin, 2012). Some studies found that women tend to participate more in highbrow cultural activities such as visiting museums, attending classical music concerts,

and engaging with others (Bihagen & Katz-Gerro, 2000). These gendered tastes are a combination of socialization during childhood, societal standards, and personal experience (Bourdieu, 1984), and interact in complex ways to produce distinct patterns of cultural consumption. The role of early experiences during childhood in shaping women's engagement in highbrow cultural pursuits has been extensively addressed (for a review, see Lareau, 2000). Cultivation of a preference for highbrow culture occurs in the early stages of life and is influenced by various factors closely linked to socioeconomic status. Exposure to highbrow culture during early socialization acts as a symbolic boundary between classes (Christin, 2012). Early socialization influences how one perceives oneself, and this can have long-term consequences for self-esteem and SWB. However, the existing literature in this area is limited and mainly focused on gendered cultural preferences rather than their effects on SWB.

The ongoing debate on the cultural engagement of older adults and SWB, gender disparities in reported life satisfaction, and the limited research on gendered cultural consumption underscore the need for further research. The present study has contributed to this debate by addressing the following questions:

RQ1: What is the association between the frequency of engagement in a variety of cultural activities and SWB (including life, leisure, and friendship satisfaction) amongst older adults?

RQ2: To what extent does the frequency and variety of cultural engagement mitigate the potential negative impact of physical limitations on the SWB of older adults (including life satisfaction, friend, and leisure satisfaction)?

RQ3: Does the relationship between SWB and cultural consumption differ according to gender?

## 3 Data and Methodology

### 3.1 Data

The present study used data from the 2018 Italian Multipurpose Survey on Households entitled *Aspects of Daily Life*, conducted by the Italian National Institute of Statistics (ISTAT). The survey comprises a sample of 42,000 individuals, covering various aspects of their living conditions. It includes questions on cultural participation, as well as measures of individual satisfaction with life and subdomains relating to health, leisure, and friendships. Its primary goal is to deepen our understanding of individual behaviors and the daily challenges they encounter. Moreover, the survey offers valuable insights into work-life balance, interpersonal relationships, household dynamics, community involvement, political and social participation, and healthy lifestyles, allowing us to investigate the connections between cultural engagement and well-being within various dimensions of the participants' lives.

After selecting individuals aged 55 and above, our sample comprised 16,515 participants. In line with the objectives of our research, we gathered individual socio-demographic characteristics, including gender, age, employment status, marital status, educational attainment, presence of physical limitations, self-rated health satisfaction, and economic well-being. We also used data on cultural supply at a regional level from the ISTAT database.

### 3.2 Variables and Method

Our main variable of interest was individual satisfaction with life and other relevant subdomains, for example, leisure and friendship satisfaction. We gathered information about the variety and frequency of participants' engagement in outdoor cultural and leisure activities—which encompassed sports events, dance venues, music concerts, cinemas, theatres, museums, and monuments—for the past 12 months. The options offered were as follows: *never*, *1–3 times*, *4–6 times*, *7–12 times*, and *more than 12 times*. We grouped the original five frequency categories into three broader categories: *never*, *1–6 times*, and *at least 7 times*. We do that for several reasons: first, reducing the original five categories to three can make it easier to interpret the results and capture the main trend in cultural participation without over-complicating the model. Second, by focusing on three crucial levels of engagement (no participation, occasional and frequent), we are able to capture meaningful differences in cultural behavior, aligning with common thresholds in social research (Bertacchini et al., 2023). Third, from a methodological point of view, grouping cultural frequencies increases the sample size within each category, reducing variability that might arise from smaller subgroup analyses.

To understand how the combined influence of the variety and frequency of cultural engagement is related to life satisfaction and related subdomains, we employed Bertacchini et al.'s (2023) latent class analysis (LCA) approach, from which we derived four distinct cultural consumer profiles:

$$p(Y = y) = \sum_{c=0}^{c} \gamma_c \prod_{j=1}^{J} \prod_{r=1}^{R} \rho_{j,\,rj|c}^{1(yi=rj)}$$

where $P(Y = y)$ denotes the likelihood of observing a set of responses given $I(y_j = r_j)$ if the response to variable $j = rj$ or 0 otherwise; $\gamma_c$ represents the likelihood of an individual belonging to latent class $c$, while $\rho_{j,rj|c)}^{I(y_i=r_j)}$ is the probability of response $r_j$ for each individual $i$. The crucial parameters are γ, which represents the probabilities of belonging to a latent class, and $\rho$, which represents the probabilities of item responses, conditional on γ. Latent class analysis allowed us to assign each sample member to the latent class that best fitted their specific individual characteristics. These classes were mutually exclusive, that is, each individual belonged to only one class. We segmented the sample into distinct subgroups and analyzed them. The central idea of LCA is to create classes comprising individuals with similar response patterns; we clustered individuals with comparable preferences in cultural consumption, taking into account the simultaneous combination of variety and frequency of their participation.

First, we evaluated different models with different numbers of classes, spanning from a single class up to six classes. The optimal number of classes was determined using the Bayesian information criterion (BIC) and the Akaike information criterion (AIC). Table 1 shows the goodness of fit for model selection in the LCA.

The information parameters in Table 1 decrease as the number of classes increases. The need to preserve the parsimony and interpretability of the final model prompted us to opt for a model with fewer classes, so we identified four distinctive cultural consumer profiles.[2] We then allocated each individual to the class that best suited their characteristics. Each

[2] Bayesian information criterion: 97,443; AIC: 96,917, $G^2$: 4081.6.

**Table 1** Akaike's information criterion, Bayesian information criterion, and Goodness of fit measures for LCA

| Model | N | G2 | df | AIC | BIC | Δ AIC | Δ BIC |
|---|---|---|---|---|---|---|---|
| One class | 16,515 | 26,490 | 16 | 119,223 | 119,347 | – | – |
| Two classes | 16,515 | 7036.2 | 32 | 99,801 | 100,048 | 19,422 | 19,299 |
| Three classes | 16,515 | 4936.3 | 50 | 97,773 | 98,123 | 2028 | 1925 |
| Four classes | 16,515 | 4081.6 | 67 | 96,917 | 97,433 | 856 | 690 |
| Five classes | 16,515 | 3321.7 | 81 | 96,073 | 96,810 | 844 | 623 |
| Six classes | 16,515 | 3189.6 | 91 | 95,942 | 96,775 | 131 | 35 |

distinct cultural profile was labeled according to the features of their specific cultural consumption. Following this, we incorporated the cultural consumption profiles derived from LCA as explanatory variables in our regression models.

Since the SWB measures in our survey were ordinal, we were aware that an ordinal regression model may have been the more traditional choice. However, due to the subjective nature of the scores and the characteristics of both cultural consumption patterns and individual well-being, the probit regression model using a binary choice approach was better suited for examining the cultural question because it facilitated the interpretation of the simultaneous combination of variety and frequency of cultural goods consumption. Our main research question was therefore based on the following formula:

$$\mathrm{SWB}_{ird} = \alpha + \beta_1 \mathrm{PROFILES}_{ird}\prime + \beta_2 X_{ird}\prime + \beta_3 Z_r\prime + u_{ird}$$

where SWB is the SWB of individual *i*, in region *r* for each domain *d* (life, friendship, and leisure satisfaction). Life satisfaction was evaluated using an 11-point Likert scale, from 0 (indicating *no satisfaction at all*) to 10 (indicating *complete satisfaction*) in the past 12 months. We posed the following question: When you consider all aspects of your life, how satisfied are you with it? A binary dummy variable was assigned values of 1 for responses falling within the top four categories (7–10) and 0 for all other scores. Friendship and leisure satisfaction were each assessed using a 4-point Likert scale, with responses varying from 1 (*very happy*) to 4 (*unhappy*).[3] Binary dummy variables were assigned a value of 1 if the individual fell into the categories of *very happy* or *quite happy* (Scores 1–2 on the Likert scale) and 0 otherwise.

Our explanatory variable was PROFILES′ which referred to the four cultural consumer profiles for individual *i* in region *r* for each domain *d*, as derived from the LCA: culturally inactive, culturally omnivorous, highbrow lovers, and culturally voracious. The profiles reflected the outcomes of various combinations of individual-level engagement in cultural activities. The combinations encompassed different degrees of simultaneous involvement in cultural pursuits. A more detailed description of the profiles is provided in the following section. The parameter β1 indicated the connection between cultural consumption profiles and the individual's SWB (SWB). When this coefficient was positive and statistically significant, the diversity within cultural profiles, stemming from the simultaneous

[3] The questions were: First, how satisfied are you with your relationships with your friends? Secondly, how satisfied are you with your free time?

combination of variety and frequency in cultural engagement, was associated with a greater probability of heightened satisfaction across the three principal life domains.

The vector $X'$ comprised individual-level observable characteristics that are commonly recognized in the literature as significant in influencing SWB. It included variables such as gender, age (dummies for 65–74-year-olds and over-75 s, with respondents under the age of 65 as the reference group); marital status (dummies for married/cohabitant with a spouse, separated/divorced, and widow/er, with single as the reference group); children; educational attainment (upper-secondary and tertiary levels, with little education as the reference group); and labor status (dummies for currently employed and currently retired, with unemployed as the reference group). The ownership status of the individual's home and their subjective evaluation of economic status were taken into account to gain an insight into their inclination to allocate economic resources to leisure activities. Subjective assessments of health satisfaction and indicators of physical health conditions were also included. This multifaceted approach allowed for a more comprehensive examination of the variables impacting individual well-being and cultural choices. For instance, we were able to account for relevant individual traits that might have influenced cultural consumption patterns and SWB outcomes.

The per capita number of cultural venues was included ($Z\prime$) to account for regional disparities in the local cultural supply. We could then identify the influence of an individual's current cultural consumption on their SWB from the possible effects of the accessibility of cultural and leisure opportunities within their local environment. Finally, we included dummies for the macro area of residence (i.e., northeast, northwest, central, south, and islands); $u_{ird}$ was the error term. The descriptive statistics of the variables are displayed in Table 7 in the Appendix.

### 3.3 Cultural Consumer Profiles

Previous studies on cultural consumption have focused on understanding tastes and preferences through participation in highbrow and lowbrow cultural activities (Katz-Gerro, 2004; Sullivan & Katz-Gerro, 2007). Our analysis goes beyond this conventional division to unveil distinctive patterns of cultural consumption among the aging population. Following Bertacchini et al. (2023) approach, we employed LCA and the individual expressions of cultural preferences reflected in the participants' self-reported engagement in cultural activities to extrapolate distinct cultural consumer profiles.

Table 2 provides an overview of the profiles within the four clusters and the probability associated with the frequency of participation in specific activities, categorized as *never*, *1 to 6 times*, or *7 or more times* per year. The first profile was the culturally inactive group, which comprised individuals displaying a very high conditional probability of abstaining from participation in almost all cultural activities except for cinema; the probability of not engaging in any cultural activity ranged from 95 to 99%. These individuals were characterized by their non-engagement with cultural venues relating to the arts, entertainment, and heritage. In an aging population, cultural inactivity may be attributed to a variety of factors, for example, health-related issues, restricted mobility, or diminished interest (Nummela et al., 2011). Next was the cultural omnivore group, who were characterized by a moderate probability of engagement. Members exhibited diverse cultural interests and took part in highbrow and lowbrow activities (i.e., a relatively high probability of cinema attendance [1–6 times; 42%] and a moderate probability of attending the theatre [1–6 times; 23%], sports events [1–6 times; 23%], and

**Table 2** Parameter estimates of the LCA model, and conditional probabilities

| | Culturally inactive | Culturally omnivore | Highbrow lovers | Voracious |
|---|---|---|---|---|
| *Theater* | | | | |
| Never | .9879108 | .7478356 | .6262128 | .1297229 |
| 1–6 times | .0108217 | .2398432 | .3543812 | .5973911 |
| = +7 times | .0012675 | .0123212 | .019406 | .2728859 |
| *Cinema* | | | | |
| Never | .9588554 | .5340448 | .462115 | .1470756 |
| 1–6 times | .0405572 | .4285639 | .4562398 | .3781116 |
| = +7 times | .0005874 | .0373912 | .0816452 | .4748128 |
| *Museo* | | | | |
| Never | .9857583 | .9775319 | .0088691 | .0245481 |
| 1–6 times | .0140102 | .0224681 | .9496415 | .6015382 |
| = +7 times | .0002315 | 2.97e-21 | .0414894 | .3739137 |
| *Music* | | | | |
| Never | .9988528 | .9257555 | .8115421 | .2646883 |
| 1–6 times | .0010521 | .0734541 | .1819202 | .5239892 |
| = +7 times | .000095 | .0007904 | .0065377 | .2113225 |
| *Classical music* | | | | |
| Never | .9953141 | .8027462 | .7996668 | .3008925 |
| 1–6 times | .004552 | .1933852 | .1990806 | .5361671 |
| = +7 times | .0001339 | .0038685 | .0012526 | .1629404 |
| *Sport events* | | | | |
| Never | .9615948 | .7128512 | .7434258 | .5656434 |
| 1–6 times | .0294848 | .2361468 | .2209511 | .2950041 |
| = +7 times | .0089204 | .051002 | .035623 | .1393525 |
| *Disco* | | | | |
| Never | .9812467 | .8803125 | .9169316 | .7036821 |
| 1–6 times | .0103496 | .0905133 | .0632688 | .1695473 |
| = +7 times | .0084037 | .0291743 | .0197995 | .1267705 |
| *Monuments* | | | | |
| Never | .9861291 | .8220664 | .2945858 | .0769452 |
| 1–6 times | .013047 | .1762464 | .6691593 | .6476389 |
| = +7 times | .0008239 | .0016873 | .0362549 | .2754159 |

classical music concerts [1–6 times; 19%]). The highbrow lovers category comprised individuals who exhibited a distinctive preference for cultural heritage-related activities, such as visiting museums and monuments (with a strong inclination toward visits to museums [1–6 times; 94%] and monuments [67%]). While they showed a higher probability of engaging in cultural activities associated with heritage, their participation in other highbrow and lowbrow cultural activities (except for cinema, with a 45% probability), was relatively lower (with a moderate probability of attending classical music concerts [19%]). Finally, the culturally voracious group actively participated in all activities and did so with a high frequency, with 12 to 47% engaging more than seven times. These individuals exhibited an insatiable appetite for a wide range of cultural activities, spanning different domains (e.g., the arts, entertainment, and heritage). Smith (2020)

observed that cultural voracity offered older people cognitive stimulation, a sense of enrichment, and life satisfaction.

## 4 Results

Table 1A (Appendix) shows that females represented 54% of the participants. The sample was evenly distributed across three age groups (55–64, 65 − 74, and 75 +). Seventy-three percent of the participants were retired or were economically inactive and 21% were employed. Sixty-three percent were married or cohabiting with their spouse and approximately 20% were widowed. Education levels did not differ significantly. Finally, 56% did not report any physical limitations and 32% had minor physical limitations. The majority of the participants rated their health as good (Scores 2–3). Eighty-two percent of the participants were homeowners and 63% stated that their economic status was adequate. These indicators were used to gauge the individuals' willingness to spend on cultural and leisure activities.

### 4.1 SWB and Heterogeneity in Cultural Consumption Profiles

For the preliminary step of our analysis, we explored the relationship between the simultaneous combination of variety and frequency in cultural consumption and overall life satisfaction among the participants. Table 3 presents the results of the probit regression analysis using different binary dependent variables and ordered regression analysis.

**Table 3** Probit and Ordered probit estimations of Life Satisfaction

| DV: Life Satisfaction | Cut-off 6 (1) | Cut-off 7 (2) | Cut-off 8 (3) | Cut-off 9 (4) | Ordered probit (5) |
|---|---|---|---|---|---|
| Culturally Omnivore | 0.0404*** | 0.0311** | -0.00426 | − 0.00804 | 0.0504 |
| | (0.00888) | (0.0132) | (0.0133) | (0.00814) | (0.0274) |
| Highbrow Lovers | 0.0462*** | 0.0853*** | 0.0268** | 0.00394 | 0.106*** |
| | (0.00798) | (0.0114) | (0.0120) | (0.00752) | (0.0244) |
| Culturally Voracious | 0.0470*** | 0.0876*** | 0.0331 | 0.00918 | 0.125*** |
| | (0.0156) | (0.0225) | (0.0239) | (0.0151) | (0.0480) |
| Individual controls | YES | YES | YES | YES | YES |
| Regional controls | YES | YES | YES | YES | YES |
| Regional cultural supply controls | YES | YES | YES | YES | YES |
| Observations | 16,011 | 16,011 | 16,011 | 16,011 | 16,011 |
| Pseudo r-squared | 0.1895 | 0.1588 | 0.1154 | 0.0804 | 0.0720 |
| Chi-square | 2763.260 | 3242.641 | 2455.354 | 1026.696 | 4298.765 |
| Prob > Chi2 | 0.1342 | 0.0064 | 0.0150 | 0.0971 | – |

The reference category is Culturally Inactive. The sample comprises individuals aged 55 and above. The table presents the findings of the probit regression analysis with different thresholds of the Life satisfaction dependent variable (11-point Likert scale) (1–4 columns). The binary dependent variable is created using different cut-offs (6/7/8/9). Column 5 shows the results of the ordered probit estimation. Marginal effects are reported. Standard errors are clustered at the individual level

The first four columns show the results of the probit regression analysis, with various thresholds for the dependent variable of life satisfaction (using an 11-point Likert scale). The binary dependent variable was created using different cutoffs (6/7/8/9). Column 5 reports the findings of the ordered probit estimation using the ordinal measure of life satisfaction, ranging from 0 to 10. In Columns 1–4, the principal relationship is consistent across various specifications of the dependent variable, excluding the case of individuals with extremely high satisfaction levels (9 on a scale of 10; Column 4). We used a probit regression with a binary dependent variable equal to or exceeding 7 on a scale of 10 to facilitate the interpretability of our findings, particularly the interaction between the variety and intensity of individual cultural consumption. The coefficient in Column 5 confirms the previous findings for all the cultural consumer profiles when compared with the baseline profile (culturally inactive). The results showed that a diverse range of cultural consumption behaviors (e.g., highbrow or voracious) was associated with greater life satisfaction, particularly among older individuals. The findings reinforced the correctness of summarizing individual cultural choices through a binary dependent variable to enhance the interpretation of the findings.

Subsequently, we explored the extent to which the different cultural consumer profiles were associated with life, friendship, and leisure satisfaction for the older population. Table 4 shows the results of probit regressions of our baseline specification.

The results in Column 1 show a positive association between life satisfaction and the simultaneous combination of variety and frequency of individual cultural engagement (RQ1). They indicate that participation in various cultural activities enhances life satisfaction. Even sporadic engagement in different cultural activities is positively associated with a higher probability of life satisfaction, spanning from those who are culturally inactive to the culturally omnivorous. As with our findings regarding life satisfaction, friendship and leisure satisfaction coefficients exhibited higher values. While life satisfaction can be related to various socio-demographic factors, especially for older individuals, larger coefficients associated with satisfaction subdomains were directly linked with free time and recreational activities, such as friendship and leisure satisfaction, indicating a more pronounced and robust association between cultural good consumption and SWB. Cultural engagement also had a significant positive effect on all three aspects of SWB among the highbrow lover group. The coefficients in Columns 1, 2, and 3 reveal that individuals who identified as highbrow cultural consumers tended to have a higher probability of being satisfied with life, friendships, and leisure. This finding highlights the positive association between involvement in the arts and heritage and participation in civic life, a sense of place, and a sense of belonging. This tends to be particularly true for aging populations, for which social cohesion is also related to many other social outcomes, such as the enhancement of personal capabilities and a sense of meaning.

Finally, our results reveal that dedicating more time to diverse cultural experiences was linked to elevated levels of life satisfaction. The culturally voracious profile shows the strongest positive effects on all three aspects of SWB. The coefficients of 0.0894***, 0.134***, and 0.151*** in Columns 1, 2, and 3 indicate that the members of this group experienced significantly higher levels of life satisfaction, friendship, and leisure satisfaction. Our findings suggest that high-frequency engagement with a diverse range of cultural activities mitigated satiation effects, resulting in higher levels of overall individual satisfaction.

Finally, in terms of socio-demographic characteristics and territorial covariates, gender did not appear to be a significant factor in life satisfaction and other subdomains of SWB. By contrast, marriage status significantly impacted life satisfaction, with

**Table 4** Probit estimations of the determinants of Life satisfaction, Friend and Leisure satisfaction

| DV | (1) Life satisfaction | (2) Friend satisfaction | (3) Leisure satisfaction |
|---|---|---|---|
| Culturally Omnivore | 0.0276** | 0.0648*** | 0.0547*** |
| | (0.0135) | (0.0107) | (0.0128) |
| Highbrow Lovers | 0.0866*** | 0.0878*** | 0.0512*** |
| | (0.0116) | (0.00924) | (0.0115) |
| Culturally Voracious | 0.0894*** | 0.134*** | 0.151*** |
| | (0.0229) | (0.0149) | (0.0193) |
| Current employed | 0.0818*** | 0.00928 | −0.158*** |
| | (0.0215) | (0.0179) | (0.0209) |
| Current retired | 0.0875*** | 0.0136 | 0.0404 |
| | (0.0213) | (0.0176) | (0.0208) |
| Female | −0.0203** | −0.0141** | −0.0725*** |
| | (0.00863) | (0.00709) | (0.00835) |
| Age:65–74 | 0.00821 | −0.00839 | 0.0212 |
| | (0.0122) | (0.00971) | (0.0118) |
| > =75 | 0.00807 | −0.0504*** | 0.0182 |
| | (0.0142) | (0.0117) | (0.0139) |
| Married/Cohabitant with spouse | 0.0768*** | 0.0524*** | 0.00320 |
| | (0.0164) | (0.0138) | (0.0154) |
| Separated/Divorced | −0.0315 | −0.0122 | −0.00976 |
| | (0.0210) | (0.0179) | (0.0194) |
| Widow/er | 0.00916 | −0.00223 | −0.0107 |
| Child | (0.0187) | (0.0157) | (0.0175) |
| | −0.0443*** | −0.0253*** | −0.0495*** |
| | (0.00956) | (0.00787) | (0.00918) |
| Secondary school | −0.00859 | 0.0174** | 0.00607 |
| | (0.0111) | (0.00883) | (0.0108) |
| Diploma | −0.00213 | −0.00225 | −0.00708 |
| | (0.0121) | (0.00995) | (0.0118) |
| Degree/Phd | 0.0190 | −0.00925 | −0.0122 |
| | (0.0173) | (0.0150) | (0.0169) |
| North-East | −0.112*** | −0.0290 | −0.0271 |
| | (0.0248) | (0.0208) | (0.0242) |
| Center | −0.159*** | −0.0181 | −0.0355 |
| | (0.0236) | (0.0190) | (0.0227) |
| South | −0.0616*** | −0.0199 | −0.0173 |
| | (0.0162) | (0.0139) | (0.0164) |
| Islands | 0.0265 | 0.0502*** | 0.0558** |
| | (0.0219) | (0.0172) | (0.0224) |
| Health satisfaction:2 | −0.143*** | −0.0432*** | −0.0691*** |
| | (0.0116) | (0.0110) | (0.0131) |
| Health satisfaction:3 | −0.383*** | −0.186*** | −0.271*** |
| | (0.0144) | (0.0136) | (0.0159) |

**Table 4** (continued)

| DV | (1) Life satisfaction | (2) Friend satisfaction | (3) Leisure satisfaction |
|---|---|---|---|
| Health satisfaction:4 | −0.588*** | −0.349*** | −0.474*** |
| | (0.0193) | (0.0201) | (0.0207) |
| Rental/sublet house | 0.0674 | 0.0730*** | 0.0498 |
| | (0.0347) | (0.0267) | (0.0332) |
| Owned house | 0.110*** | 0.0774*** | 0.0775** |
| | (0.0329) | (0.0252) | (0.0315) |
| Other titles | 0.125*** | 0.0764** | 0.0495 |
| | (0.0410) | (0.0316) | (0.0392) |
| Home for free | 0.0793 | 0.0824** | 0.0823** |
| | (0.0408) | (0.0321) | (0.0395) |
| Economic resource: adequate | −0.0748** | 0.0333 | −0.0470 |
| | (0.0320) | (0.0302) | (0.0313) |
| Scarce | −0.208*** | −0.0243 | −0.142*** |
| | (0.0326) | (0.0307) | (0.0320) |
| Insufficient | −0.245*** | −0.0523 | −0.211*** |
| | (0.0385) | (0.0352) | (0.0377) |
| Physical limitations: not severe | 0.0465*** | 0.0301** | 0.0501*** |
| | (0.0148) | (0.0117) | (0.0144) |
| no limitations | 0.0589*** | 0.0354*** | 0.0583*** |
| | (0.0153) | (0.0123) | (0.0149) |
| Territorial controls | YES | YES | YES |
| Regional Cultural Supply covariates | YES | YES | YES |
| Observations | 15,449 | 15,509 | 15,495 |
| Pseudo r-squared | 0.1589 | 0.1161 | 0.1176 |
| Chi-Square | 3166.406 | 1896.994 | 2306.359 |
| Prob > Chi2 | 0.0756 | 0.0431 | 0.1798 |

The reference category is Culturally Inactive. The sample comprises individuals aged 55 and above. The table presents the findings of the probit regression analysis investigating the link between cultural consumption profiles and various facets of subjective well-being, encompassing life satisfaction, friend satisfaction, and leisure satisfaction. Marginal effects are reported. Standard errors are clustered at the individual level

married or individuals in civil relationships reporting higher satisfaction levels than singles. Children were associated with reduced life satisfaction and had a corresponding impact on related domains. Employment status also played a role in life satisfaction, with employed participants reporting higher levels of satisfaction than the unemployed. This difference may be attributed to variations in economic and workplace conditions. The retired participants consistently demonstrated a marked and statistically significant greater life satisfaction. The absence of physical or fewer limitations was positively related to life satisfaction and related domains, reflecting the positive impact of good health on SWB. Additionally, our results confirmed that economic status is a significant factor in life satisfaction and other relevant subdomains. Individuals with higher economic status (i.e., those who owned their own homes and possessed abundant economic resources) tended to report higher levels of satisfaction. We controlled for territorial

covariates and cultural supply at the regional level to account for other potential influences; statistical significance was analyzed using a *t*-test.

### 4.2 Physical Limitations

In a further step, our analysis involved the mediating effect of increased cultural consumption on the self-reported overall satisfaction of those with different levels of physical limitation. Table 5 shows the results of the probit estimations, differentiating the presence/absence/severity of physical limitations.

Columns 1, 2, and 3 display the influence of the simultaneous combination of variety and frequency in cultural consumption, as measured through cultural consumption profiles, on life satisfaction. Overall, the small and rarely significant coefficients suggest that cultural participation, in terms of increased and diversified involvement in the arts and cultural activities, had marginal effects on the participants' life satisfaction (RQ2). These results induce us to believe that especially elderly people with physical limitations evidently prioritize their state of health. It is worth noting that life satisfaction is a multifaceted construct influenced by a multitude of factors ranging from socioeconomic status, and educational attainment to material and non-material personal resources.

Columns 4 to 9 reveal a different trend. While our findings revealed the presence of a positive relationship between cultural consumption and related domains of SWB across all the profiles, the strongly positive and significant coefficients associated with variety and frequency in consumption (the highbrow lovers and culturally voracious) suggested that the participants experienced higher levels of satisfaction when they engaged in a broader spectrum of cultural activities and intensified their participation (RQ2). Columns 4 and 7 further emphasize the potential of cultural participation for aging adults dealing with severe physical challenges. We also find that engaging in a diverse range of cultural activities is positively associated above all with friend and leisure satisfaction. This means that cultural consumption could alleviate feelings of isolation and create greater opportunities for social interaction, contributing collectively to heighten a stronger sense of purpose and meaning.

### 4.3 Gender Differences

For the next step, we explored the extent to which cultural consumption profiles were linked to life satisfaction and other relevant subdomains of SWB by examining gender differences. Table 6 shows the results of probit estimations. The statistical significance of gender was analyzed with a t-test.

The coefficients in Table 6 provide information about the relationship between each cultural consumption profile and the different satisfaction variables (life, friendships, and leisure) for males and females. In general, the results show a positive relationship between cultural consumption profiles and SWB, even in the presence of differences across genders and among the different domains of SWB. Columns 1 and 2 show a positive association between increased cultural consumption, particularly in terms of a simultaneous combination of variety and frequency (the voracious profile) and life satisfaction, with little gender-related variations. By contrast, our models (Columns 3–) show a strong gender-related impact among highbrow lovers and culturally voracious profiles on friendship and leisure satisfaction (RQ3). Women often excel in building and maintaining friendships, as well as investing time and effort into cultivating hobbies and

**Table 5** Probit estimation of satisfaction with life and different subdomain satisfaction by cultural consumption profiles, heterogeneity across degrees of physical limitations

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| | Life Satisfaction | | | Friend Satisfaction | | | Leisure Satisfaction | | |
| | S | M | N | S | M | N | S | M | N |
| Culturally Omnivore | 0.0788 | 0.000816 | 0.0352** | 0.180*** | 0.0704*** | 0.0512*** | 0.141** | 0.0217 | 0.0583*** |
| | (0.0616) | (0.0257) | (0.0151) | (0.0538) | (0.0205) | (0.0119) | (0.0590) | (0.0242) | (0.0148) |
| Highbrow Lovers | 0.0518 | 0.0712*** | 0.0852*** | 0.181*** | 0.0887*** | 0.0760*** | 0.113 | 0.0313 | 0.0496*** |
| | (0.0580) | (0.0221) | (0.0128) | (0.0548) | (0.0177) | (0.0100) | (0.0589) | (0.0212) | (0.0135) |
| Voracious | 0.0684 | 0.0997** | 0.0768*** | 0.240*** | 0.146*** | 0.111*** | 0.255*** | 0.145*** | 0.136*** |
| | (0.103) | (0.0475) | (0.0244) | (0.0872) | (0.0312) | (0.0150) | (0.0966) | (0.0393) | (0.0213) |
| Individual controls | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Regional controls | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Regional cultural supply controls | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Observations | 1,827 | 4,951 | 8,671 | 1,834 | 4,975 | 8,700 | 1,828 | 4,972 | 8,695 |
| Pseudo r-squared | 0.1649 | 0.1331 | 0.1223 | 0.1387 | 0.0816 | 0.0792 | 0.1343 | 0.0950 | 0.1033 |
| Chi-Square | 407.134 | 878.968 | 1240.102 | 346.243 | 452.570 | 612.730 | 339.988 | 607.585 | 1064.232 |
| Prob > Chi2 | 0.2671 | 0.0794 | 0.1581 | 0.2778 | 0.1091 | 0.1849 | 0.2583 | 0.1692 | 0.2781 |

The reference category is Culturally Inactive. The sample comprises individuals aged 55 and above. The table provides the results of the probit regression analysis investigating the relationship between the profiles of cultural consumption and different domains of subjective well-being, including life satisfaction (1)(2) (3) friend satisfaction (4)(5) (6), and leisure satisfaction (7)(8)(9) It presents the results for distinct groups of physical medical limitations: Severe (S), Minor (M) and absence of limitations (N) for each of the three dependent variables. Marginal effects are reported. Standard errors are clustered at the individual level

**Table 6** Probit estimation of satisfaction with life and different subdomains of satisfaction by cultural consumption profiles, heterogeneity across gender

| DV | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | M | F | M | F | M | F |
| Culturally Omnivore | 0.0351 | 0.0266 | 0.0696*** | 0.0564*** | 0.0580*** | 0.0547*** |
| | (0.0180) | (0.0191) | (0.0137) | (0.0159) | (0.0167) | (0.0184) |
| Heritage Lovers | 0.0854*** | 0.0844*** | 0.0722*** | 0.101*** | 0.0380** | 0.0598*** |
| | (0.0156) | (0.0164) | (0.0123) | (0.0131) | (0.0155) | (0.0161) |
| Culturally Voracious | 0.0944*** | 0.0842*** | 0.123*** | 0.148*** | 0.139*** | 0.170*** |
| | (0.0317) | (0.0313) | (0.0194) | (0.0210) | (0.0259) | (0.0267) |
| Individual controls | YES | YES | YES | YES | YES | YES |
| Territorial controls | YES | YES | YES | YES | YES | YES |
| Regional Cultural Supply covariates | YES | YES | YES | YES | YES | YES |
| Observations | 7,273 | 8,738 | 7,297 | 8,777 | 7,297 | 8,761 |
| Pseudo r-squared | 0.1596 | 0.1542 | 0.1076 | 0.1190 | 0.1151 | 0.1130 |
| Chi-Square | 1437.409 | 1781.877 | 763.026 | 1162.873 | 1007.129 | 1294.68 |
| Prob > Chi2 | 0.0509 | 0.0112 | 0.4010 | 0.0499 | 0.5120 | 0.1051 |

The reference category is Culturally Inactive. The sample comprises individuals aged 55 and above. The table provides the results of the probit regression analysis investigating the relationship between the profiles of cultural consumption and different domains of subjective well-being, including life satisfaction (1)(2), friend, satisfaction (3)(4), and leisure satisfaction (5)(6). It presents the results for distinct groups: Males (M) and Females (F) for each of the three dependent variables. Marginal effects are reported. Standard errors are clustered at the individual level

leisure activities, and they are inclined to establish and strengthen social connections more easily over time. These proclivities contribute to their individual specific experiences of SWB, particularly in the context of cultural consumption profiles.

Finally, to assess how changes in cultural consumption profiles were related to SWB, we calculated predictive margins at different levels of our independent variable while holding all other covariates of our model at their means. This allowed us to examine the effect of different cultural consumer profiles controlling for other covariates. Figure 1 shows the average predicted value for life, friendship, and leisure satisfaction for the male and female participants, respectively.

On the one hand, the predictive margins revealed a positive relationship between increased cultural consumption and SWB. The likelihood of being satisfied steadily rose as participants moved from culturally inactive to culturally voracious profiles. Notably, there was a significant jump in probability between the culturally inactive and culturally omnivorous categories. This suggests that even occasional engagement in cultural activities was associated with higher levels of SWB. Additionally, the participants tended to experience greater levels of well-being when they engaged in a wider range of cultural activities and increased their level of involvement (thereby moving toward the culturally voracious profile). This underscored the positive impact of cultural engagement on their well-being and the value of cultural participation for their overall satisfaction.

On the other hand, a distinct gendered pattern was apparent. While our principal hypothesis was confirmed in both genders, the marginal effect of increased cultural consumption was more pronounced among the females. In marginal terms, it appeared to

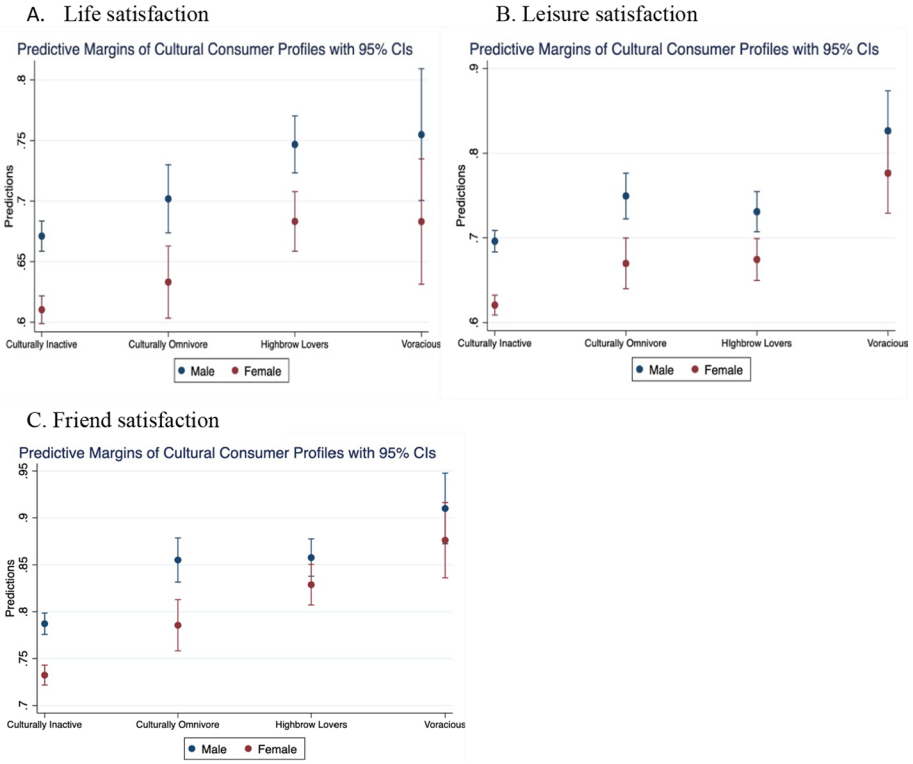


**Fig. 1** Predictive Margins with 95% CI on the probability of being satisfied with life, friends, and leisure for cultural consumer profiles, differentiated by gender

exhibit a stronger effect on their overall well-being, as they transitioned from one cultural consumption profile to another (i.e., from culturally inactive to voracious).

Finally, to take into account the possibility of observing distorted results a stepwise regression is included in the Appendix (Table 8).

## 5 Discussion and Conclusions

Social participation is a crucial aspect of successful aging, so identifying factors that influence life satisfaction and relevant subdomains in older adults and designing strategies to ensure such an outcome are now policy and research priorities. Several scholars have shifted their focus away from material and economic drivers towards more intangible and less visible determinants of SWB, exploring the importance of social and cultural factors in shaping individual happiness and life satisfaction (Diener et al., 2009; Frey, 2010). However, despite the relevance of the issue, researchers have failed to measure and evaluate the potential effects of combining variety and frequency in cultural engagement on SWB, especially among older people. To address this shortfall, we sought to establish how cultural participation in this cohort was expressed through the interplay between specific consumer profiles and life satisfaction and the significant subdomains of leisure and friendship.

We discovered that, in keeping with the previous literature (Bertacchini et al., 2023; Brown et al., 2015; Carella & Misuraca, 2024; Hand, 2018; Wheatley & Bickerton, 2017), a marginal increase in the consumption of cultural goods may have a beneficial effect on the SWB. Even occasional and moderately diverse cultural consumption was significantly and positively associated with self-reported satisfaction across different domains. The strongest effect was observed amongst voracious consumers, with the findings indicating that allocating more time to diverse cultural experiences (in accordance with the voracious cultural consumer profile) correlated with higher levels of SWB. This corroborates earlier research focused on preventing satiation effects (Galak et al., 2011). In the case of habitual consumption, individuals may feel compelled to diversify to counteract potential satiation effects. However, this may not hold in the presence of very strong preferences. From a general point of view, our findings are in line with recent European research that has stressed the positive association between involvement in the arts and heritage and participation in civic life, a sense of place, and a sense of belonging (Ateca-Amestoy et al., 2021). This tends to be particularly true for aging populations, for which social cohesion is also related to many other social outcomes, such as the enhancement of personal capabilities and a sense of meaning (Grossi et al., 2012). Our contribution highlights the potential benefits of promoting and facilitating cultural participation as a means to enhance the well-being of the older population, thereby offering valuable insights that might be used to inform the development of culture-led welfare policies.

Secondly, cultural engagement potentially mitigated the negative effect on the SWB of older individuals in the presence of physical limitations. This held especially true for those with severe physical challenges. Engaging in a broader spectrum of cultural activities and increasing participation may be a way of enhancing the SWB of these categories of individuals. In contrast with a body of literature documenting that individuals with long-term physical disabilities generally experienced a poorer quality of life (Roes, 2008; van Campen & Schellingerhout, 2005), our findings show that engaging in a diverse range of cultural activities is positively associated above all with friend and leisure satisfaction. This means that cultural consumption could alleviate feelings of isolation and create greater opportunities for social interaction, contributing collectively to heighten a stronger sense of purpose and meaning (Fiorillo & Sabatini, 2011). In this direction, cultural programs designed to raise awareness of the manifold advantages of cultural engagement for older individuals, particularly those with physical limitations, should be encouraged.

Finally, the study offers several insights into gendered cultural consumption. As with several previous studies (Kessler et al., 1993; Weissman et al., 1996), we noted the persistence of the gender/overall satisfaction paradox; that is, although increased cultural consumption enabled women to experience higher levels of satisfaction with their friends and leisure time, they tended to report lower levels of overall life satisfaction. Moreover, we recognized the crucial role of gender-related tastes in shaping cultural participation, which, in turn, had distinct effects on SWB amongst both men and women. To comprehend the gender gap in cultural participation and its differentiated effect on SWB, a range of determinants must be considered. In this direction, the stronger positive influence of highbrow lovers on women's friendship and leisure satisfaction can be attributed to the role of early socialization and gendered cultural preferences. As mentioned in the literature review section, one of the most significant findings in the studies on cultural consumption is the acknowledgment of gender-related tastes as a crucial factor in influencing cultural participation (Bourdieu, 1984). These gendered tastes and preferences are shaped by a complex interplay of factors—including early socialization, societal norms, and personal experiences—which leads to unique patterns of cultural consumption that, in turn, have distinct

effects on SWB. In particular, early influences (particularly in childhood and adolescence) are liable to shape women's engagement with highbrow cultural pursuits, which then have a distinct impact on SWB. Following this reasoning, early socialization becomes pivotal in the development of an individual's identity. It influences how one perceives oneself, which can have long-term consequences for self-esteem and well-being.

The present study has some limitations. The study was based on a cross-sectional dataset; this may raise concerns regarding the causality of the findings. To take into account such potential biases, the study's empirical estimations were enriched by a comprehensive set of socio-demographic, territorial, and regional covariates. A stepwise regression, with the inclusion/exclusion of different covariates in the baseline model, is included in the Appendix.

The present study contributes to the growing body of research on SWB and cultural engagement amongst older adults. It highlights the importance of considering the multidimensional nature of SWB and the crucial role played by cultural participation, namely, the positive effects of high-frequency engagement in a diverse range of cultural activities. It also provides valuable insights for the development of culture-driven welfare policies that enhance SWB and contribute to successful older. Finally, the study underscores the importance of taking into account gender-specific factors when designing interventions aimed at promoting the cultural engagement of older adults.

## Appendix

See Tables 7 and 8.

**Table 7** Descriptive summary of the variables

| Variables | Obs | Mean | Std. Dev | Min | Max |
|---|---|---|---|---|---|
| *Satisfaction domains* | | | | | |
| Life Satisfaction | 16,394 | .6541418 | .4756618 | 0 | 1 |
| Friend Satisfaction | 16,425 | .7802131 | .4141148 | 0 | 1 |
| Leisure Satisfaction | 16,406 | .6712178 | .469785 | 0 | 1 |
| *Cultural consumer profiles* | | | | | |
| Culturally Inactive | 16,515 | .6805934 | .4662609 | 0 | 1 |
| Culturally Omnivore | 16,515 | .1092946 | .3120179 | 0 | 1 |
| Highbrow Lover | 16,515 | .1772934 | .3819283 | 0 | 1 |
| Culturally Voracious | 16,515 | .0328186 | .1781671 | 0 | 1 |
| *Socio-demographics* | | | | | |
| Age | | | | | |
| Age 55–64 | 16,515 | .3712988 | .4831668 | 0 | 1 |
| Age 65–74 | 16,515 | .3125038 | .463528 | 0 | 1 |
| Age > = 75 | 16,515 | .3161974 | .465005 | 0 | 1 |
| Female | 16,515 | 1.544.717 | .4980115 | 1 | 2 |
| Employed | 16,515 | .2194974 | .4139187 | 0 | 1 |
| Retired/out of labor force | 16,515 | .737148 | .440196 | 0 | 1 |
| Single | 16,377 | .075777 | .2646491 | 0 | 1 |
| Married/Cohabitant | 16,377 | .6314343 | .4824305 | 0 | 1 |
| Separated/Divorced | 16,377 | .087745 | .2829323 | 0 | 1 |
| Widow/er | 16,377 | .2050437 | .4037458 | 0 | 1 |
| Child | 16,515 | .308568 | .4619163 | 0 | 1 |
| Secondary school | 16,370 | .2931582 | .4552243 | 0 | 1 |
| Diploma | 16,370 | .2651802 | .4414426 | 0 | 1 |
| Degree/Phd | 16,370 | .0925473 | .2898059 | 0 | 1 |
| *Health Satisfaction* | | | | | |
| 1 | 16,442 | .068544 | .2526847 | 0 | 1 |
| 2 | 16,442 | .6249848 | .4841416 | 0 | 1 |
| 3 | 16,442 | .2297774 | .4207024 | 0 | 1 |
| 4 | 16,442 | .0766938 | .2661131 | 0 | 1 |
| *Physical limitations* | | | | | |
| Severe | 15,914 | .1181978 | .3228524 | 0 | 1 |
| Minor | 15,914 | .3204725 | 4,666,729 | 0 | 1 |
| No limitations | 15,914 | .5613296 | .49624 | 0 | 1 |
| Rental/sublet house | 16,515 | .1112322 | .314429 | 0 | 1 |
| Owned house | 16,515 | .8217378 | .3827449 | 0 | 1 |
| Other titles | 16,515 | .0263397 | .1601483 | 0 | 1 |
| Home for free | 16,515 | .0251287 | .1565206 | 0 | 1 |
| Economic resource | | | | | |
| Excellent | 16,430 | .0137553 | .1164772 | 0 | 1 |
| Adequate | 16,430 | .6278758 | .483386 | 0 | 1 |
| Scarce | 16,430 | .3169811 | .4653142 | 0 | 1 |
| Insufficient | 16,430 | .0413877 | .1991913 | 0 | 1 |
| *Regional cultural supply (per 100,000 inhabitans)* | | | | | |

**Table 7** (continued)

| Variables | Obs | Mean | Std. Dev | Min | Max |
|---|---|---|---|---|---|
| Museum | 16,494 | 1.086.936 | 8.804.602 | 3.746.813 | 6.608.657 |
| Cinema | 16,494 | 8.604.723 | 2.484.707 | 3.907.596 | 1.335.124 |
| Theather | 16,494 | 2.808.435 | 1.003.435 | 1.294.074 | 4.806.472 |
| Concert halls | 16,494 | 195.459 | 9.673.587 | 7.110.078 | 412.609 |
| Sport clubs | 16,494 | 1.852.818 | 12.409 | 3.247.872 | 3.983.801 |
| Dance halls | 16,494 | 1.275.171 | 5.196.126 | 4.242.533 | 3.463.469 |
| Monuments | 16,494 | 1.178.085 | 1.177.523 | .1748162 | 8.654.194 |
| *Geographic Area* | | | | | |
| North-West | 16,507 | .2202096 | .4144005 | 0 | 1 |
| North-East | 16,507 | .2037923 | .4028286 | 0 | 1 |
| Center | 16,507 | .1936754 | .3951895 | 0 | 1 |
| South | 16,507 | .2810323 | .4495168 | 0 | 1 |
| Islands | 16,507 | .1012904 | .301722 | 0 | 1 |

## Additional analysis

To evaluate the marginal effects deriving from the inclusion/exclusion of the different covariates in the main model, we carried out a stepwise regression. This approach also allowed us to take into account the possibility of observing distorted results. Model 1 comprises the cultural consumption profiles only; Model 2 explores the possibly negative impact of physical limitations on individuals' SWB (van Campen & van Santvoort, 2013); Model 3 encompasses socio-demographic characteristics; Model 4 controls for indicators of willingness to pay and excludes the presence of physical limitations. This is consistent with the literature on the well-being gap in subpopulations with disabilities, which has taken into account socioeconomic status and social participation [Diener et al., 2009; van Campen and Iedema, 2007]); Model 5 introduces the measure of individual self-reported satisfaction with health status while excluding indicators of willingness to pay; and Model 6 is our baseline specification. The consistent results presented in Table$$ 8 validate the reliability of our primary findings.

**Table 8** Further model specification: Probit estimation of satisfaction with life by cultural consumption profile

| DV: Life satisafction | I | II | III | IV | V | VI |
|---|---|---|---|---|---|---|
| Culturally Omnivore | 0.115*** | 0.0809*** | 0.0776*** | 0.0582*** | 0.0434*** | 0.0277** |
| | (0.0116) | (0.0123) | (0.0127) | (0.0130) | (0.0132) | (0.0135) |
| Highbrow Lovers | 0.188*** | 0.157*** | 0.149*** | 0.127*** | 0.116*** | 0.0868*** |
| | (0.00886) | (0.00947) | (0.0105) | (0.0109) | (0.0111) | (0.0116) |
| Culturally Voracious | 0.192*** | 0.163*** | 0.156*** | 0.128*** | 0.117*** | 0.0896*** |
| | (0.0180) | (0.0193) | (0.0204) | (0.0214) | (0.0218) | (0.0229) |
| Physical limitations: not severe | | 0.187*** | 0.179*** | | 0.0424*** | 0.0467*** |
| | | (0.0135) | (0.0138) | | (0.0146) | (0.0148) |
| No limitations | | 0.285*** | 0.280*** | | 0.0535*** | 0.0593*** |
| | | (0.0127) | (0.0133) | | (0.0151) | (0.0153) |
| Female | | | −0.0274*** | −0.0306*** | −0.0155 | −0.0205** |
| | | | (0.00822) | (0.00842) | (0.00842) | (0.00862) |
| Age | | | 0.0154** | −0.00488 | 0.0266*** | 0.00373 |
| | | | (0.00601) | (0.00684) | (0.00617) | (0.00705) |
| Secondary school | | | 0.0157 | 0.00254 | 0.00770 | −0.00851 |
| | | | (0.0108) | (0.0108) | (0.0110) | (0.0111) |
| Diploma | | | 0.0370*** | 0.00603 | 0.0249** | −0.00196 |
| | | | (0.0115) | (0.0118) | (0.0118) | (0.0121) |
| Degree/Phd | | | 0.0664*** | 0.0150 | 0.0489*** | 0.0193 |
| | | | (0.0161) | (0.0171) | (0.0166) | (0.0173) |
| Married/Cohabitant with spouse | | | 0.0947*** | 0.0750*** | 0.0895*** | 0.0771*** |
| | | | (0.0157) | (0.0159) | (0.0161) | (0.0164) |
| Separated/Divorced | | | −0.0398** | −0.0181 | −0.0470** | −0.0313 |
| | | | (0.0202) | (0.0203) | (0.0208) | (0.0210) |
| Widow/er | | | 0.00844 | 0.00367 | 0.00952 | 0.00898 |
| | | | (0.0180) | (0.0182) | (0.0185) | (0.0187) |
| Child | | | −0.0536*** | −0.0500*** | −0.0552*** | −0.0446*** |
| | | | (0.00915) | (0.00931) | (0.00936) | (0.00954) |
| Current employed | | | | 0.0896*** | | 0.0817*** |
| | | | | (0.0211) | | (0.0215) |
| Current retired | | | | 0.0878*** | | 0.0891*** |
| | | | | (0.0206) | | (0.0210) |
| Rental/sublet house | | | | 0.0856** | | 0.0675 |
| | | | | (0.0339) | | (0.0347) |
| Owned house | | | | 0.133*** | | 0.110*** |
| | | | | (0.0322) | | (0.0329) |
| Other titles | | | | 0.149*** | | 0.124*** |
| | | | | (0.0399) | | (0.0410) |
| Home for free | | | | 0.112*** | | 0.0793 |
| | | | | (0.0400) | | (0.0408) |
| Economic resource: adequate | | | | −0.0956*** | | −0.0746** |
| | | | | (0.0279) | | (0.0320) |
| Scarce | | | | −0.264*** | | −0.208*** |
| | | | | (0.0286) | | (0.0326) |

**Table 8** (continued)

| DV: Life satisafction | I | II | III | IV | V | VI |
|---|---|---|---|---|---|---|
| Insufficient | | | | −0.356*** | | −0.245*** |
| | | | | (0.0346) | | (0.0385) |
| Health satisfaction:2 | | | | | −0.153*** | −0.143*** |
| | | | | | (0.0106) | (0.0116) |
| Health satisfaction:3 | | | | | −0.420*** | −0.383*** |
| | | | | | (0.0134) | (0.0144) |
| Health satisfaction:4 | | | | | −0.633*** | −0.588*** |
| | | | | | (0.0177) | (0.0193) |
| Territorial controls | YES | YES | YES | YES | YES | YES |
| Regional Cultural Supply covariates | YES | YES | YES | YES | YES | YES |
| Observations | 16,394 | 15,808 | 15,564 | 15,488 | 15,525 | 15,449 |
| Pseudo r-squared | 0.0390 | 0.0661 | 0.0781 | 0.0848 | 0.1422 | 0.1589 |
| Chi-Square | 822.466 | 1348.103 | 1569.459 | 1753.719 | 2850.145 | 3166.202 |
| Prob > Chi2 | 0.000 | 0.000 | 0.0801 | 0.0821 | 0.0377 | 0.0756 |

The reference category is Culturally Inactive. The sample comprises individuals aged 55 and above. The table provides the results of the probit regression analysis investigating the relationship between the profiles of cultural consumption and life satisfaction. It presents the results for distinct groups of covariates. Marginal effects are reported. Standard errors are clustered at the individual level

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## Declarations

**Conflict of interests** The authors declare that they have no competing interests.



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