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STATISTICAL INSIGHTS ON THE ARTS

Canadians' Arts Participation, Health, and Well-Being

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Executive summary

Canadians' Arts Participation, Health, and Well-Being, the 53rd report in the *Statistical Insights on the Arts* series, probes the relationships between 15 arts, culture, and heritage activities and four aspects of health and well-being:

- Overall health
- Mental health
- Satisfaction with life
- Satisfaction with feeling part of the community (i.e., sense of belonging)

The analysis is based on Statistics Canada's 2016 *General Social Survey*, a representative survey of 9,844 Canadians 15 years of age or older who reside in the ten provinces.

For health and well-being, this report interprets "positive" results as:

- Higher frequency of self-reported very good or excellent health (52% of all Canadians report their health as very good or excellent)
- Higher frequency of self-reported very good or excellent mental health (62% of all Canadians report their mental health as very good or excellent)
- Higher frequency of relatively strong satisfaction with life (the average rating for all Canadians is 7.9, based on a scale from 0 to 10)
- Higher frequency of relatively strong satisfaction with feeling part of community (the average rating for all Canadians is 7.3, based on a scale from 0 to 10)

While the research reflects data from a 2016 survey, it shows important linkages between

the arts and well-being, linkages that are particularly important within the current pandemic and eventual post-pandemic recovery. The pandemic has also raised awareness that many socio-economic factors (e.g., income, age, Indigenous identity, racialized groups) can have a substantial influence on individuals' health and well-being. This report extends the discussion by investigating whether cultural activities are another factor in Canadians' health and well-being. If cultural activities are related to health and well-being, then equitable access to culture can be related to equitable health outcomes.

Methods and limitations

The data analysis for this report is comprised of three complementary methods:

1. A count of the number of arts, culture, and heritage activities where attendees or participants have more positive results than non-attendees or non-participants on measurements of the four aspects of health and well-being. This portion of the exploratory analysis identifies potential connections between 15 cultural activities and well-being. The analysis is predominantly related to in-person cultural activities (because of the survey wording), but a few survey questions specifically identified digital experiences (i.e., digital music, books, news, and magazines).
2. Connections between a cultural participation index and measurements of the four aspects of health and well-being. The cultural participation index captures

both breadth and depth of attendance and participation: the index score is highest when someone frequently attends or participates in many different cultural activities. While still exploratory in nature, this analysis identifies connections between extensive cultural attendance and participation (rather than individual activities) and well-being.

15 arts, culture, and heritage activities

- Active arts participation (in any form)
- Live theatre or comedy attendance
- Classical music attendance
- Popular music attendance
- Heritage or ethnic performance attendance
- Other cultural performance attendance
- Arts or cultural festival attendance
- Public art gallery attendance
- Museum attendance (other than an art gallery)
- Historic site attendance
- Attendance at a zoo, aquarium, botanical garden, planetarium, or observatory
- Book reading (in any format)
- Magazine reading (in any format)
- Watching a movie (in any format)
- Listening to recorded music (in any format)

3 additional combinations of cultural activities

- Live music attendance (combining popular and classical music)
- Attendance at any of six performing arts or festival activities
- Attendance at any of four museum or heritage activities

3. Statistical modelling (via regression analysis) of the association between seven arts activities, health, and well-being, after taking 15 socio-economic factors into account (including income, age, gender, region, Indigenous identity, racialized groups, and more). In other words, the statistical models examine whether arts attendees simply fit the socio-economic profile of healthy citizens, or whether arts attendance might help explain aspects of health and well-being that are beyond socio-economic analysis. In this report, the statistical models represent the strongest evidence of connections between arts activities, health, and well-being. Readers should keep in mind, however, that these models identify associations, not causal links. Also, the causal link could go in the opposite direction. If people who are in very good or excellent health are more likely to attend arts activities than less healthy Canadians, a “positive” correlation could be interpreted as an indicator of the lack of accessibility of arts activities.

Key findings

For each aspect of health and well-being, the analysis shows that:

- There is a strong connection between cultural participation and health.
- There is solid evidence of a connection between cultural participation and mental health.
- There is a moderate connection between cultural participation and satisfaction with life.
- There is a limited connection between cultural participation and community belonging.

The data in Table ES1 show instances where those who participate in cultural activities report better health, better mental health, greater satisfaction with life, and possibly a greater sense of community belonging.

The simple existence of a difference between cultural attendees or participants and non-attendees or non-participants is counted in the middle column of Table ES1. The data point to many linkages between cultural activities and well-being, with particularly strong results for health, mental health, and satisfaction with life.

The final column identifies whether the differences are statistically significant, given the margins of error of each statistic.¹ Statistical significance provides greater confidence that the differences are “real” and not just small differences (within the margins of error). There are many statistically significant differences for health and mental

health, but few or none for above average satisfaction with life and above average satisfaction with feeling part of community.

Strong connection with health

Arts and culture activities have a strong statistical connection with overall health. Attendees or participants in all 15 arts, culture, and heritage activities are more likely to report very good or excellent health than non-attendees or non-participants. For 14 of the 15 activities, the differences are statistically significant, including arts activities such as: active arts participation; live theatre or comedy attendance; classical and popular music attendance; cultural festival attendance; art gallery attendance; and book reading.

Table ES1: Cultural participation, health, and well-being		
Number of activities with differences between participants and non-participants		
Aspects of health and well-being	Activities with positive differences	Activities with statistically significant (positive) differences
Health (self-rating of very good or excellent)	15 / 15	14 / 15
Mental health (self-rating of very good or excellent)	15 / 15	12 / 15
Satisfaction with life (self-rating of 8-10 on a scale from 0-10)	12 / 15	4 / 15
Satisfaction with feeling part of community (self-rating of 8-10 on a scale from 0-10)	8 / 15	0 / 15

Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.

¹ Statistical significance was identified using a t-test to determine if the differences met the threshold of $p < .05$.

Another positive indicator is the fact that overall health is better for people with higher levels of cultural engagement, as evidenced by the cultural participation index.

Regression models show that six of seven arts activities have an association with very good or excellent health, after taking socio-economic factors into account: active arts participation, public art gallery attendance, live music attendance, live theatre or comedy attendance, arts or cultural festival attendance, and book reading. This represents particularly strong evidence of a broad-based connection between arts activities and very good or excellent health.

In the regression models, socio-economic factors that are associated with health include: good eating habits; education; age (best for people between 25 and 44); and Indigenous identity (better for non-Indigenous than Indigenous people).

Solid evidence of a relationship with mental health

The analysis provides evidence of a connection between cultural activities and mental health. Attendees or participants in all 15 arts, culture, and heritage activities are more likely to report very good or excellent mental health than non-attendees or non-participants. For 12 of the 15 activities, the differences are statistically significant, including arts activities such as: live theatre or comedy attendance; classical and popular music attendance; cultural festival attendance; art gallery attendance; and book reading.

Other positive evidence includes the fact that there is a higher level of self-perceived mental health for people with moderate, high, and very high levels of cultural participation than for those with low levels of cultural participation.

The report provides particularly strong evidence of a connection between three arts activities and very good or excellent mental health: live music attendance, live theatre or comedy attendance, and book reading. After taking socio-economic factors into account, regression models show that these three arts activities (of seven introduced into the models) have an association with very good or excellent mental health.

Socio-economic factors that are associated with very good or excellent mental health in the regression models include: education; good eating habits; age (worst for people under 25); and members of racialized groups (better for racialized than non-racialized people).

Moderate connection with overall satisfaction with life

Some of the evidence in this report shows a positive connection between cultural activities and satisfaction with life. However, the connection is not uniformly positive, depending on the measurement used for satisfaction with life.

The measurement with the strongest apparent connection with cultural participation is the satisfaction rating of 7 to 10. Attendees or participants in all 15 arts, culture, and heritage activities are more likely to rate their satisfaction with life as 7 to 10 than non-attendees or non-participants. For

13 of the 15 activities, the differences are statistically significant.

There is also an apparent connection between cultural participation and above average satisfaction with life (i.e., ratings from 8 to 10). For this measurement, attendees or participants in 12 arts, culture, and heritage activities are more likely to report above average satisfaction with life than non-attendees or non-participants. However, the differences are statistically significant for just four activities.

There does not appear to be a connection between cultural participation and very strong satisfaction with life (i.e., ratings of 9 or 10). For this measurement, attendees or participants in two arts, culture, and heritage activities are more likely to report very strong satisfaction with life than non-attendees or non-participants, but neither of these differences are statistically significant. For three activities, there is a statistically significant *negative* difference between arts attendees or participants and non-attendees or non-participants.

The cultural participation index has different connections depending on the measurement of satisfaction with life as a whole:

- A positive connection with ratings of 7 to 10
- No clear connection with ratings of 8 to 10
- A mildly negative connection with ratings of 9 or 10

A statistical model provides particularly strong evidence of a connection between three arts activities and above average satisfaction with life (ratings from 8 to 10): live music attendance, live theatre or comedy attendance, and active arts participation.

These three arts activities (of seven introduced into the models) have an association with above average satisfaction with life, after taking socio-economic factors into account.

In the regression models, socio-economic factors that are associated with above average satisfaction with life include: immigrants to Canada (higher for immigrants than non-immigrants); members of racialized groups (higher for racialized than non-racialized people); urban vs. rural residents (higher for residents of rural areas); and age (highest for people under 25).

Limited connection with sense of belonging

The report contains some positive evidence of a connection between cultural participation and Canadians' sense of belonging to their communities, but the evidence differs depending on the measurement used for community belonging.

The measurement with the strongest apparent connection with cultural participation is the satisfaction rating of 7 to 10. Attendees or participants in 11 of the 15 arts, culture, and heritage activities are more likely to rate their satisfaction with feeling part of their community as 7 to 10 than non-attendees or non-participants. For four activities, the differences are statistically significant.

There is a moderate connection between cultural participation and above average satisfaction with feeling part of their community (i.e., ratings from 8 to 10). For this measurement, attendees or participants in

eight arts, culture, and heritage activities are more likely to report above average satisfaction with feeling part of their community than non-attendees or non-participants. However, the differences are not statistically significant for any activity.

There is no apparent connection between cultural participation and very strong satisfaction with feeling part of community (i.e., ratings of 9 or 10). For this measurement, attendees or participants in five arts, culture, and heritage activities are more likely to report above average satisfaction with feeling part of their community than non-attendees or non-participants, but none of these differences are statistically significant. On the other hand, attendees or participants in four arts, culture, and heritage activities are *less* likely to report above average satisfaction with feeling part of their community than non-attendees or non-participants, and one of these differences is statistically significant.

The cultural participation index has different connections depending on the measurement of respondents' satisfaction with feeling part of their community:

- A mildly positive connection with ratings of 7 to 10
- No clear connection with ratings of 8 to 10
- No clear connection with ratings of 9 or 10

After taking socio-economic factors into account, three of the seven arts activities examined in a statistical model have an association with above average belonging to community (ratings from 8 to 10): live music attendance, live theatre or comedy attendance, and attendance at arts or cultural festivals. This represents particularly strong evidence of a connection between these

three arts activities and above average sense of belonging to community.

In the regression models, socio-economic factors that are associated with feeling part of community include: having a child at home (higher for people with children); immigrants to Canada (higher for immigrants); and urban vs. rural residents (higher for residents of rural areas).

Full report and data

The full report contains many more details about the research methods and findings. Report appendices contain detailed data for each arts, culture, and heritage activity, as well as information about the data source and survey questions. Further details about the regression models are provided in a Technical Supplement available at HillStrategies.com.

1) Introduction

What roles do the arts and culture play in the health and well-being of Canadians? Previous research has indicated that the benefits of arts events might include strengthened mental health, a stronger sense of belonging, a sense of discovery about new things, and a better understanding of others.² Furthermore, some arts organizations offer activities that are intended to have broader social impacts, such as improved health and well-being.³ Research into the “social determinants of health” has indicated that the arts can “encourage health-promoting behaviours”, “help to prevent ill health”, and “help people experiencing mental illness”.⁴

This report explores statistical connections between Canadians' cultural activities, their health, and their well-being, based on Statistics Canada's 2016 *General Social Survey*, a representative survey of 9,844 Canadians 15 years of age or older who reside in the ten provinces.⁵ The analysis of this broad-based population sample includes four aspects of health and well-being:

- Overall health
- Mental health
- Satisfaction with life
- Satisfaction with feeling part of the community (i.e., sense of belonging)

The health and well-being questions are listed in [Appendix 2](#).

15 cultural activities

The 15 arts, culture, and heritage activities included in the analysis (see text box) are drawn from Statistics Canada's survey questions (see [Appendix 2](#)). Some activities are Hill Strategies' combinations of separate survey questions. Findings for three additional combinations of cultural activities are also included in the analysis.

The questions about arts, culture, and heritage activities are usually phrased as “attending” performances or “visiting” other types of events. As such, the analysis is predominantly related to in-person cultural activities, but a few survey questions specifically identified digital experiences (i.e., digital music, books, news, and magazines).

The survey asked about attendance or participation during the 12 months prior to the survey. In this report, a cultural attendee or participant is generally defined as someone who attended or participated at least once in 2015. This is a low threshold of cultural participation. In fact, repeated or

² Corporate Research Associates Inc., *Focus Groups on Canadians' Participation in the Arts*, Department of Canadian Heritage, 2018, p. 21, https://epe.lac-bac.gc.ca/100/200/301/pwgsc-tpsgc/poref/canadian_heritage/2018/109-17-e/index.html

³ Ekos Research, *Survey of the Social Impacts of Dance Organizations in Canada*, Canada Council for the Arts, 2016, p. vi, <https://canadacouncil.ca/research/research-library/2016/03/social-impacts-of-dance>

⁴ Daisy Fancourt and Saoirse Finn, *What is the evidence on the role of the arts in improving health and well-being? A scoping review*, World Health Organization, 2019, pp. vii-viii, <https://www.euro.who.int/en/publications/abstracts/what-is-the-evidence-on-the-role-of-the-arts-in-improving-health-and-well-being-a-scoping-review-2019>

⁵ Respondents were reached by telephone or online. The survey design excluded residents of the three territories. All computations, use, and interpretation of these data are entirely that of Hill Strategies Research, not Statistics Canada.

deeply engaged arts experiences may generate stronger impacts.⁶

However, the survey did include response options identifying the frequency of attendance or participation in most of the 15 cultural activities. The frequency of attendance or participation is taken into account in a cultural participation index that was created for this report.

Exploratory analysis

The findings from three statistical methods are summarized in this report. First, exploratory statistical analysis examines the potential relationships between the 15 arts, culture, and heritage activities and the four aspects of health and well-being.

The simple existence of a difference between cultural attendees or participants and non-attendees or non-participants is one indicator used in this report. A second indicator is whether these differences are statistically significant, given the margins of error of each statistic.⁷ Statistical significance provides greater confidence that the differences are “real” and not just small differences (within the margins of error).

Second, connections between a cultural participation index and measurements of the four aspects of health and well-being are examined. The cultural participation index captures both breadth and depth of participation: the index score is highest when

someone frequently attends or participates in many different cultural activities.⁸ While still exploratory in nature, this analysis

15 arts, culture, and heritage activities

- Active arts participation (in any form)
- Live theatre or comedy attendance
- Classical music attendance
- Popular music attendance
- Heritage or ethnic performance attendance
- Other cultural performance attendance
- Arts or cultural festival attendance
- Public art gallery attendance
- Museum attendance (other than an art gallery)
- Historic site attendance
- Attendance at a zoo, aquarium, botanical garden, planetarium, or observatory
- Book reading (in any format)
- Magazine reading (in any format)
- Watching a movie (in any format)
- Listening to recorded music (in any format)

3 additional combinations of cultural activities

- Live music attendance (combining popular and classical music)
- Attendance at any of six performing arts or festival activities
- Attendance at any of four museum or heritage activities

⁶ Research from Korea has shown that, “as the frequency of [cultural] experience goes up, life satisfaction or happiness also increases”. Kim, S., Kim, H. *Does Cultural Capital Matter?: Cultural Divide and Quality of Life*. Soc Indic Res 93, 295–313 (2009). <https://doi.org/10.1007/s11205-008-9318-4>

⁷ Statistical significance was identified using a t-test to determine if differences in the averages for cultural attendees and non-attendees met the threshold of $p < .05$.

⁸ For example, for each of 12 cultural attendance activities, respondents were allocated one point for attending between one and four times, three points for attending between five and 11 times, four points for attending at least once a month, and zero points for not attending at all during the year. The questions related to active arts participation did not have a frequency indicator.

identifies connections between extensive cultural participation (rather than individual activities) and well-being. In theory, an individual's cultural participation index could range from 0 to 100. In this dataset, the lowest index score is 0, and the highest score is 77. Details of the participation index are available in in [Appendix 2](#).

The cultural participation index was split into four equal sections (called "quartiles") for crosstabulation with each aspect of health and well-being. The cultural participation quartiles were labelled "low", "moderate", "high", and "very high".

Statistical models

Informed by the findings of the exploratory research, the third research method involves regression analysis to probe the extent of the association between arts activities, health, and well-being, after taking socio-economic factors into account. In keeping with the nature of the *Statistical Insights on the Arts* series, priority was given to seven arts activities, rather than broader cultural or heritage activities.

Initial statistical models of health and well-being were created, including 15 socio-economic factors that might be significant, based on exploratory statistics from this dataset as well as research from other jurisdictions. The initial goal was to create the best possible models using only the following socio-economic factors:

- Education
- Family income
- Age
- Gender
- People with or without a child at home

- Region (British Columbia, Prairies, Ontario, Quebec, Atlantic)
- Urban / rural residence
- Household language
- Indigenous or non-Indigenous people
- Racialized or non-racialized people
- Immigrants to Canada or non-immigrants
- Disability status
- Eating habits (self-rated quality)
- Current frequency of smoking
- Frequency of alcohol consumption

After the initial models were created, seven arts activities were added individually to the models:

- Active arts participation
- Live theatre or comedy attendance
- Popular or classical music attendance
- Heritage or ethnic performance attendance
- Arts or cultural festival attendance
- Public art gallery attendance
- Book reading (in any format)

The ultimate goal was to find whether each of the arts activities has some explanatory value in each model, beyond demographics, not to find which arts activity or activities create the best possible overall model of health or well-being.

Limitations

While the statistical models can provide evidence of a connection between arts activities, health, and well-being, these models identify associations, not causal links. In fact, it is difficult to provide evidence of a cause and effect relationship in the absence of an experiment to directly measure the impacts of the arts on health and well-being.

Another limitation is that, in some models, the causal link could go in the opposite direction. For example, people who are in very good or excellent health may be more likely to attend arts activities than less healthy Canadians. In that situation, a “positive” correlation could be interpreted as an indicator of the lack of accessibility of arts activities.

Third, while the statistical models provide evidence of a connection between arts activities and well-being, questions about some factors that might have an association with health and well-being were not available. Because existing survey data were used, there was no opportunity to include customized questions.

Further details about the regression models are provided in a Technical Supplement available at HillStrategies.com.

This report is similar to [a previous report in the *Statistical Insights on the Arts* series](#). However, between the 2010 and 2016 iterations of the *General Social Survey*, there were changes in the questions related to arts, culture, and heritage activities. In addition, four social indicators examined in the previous report were not asked in 2016: volunteering, feeling trapped in a daily routine, knowledge of neighbours, and doing a favour for a neighbour.

Organization of this report

Subsequent sections provide further details of the connections between cultural activities and the four aspects of health and well-being:

- [Overall health](#)
- [Mental health](#)
- [Satisfaction with life](#)
- [Community belonging](#)

Detailed data for each arts, culture, and heritage activity are provided in an [appendix](#). Notes regarding the data source and methods can be found in the [second appendix](#).

2) Health and arts participation

Attendance or participation in arts and culture activities have a strong statistical connection with overall health. As shown in this section:

- Attendees or participants in all 15 arts, culture, and heritage activities are more likely to report very good or excellent health than non-attendees or non-participants. For 14 of the 15 activities, the differences are statistically significant.
- Regression models show that six of seven arts activities have a positive association with health, after taking socio-economic factors into account. The six activities with a positive association with health are active arts participation, public art gallery attendance, live music attendance, live theatre or comedy attendance, arts or cultural festival attendance, and book reading.

Exploratory analysis

A key indicator in the analysis is the proportion of different groups of Canadians reporting either very good or excellent health in the question: "In general, would you say your health is: excellent? very good? good? fair? poor?" Overall, 52% of Canadians rate their own health as very good or excellent.

A summary of the exploratory analysis is provided in Table 1, which shows an apparent connection between cultural attendance or active arts participation and the health of Canadians. For all 15 arts, culture, and heritage activities, attendees or participants are more likely to report very good or excellent health than non-attendees or non-participants. The differences are statistically significant for 14 of the 15 activities. In none of the 15 activities did cultural participants report worse health than non-participants.

Table 1: Arts and culture activities and health		
Number of activities with differences between participants and non-participants		
Indicator	Activities with differences	Activities with statistically significant differences
Higher proportion of participants reporting very good or excellent health	15 / 15	14 / 15
No difference	0 / 15	1 / 15
Lower proportion of participants reporting very good or excellent health	0 / 15	0 / 15

Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.

Details of the differences between attendees or participants and non-attendees or non-participants in each of the 15 cultural activities are provided in Table 2.

Statistically significant differences are found for:

- Participants in a cultural activity or hobby
- Live theatre or comedy attendees
- Classical music attendees
- Popular music attendees
- Other performance attendees
- Cultural festival attendees
- Art gallery visitors
- Other museum visitors
- Historic site visitors
- Visitors to zoos, aquariums, botanical gardens, planetariums, or observatories
- Book readers (in any format)
- Magazine readers (in any format)
- People who watched a movie (in any format)
- Those who listened to recorded music (in any format)

There are also statistically significant differences between:

- All live music attendees and non-attendees
- All performing arts and festival attendees and non-attendees
- All museum and heritage site visitors and non-visitors

There is a small and not statistically significant difference between attendees and non-attendees at heritage or ethnic performances.



Table 2: Individual cultural activities and health
Percentage of people reporting very good or excellent health

Cultural activities	Participants / Attendees	Non-participants / Non-attendees	
Participating in a cultural activity or hobby	54%	49%	*
Live performance (theatre/comedy)	57%	48%	*
Classical music	59%	50%	*
Popular music	57%	48%	*
Heritage or ethnic performance	53%	51%	
Other cultural performance	56%	50%	*
Artistic or cultural festival	57%	49%	*
Public art gallery	57%	48%	*
Museum (other than an art gallery)	56%	49%	*
Historic site	56%	47%	*
Zoo, aquarium, botanical garden, planetarium, or observatory	56%	48%	*
Book reading (in any format)	54%	44%	*
Magazine reading (in any format)	54%	46%	*
Watching a movie (in any format)	53%	39%	*
Listening to recorded music (in any format)	53%	39%	*
Additional groupings of arts activities			
Live music (either pop or classical)	57%	47%	*
Any of 6 performing arts / festival activities	56%	43%	*
Any of 4 museum / heritage activities	55%	44%	*
All Canadians (national average)	52%		
* denotes a statistically significant difference ($p < .05$)			
Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.			

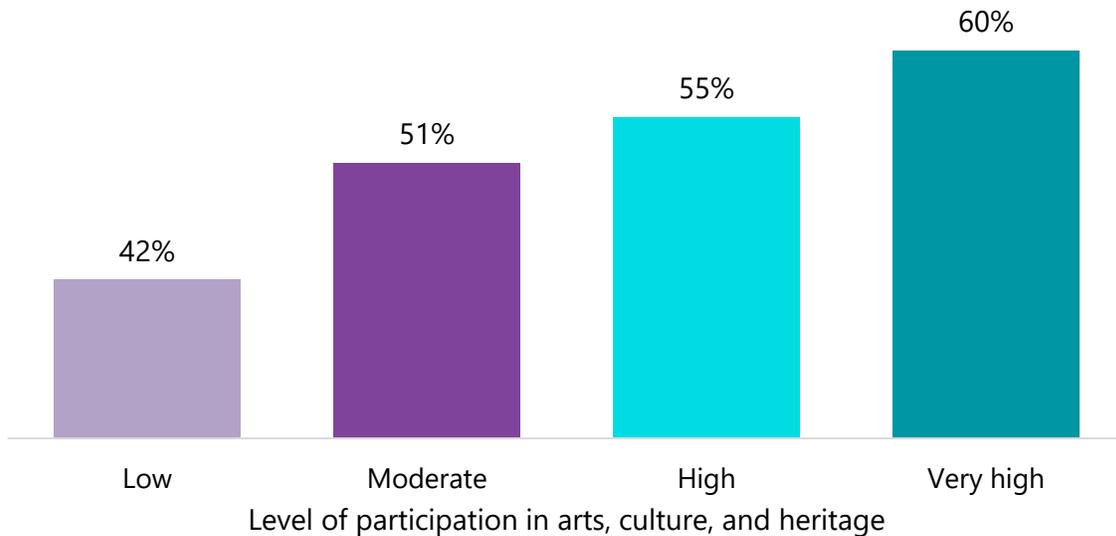
Cultural participation index

The final element of the exploratory analysis was an examination of the connection between a cultural participation index and the incidence of very good or excellent health. Unlike the rest of the exploratory analysis, the cultural participation index has higher scores for more frequent participation. Details of the participation index are [appended to this report](#).

The cultural participation index is positively connected to overall health, as shown in Figure 1.

Figure 1: Cultural participation index and overall health

Percentage of people reporting very good or excellent health by level of cultural participation



Regression models

Statistical models were created to explore whether participation in seven arts activities have an association with very good or excellent health, above and beyond socio-economic factors. In other words, the models examine whether arts attendees simply fit the demographic profile of healthy citizens, or whether arts attendance might help explain aspects of health that are beyond socio-economic analysis.

In the regression models, socio-economic factors that are associated with health include:

- Education
- Eating habits
- Age (best for people between 25 and 44)
- Indigenous identity (better for non-Indigenous than Indigenous people)

Six of the seven arts activities examined in a statistical model of health have an association with very good or excellent health, after taking socio-economic factors into account:

- Attendees at live theatre or comedy performances are 26% more likely to report very good or excellent health than non-attendees.
- Live music attendees (including popular and classical music) are 23% more likely to report very good or excellent health than non-attendees.
- People who read books are 15% more likely to report very good or excellent health than non-readers.
- Public art gallery visitors are 14% more likely to report very good or excellent health than non-visitors.

- Arts or cultural festival attendees are 12% more likely to report very good or excellent health than non-attendees.
- People who make or perform art as a cultural activity or hobby are 10% more likely to report very good or excellent health than those who do not make or perform art.
- Attendees at heritage or ethnic performances (phrased as performances “of heritage or ethnic dance, theatre or music”) were not found to have a significantly greater likelihood of reporting very good or excellent health than non-attendees.



3) Mental health and arts participation

The evidence of a statistical connection between attendance or participation in cultural activities and mental health in this section includes:

- Attendees or participants in all 15 arts, culture, and heritage activities are more likely to report very good or excellent mental health than non-attendees or non-participants. For 12 of the 15 activities, the differences are statistically significant.
- Regression models show that three of seven arts activities have an association with mental health, after taking socio-economic factors into account. These three activities are live music attendance, live theatre or comedy attendance, and book reading.

Exploratory analysis

A key indicator in the analysis is the proportion of different groups of Canadians reporting either very good or excellent mental health in the question: "In general, would you say your mental health is: excellent? very good? good? fair? poor?" Overall, 62% of Canadians rate their own mental health as very good or excellent.

A summary of the exploratory analysis is provided in Table 3, which shows an apparent connection between cultural attendance or active arts participation and mental health. For all 15 arts, culture, and heritage activities, attendees or participants are more likely to report very good or excellent mental health than non-attendees or non-participants. The differences are statistically significant for 12 of the 15 activities. In none of the 15 activities did cultural participants report worse mental health than non-participants.

Table 3: Arts and culture activities and mental health		
Number of activities with differences between participants and non-participants		
Indicator	Activities with differences	Activities with statistically significant differences
Higher proportion of participants reporting very good or excellent mental health	15 / 15	12 / 15
No difference	0 / 15	3 / 15
Lower proportion of participants reporting very good or excellent mental health	0 / 15	0 / 15

Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.

Details of the differences between attendees or participants and non-attendees or non-participants in each of the 15 cultural activities are provided in Table 4.

Statistically significant differences are found for:

- Live theatre or comedy attendees
- Classical music attendees
- Popular music attendees
- Other performance attendees
- Cultural festival attendees
- Art gallery visitors
- Historic site visitors
- Visitors to zoos, aquariums, botanical gardens, planetariums, or observatories
- Book readers (in any format)
- Magazine readers (in any format)
- People who watched a movie (in any format)
- Those who listened to recorded music (in any format)

There are also statistically significant differences for:

- All live music attendees and non-attendees
- All performing arts and festival attendees and non-attendees
- All museum and heritage site visitors and non-visitors

There is a small and not statistically significant difference between participants and non-participants in cultural activities or hobbies, visitors and non-visitors to museums other than art galleries, and attendees and non-attendees at heritage or ethnic performances.



Table 4: Individual cultural activities and mental health		
Percentage of people reporting very good or excellent mental health		
Cultural activities	Participants / Attendees	Non-participants / Non-attendees
Participating in a cultural activity or hobby	63%	62%
Live performance (theatre/comedy)	66%	60% *
Classical music	67%	61% *
Popular music	64%	61% *
Heritage or ethnic performance	63%	62%
Other cultural performance	66%	61% *
Artistic or cultural festival	65%	61% *
Public art gallery	65%	60% *
Museum (other than an art gallery)	64%	61%
Historic site	65%	60% *
Zoo, aquarium, botanical garden, planetarium, or observatory	65%	60% *
Book reading (in any format)	64%	57% *
Magazine reading (in any format)	64%	57% *
Watching a movie (in any format)	63%	55% *
Listening to recorded music (in any format)	63%	52% *
Additional groupings of arts activities		
Live music (either pop or classical)	65%	60% *
Any of 6 performing arts / festival activities	65%	57% *
Any of 4 museum / heritage activities	65%	56% *
All Canadians (national average)	62%	
<p style="text-align: right;"><i>* denotes a statistically significant difference (p < .05)</i></p> <p style="text-align: center;"><i>Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.</i></p>		

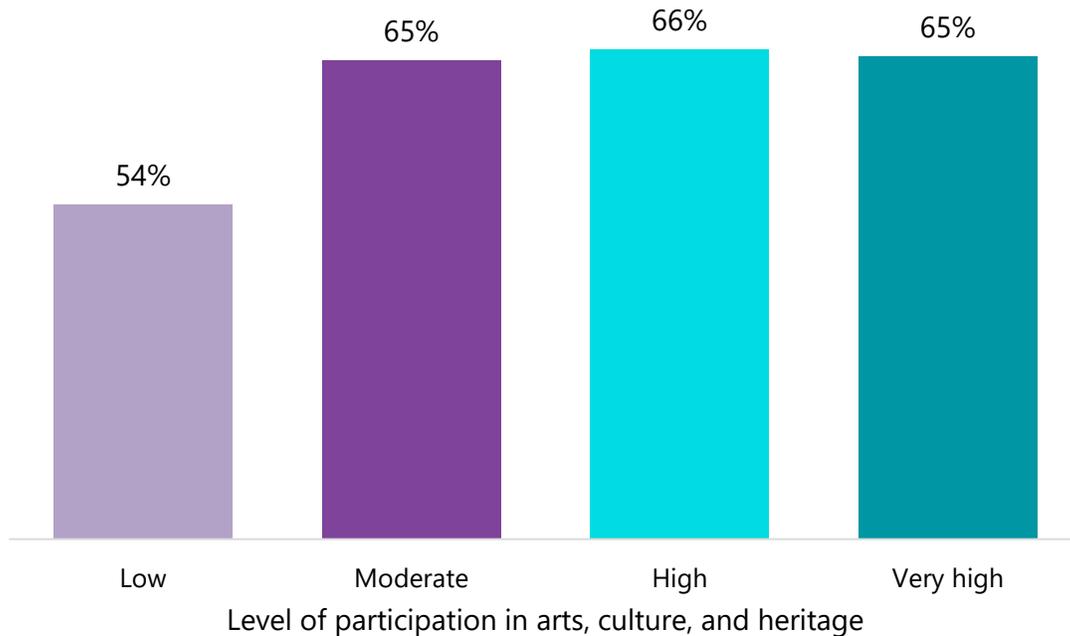
Cultural participation index

The exploratory analysis also included an examination of the connection between a cultural participation index and people who reported very good or excellent mental health. Unlike the rest of the exploratory analysis, the cultural participation index has higher scores for more frequent participation. Details of the participation index are [appended to this report](#).

As shown in Figure 2, the cultural participation index is somewhat connected to stronger mental health. There is a higher level of self-perceived mental health for people with moderate, high, and very high levels of cultural participation than for those with low levels of cultural participation. However, there is no apparent difference between the three higher levels of cultural participation (moderate, high, and very high).

Figure 2: Cultural participation index and mental health

Percentage of people reporting very good or excellent mental health by level of cultural participation



Regression models

Statistical models were created to explore whether participation in seven arts activities have an association with very good or excellent mental health, above and beyond socio-economic factors. Can arts attendance help explain aspects of mental health that are beyond socio-economic analysis?

Socio-economic factors that are associated with mental health in the regression models include:

- Education
- Good eating habits
- Age (worst for people under 25)
- Members of racialized groups (better for racialized than non-racialized people)

Three of the seven arts activities examined in a statistical model have an association with very good or excellent mental health, above and beyond socio-economic factors:

- People who read books are 23% more likely to report very good or excellent mental health than non-readers.
- Attendees at live theatre or comedy performances are 19% more likely to report very good or excellent mental health than non-attendees.
- Live music attendees (including popular and classical music) are 15% more likely to report very good or excellent mental health than non-attendees.
- Participants or attendees in four other activities were not found to have a significantly greater likelihood of reporting very good or excellent mental health than non-participants or non-attendees. These four activities are active arts participation, public art gallery attendance, arts or cultural festival attendance, and attendance at heritage or ethnic performances.



4) Satisfaction with life and arts participation

Some of the evidence in this section shows a positive connection between attendance or participation in cultural activities and satisfaction with life. However, the connection is not uniformly positive, based on different measurements of Canadians' satisfaction with life as a whole.

The analysis is based on the question: "Using a scale of 0 to 10, where 0 means 'Very dissatisfied' and 10 means 'Very satisfied', how do you feel about your life as a whole right now?"

For this indicator, three different measurements were examined: those reporting 7 to 10, 8 to 10, and 9 or 10.

The proportion of Canadians within each of these groups declines for the higher ratings: 85% rated their satisfaction with life as 7 to 10; 67% rated it as 8 to 10; and 34% rated it as 9 or 10.

The Canadian average is 7.9, so people reporting eight or more have above average satisfaction with life.

Exploratory analysis

As shown in Table 5, the measurement with the strongest apparent connection with cultural participation is the satisfaction rating of 7 to 10. Attendees or participants in all 15 arts, culture, and heritage activities are more likely to rate their satisfaction with life as 7 to 10 than non-attendees or non-participants. For 13 of the 15 activities, the differences are statistically significant.

Table 5: Arts and culture activities and satisfaction with life as a whole		
Number of activities with differences between participants and non-participants		
Indicator	Activities with positive differences	Activities with statistically significant (positive) differences
Higher proportion of participants rating satisfaction as 7 to 10	15 / 15	13 / 15
Higher proportion of participants rating satisfaction as 8 to 10	12 / 15	4 / 15
Higher proportion of participants rating satisfaction as 9 or 10	2 / 15	0 / 15

Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.

There is also an apparent connection between cultural participation and above average satisfaction with life (i.e., ratings from 8 to 10). For this measurement, attendees or participants in 12 arts, culture, and heritage activities are more likely to report above average satisfaction with life than non-attendees or non-participants. However, the differences are statistically significant for just four activities. For the 11 other activities, there is no statistically significant difference between cultural attendees or participants and non-attendees or non-participants.

There does not appear to be a connection between cultural participation and very strong satisfaction with life (i.e., ratings of 9 or 10). For this measurement, attendees or participants in two arts, culture, and heritage activities are more likely to report very strong satisfaction with life than non-attendees or non-participants, but neither of these differences are statistically significant. For three activities, there is a statistically significant *negative* difference between arts attendees or participants and non-attendees or non-participants.

Cultural participation index

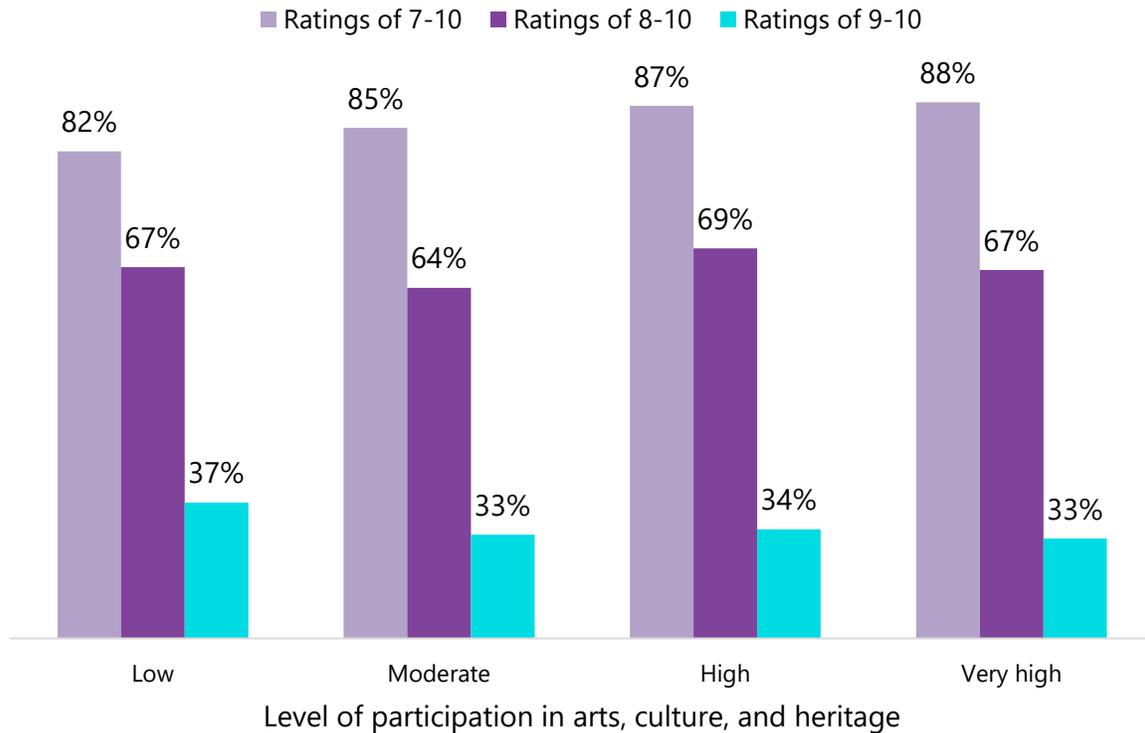
The exploratory analysis also included an examination of the connection between a cultural participation index and people who reported above average satisfaction with life. Unlike the rest of the exploratory analysis, the cultural participation index has higher scores for more frequent participation. Details of the participation index are [appended to this report](#).

As shown in Figure 3, the cultural participation index has different connections depending on the measurement of satisfaction with life as a whole:

- A positive connection with ratings of 7 to 10
- No clear connection with ratings of 8 to 10
- A mildly negative connection with ratings of 9 or 10

Figure 3: Cultural participation index and three indicators of satisfaction with life as a whole

Percentage of people reporting how they "feel about their life as a whole right now" (scale of 0-10)



Above average satisfaction with life

The remainder of this section will focus on above average satisfaction with life, i.e., the 67% of Canadians reporting ratings from 8 to 10. There is some exploratory evidence that this measurement is positively connected to cultural participation. This measurement seems to be more useful than the very broad measurement of 7 to 10, which captures 85% of the population. In addition, a focus on ratings from 8 to 10 is consistent with [our previous report on this topic](#).

Details of the differences between attendees or participants and non-attendees or non-participants in each of the 15 cultural activities are provided in Table 6, based on ratings of satisfaction with life from 8 to 10.

Statistically significant differences are found for:

- Live theatre or comedy attendees
- Popular music attendees
- Other performance attendees
- Visitors to zoos, aquariums, botanical gardens, planetariums, or observatories

Table 6: Individual cultural activities and satisfaction with life as a whole

Percentage of people rating their satisfaction as 8, 9, or 10

Cultural activities	Participants / Attendees	Non-participants / Non-attendees
Participating in a cultural activity or hobby	68%	66%
Live performance (theatre/comedy)	69%	65% *
Classical music	70%	66%
Popular music	69%	65% *
Heritage or ethnic performance	68%	66%
Other cultural performance	70%	66% *
Artistic or cultural festival	67%	66%
Public art gallery	67%	66%
Museum (other than an art gallery)	67%	67%
Historic site	68%	66%
Zoo, aquarium, botanical garden, planetarium, or observatory	69%	65% *
Book reading (in any format)	67%	65%
Magazine reading (in any format)	67%	65%
Watching a movie (in any format)	67%	67%
Listening to recorded music (in any format)	66%	71%
Additional groupings of arts activities		
Live music (either pop or classical)	69%	65% *
Any of 6 performing arts / festival activities	68%	63% *
Any of 4 museum / heritage activities	68%	63% *
All Canadians (national average)	67%	

* denotes a statistically significant difference (p < .05)

Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.

When broader groupings of arts and heritage activities are examined, there are statistically significant differences between:

- All live music attendees and non-attendees
- All performing arts and festival attendees and non-attendees
- All museum and heritage site visitors and non-visitors

The differences between participants and non-participants in all other arts and cultural activities are not statistically significant.

Regression models

Statistical models were created to explore whether participation in seven arts activities have an association with above average satisfaction with life, even taking into account key socio-economic factors. In other words, can arts attendance help explain aspects of satisfaction with life that are beyond socio-economic analysis?

In the regression models, socio-economic factors that are associated with above average satisfaction with life include:

- Immigrants to Canada (higher for immigrants than non-immigrants)
- Members of racialized groups (higher for racialized than non-racialized people)
- Urban and rural residents (higher for residents of rural areas)
- Age (highest for people under 25)

Three of the seven arts activities examined in a statistical model have an association with above average satisfaction with life, after taking socio-economic factors into account:

- Live music attendees (including popular and classical music) are 25% more likely to report above average satisfaction with life than non-attendees.
- Attendees at live theatre or comedy performances are 23% more likely to report above average satisfaction with life than non-attendees.
- People who make or perform art as a cultural activity or hobby are 11% more likely to report above average satisfaction with life than those who do not make or perform art.
- Participants or attendees in four other activities were not found to have a significantly greater likelihood of reporting above average satisfaction with life than non-participants or non-attendees. The four activities are public art gallery attendance, arts or cultural festival attendance, attendance at heritage or ethnic performances, and book reading.



5) Community belonging and arts participation

The potential connection between arts participation and Canadians' sense of belonging to their communities is explored in this section. Similar to the connection with satisfaction with life, there is some positive evidence in this section, but not uniformly so, based on different measurements of Canadians' sense of community belonging.

The analysis is based on the question: "On a scale from 0 to 10, where 0 means you feel 'Not at all satisfied' and 10 means you are 'Completely satisfied', how satisfied are you with feeling part of your community?"

For this indicator, three different measurements were examined: those reporting 7 to 10, 8 to 10, and 9 or 10.

The proportion of Canadians within each of these groups declines for the higher ratings: 72% rated their satisfaction with feeling part of their community as 7 to 10; 54% rated it as 8 to 10; and 29% rated it as 9 or 10.

The Canadian average is 7.3, so people reporting eight or more have above average satisfaction with feeling part of their community.

Exploratory analysis

As shown in Table 7, the measurement with the strongest apparent connection with cultural participation is the satisfaction rating of 7 to 10. Attendees or participants in 11 of the 15 arts, culture, and heritage activities are more likely to rate their satisfaction with feeling part of their community as 7 to 10 than non-attendees or non-participants. For four activities, the differences are statistically significant. For the 11 other activities, the differences are not statistically significant.

There is a moderate connection between cultural participation and above average satisfaction with feeling part of their community (i.e., ratings from 8 to 10). For this measurement, attendees or participants in eight arts, culture, and heritage activities are more likely to report above average satisfaction with feeling part of their community than non-attendees or non-participants. However, none of the differences are statistically significant.

On the other hand, attendees or participants in four arts, culture, and heritage activities are *less* likely to report above average satisfaction with feeling part of their community than non-attendees or non-participants. None of these differences are statistically significant.

There is no apparent connection between cultural participation and very strong satisfaction with feeling part of community (i.e., ratings of 9 or 10). For this measurement, attendees or participants in five arts, culture, and heritage activities are more likely to report above average satisfaction with feeling part of their community than non-attendees or non-participants, but none of these differences are statistically significant. On the other hand, attendees or participants in four arts, culture, and heritage activities are *less* likely to report very strong satisfaction with feeling part of their community than non-attendees or non-participants. One of these differences is statistically significant: people who listen to recorded music are significantly less likely to report a very strong sense of belonging than people who do not listen to recorded music.

Cultural participation index

The exploratory analysis also included an examination of the connection between a cultural participation index and people who reported above average satisfaction with feeling part of their community. Unlike the rest of the exploratory analysis, the cultural participation index has higher scores for more frequent participation. Details of the participation index are [appended to this report](#).

As shown in Figure 4, the cultural participation index has different connections depending on the measurement of respondents' satisfaction with feeling part of their community:

- A mildly positive connection with ratings of 7 to 10
- No clear connection with ratings of 8 to 10
- No clear connection with ratings of 9 or 10

Table 7: Arts and culture activities and satisfaction with feeling part of community

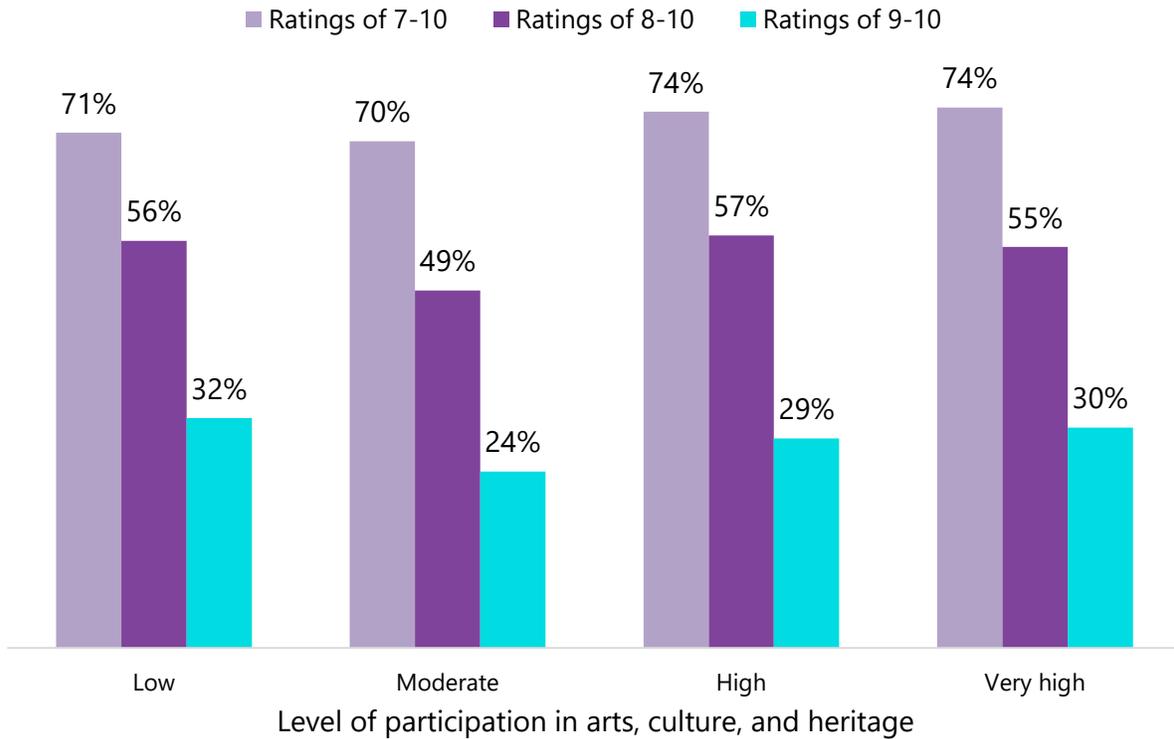
Number of activities with differences between participants and non-participants

Indicator	Activities with positive differences	Activities with statistically significant (positive) differences
Higher proportion of participants rating satisfaction as 7 to 10	11 / 15	4 / 15
Higher proportion of participants rating satisfaction as 8 to 10	8 / 15	0 / 15
Higher proportion of participants rating satisfaction as 9 or 10	5 / 15	0 / 15

Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.

Figure 4: Cultural participation index and three indicators of sense of belonging to community

Percentage of people reporting how satisfied they are with feeling part of their community (scale of 0-10)



Above average satisfaction with feeling part of community

The remainder of this section will focus on above average satisfaction with feeling part of their community, i.e., the 54% of Canadians reporting ratings from 8 to 10. This measurement might be more useful than the very broad measurement (7 to 10), which captures 72% of the population.

Details of the differences between attendees or participants and non-attendees or non-participants in each of the 15 cultural activities are provided in Table 8, based on

ratings of satisfaction with feeling part of community from 8 to 10.

While there are many positive but small differences between attendees or participants and non-attendees or non-participants, none of them are statistically significant.

There are positive but small differences for two broader groupings of arts activities (live music attendance and attendance at any performing arts or festival activity). These differences are not statistically significant.

Table 8: Individual cultural activities and satisfaction with feeling part of community

Percentage of people rating their satisfaction as 8, 9, or 10

Cultural activities	Participants / Attendees	Non-participants / Non-attendees
Participating in a cultural activity or hobby	55%	53%
Live performance (theatre/comedy)	56%	53%
Classical music	56%	54%
Popular music	56%	53%
Heritage or ethnic performance	55%	54%
Other cultural performance	56%	54%
Artistic or cultural festival	55%	54%
Public art gallery	54%	54%
Museum (other than an art gallery)	55%	54%
Historic site	54%	54%
Zoo, aquarium, botanical garden, planetarium, or observatory	54%	54%
Book reading (in any format)	54%	55%
Magazine reading (in any format)	53%	56%
Watching a movie (in any format)	54%	57%
Listening to recorded music (in any format)	54%	59%
Additional groupings of arts activities		
Live music (either pop or classical)	56%	53%
Any of 6 performing arts / festival activities	55%	52%
Any of 4 museum / heritage activities	54%	54%
All Canadians (national average)	54%	
<i>None of the differences are statistically significant ($p < .05$). Source: Hill Strategies, analysis of Statistics Canada's 2016 General Social Survey.</i>		

Regression models

Statistical models were created to explore whether participation in seven arts activities have an association with above average satisfaction with feeling part of community, even taking into account key socio-economic factors. In other words, can arts attendance help explain aspects of Canadians' sense of belonging to their communities that are beyond socio-economic analysis?

In the regression models, socio-economic factors that are associated with feeling part of community include:

- Having a child at home (higher for people with children)
- Immigrants to Canada (higher for immigrants)
- Urban and rural residents (higher for residents of rural areas)

Three of the seven arts activities examined in a statistical model have an association with above average belonging to community, after taking socio-economic factors into account:

- Live music attendees (including popular and classical music) are 20% more likely to report above average satisfaction with feeling part of their community than non-attendees.
- Attendees at live theatre or comedy performances are 20% more likely to report above average satisfaction with feeling part of their community than non-attendees.
- Attendees at arts or cultural festivals are 13% more likely to report above average satisfaction with feeling part of their community than non-attendees.

- Participants or attendees in four other activities were not found to have a significantly greater likelihood of reporting above average satisfaction with feeling part of their community than non-participants or non-attendees. The four activities are active arts participation, public art gallery attendance, attendance at heritage or ethnic performances, and book reading.

Photo credits

p.12: Photo of Indigenous dancer by Surrey International Children's Festival, Surrey, BC.

p.15: Photo of Allison Russell by Bruce Dienes at StanFest 2016, Canso, NS.

p.17: Photo of a woman reading by Andrii Podilnyk (via unsplash.com)

p.19: Photo of H'Sao by Claude Emond at Festival piments et sirop d'érable, St. John, NB.

p.24: Photo of Ammoye by Anna Encheva at Lulaworld Festival, Toronto, ON.

Appendix 1) Detailed tables

Cultural participation, health, and well-being

Arts, culture, and heritage activities	Health	Mental health	Satisfaction with life			Satisfaction with feeling part of community (belonging)		
	Very good or excellent (as %)	Very good or excellent (as %)	7 or higher (as %)	8 or higher (as %)	9 or 10 (as %)	7 or higher (as %)	8 or higher (as %)	9 or 10 (as %)
All Canadians (national average)	52%	62%	85%	67%	34%	72%	54%	29%
Participants in a cultural activity or hobby	54%	63%	86%	68%	34%	73%	55%	30%
Non-participants	49%	62%	84%	66%	34%	71%	53%	28%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
<i>Factor retained in regression model?</i>	<i>yes</i>	<i>no</i>		<i>yes</i>			<i>no</i>	
Live theatre or comedy attendees	57%	66%	89%	69%	34%	75%	56%	29%
Non-attendees	48%	60%	83%	65%	34%	70%	53%	29%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>
<i>Factor retained in regression model?</i>	<i>yes</i>	<i>yes</i>		<i>yes</i>			<i>yes</i>	

	Health	Mental health	Satisfaction with life			Satisfaction with feeling part of community (belonging)		
Arts, culture, and heritage activities	Very good or excellent (as %)	Very good or excellent (as %)	7 or higher (as %)	8 or higher (as %)	9 or 10 (as %)	7 or higher (as %)	8 or higher (as %)	9 or 10 (as %)
Classical music attendees	59%	67%	88%	70%	36%	74%	56%	31%
Non-attendees	50%	61%	85%	66%	34%	72%	54%	28%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Popular music attendees	57%	64%	88%	69%	33%	74%	56%	29%
Non-attendees	48%	61%	83%	65%	35%	70%	53%	28%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>
Heritage or ethnic performance attendees	53%	63%	87%	68%	37%	75%	55%	30%
Non-attendees	51%	62%	85%	66%	34%	71%	54%	28%
<i>Statistically significant difference?</i>	<i>no</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
<i>Factor retained in regression model?</i>	<i>no</i>	<i>no</i>		<i>no</i>			<i>no</i>	
Other performance attendees	56%	66%	88%	70%	33%	73%	56%	30%
Non-attendees	50%	61%	85%	66%	34%	72%	54%	28%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>

	Health	Mental health	Satisfaction with life			Satisfaction with feeling part of community (belonging)		
			Very good or excellent (as %)	Very good or excellent (as %)	7 or higher (as %)	8 or higher (as %)	9 or 10 (as %)	7 or higher (as %)
Arts, culture, and heritage activities								
Arts or cultural festival attendees	57%	65%	88%	67%	31%	74%	55%	27%
Non-attendees	49%	61%	84%	66%	36%	71%	54%	29%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>yes (worse)</i>	<i>yes</i>	<i>no</i>	<i>no</i>
<i>Factor retained in regression model?</i>	<i>yes</i>	<i>no</i>		<i>no</i>			<i>yes</i>	
Public art gallery visitors	57%	65%	88%	67%	33%	74%	54%	28%
Non-visitors	48%	60%	84%	66%	35%	71%	54%	29%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>
<i>Factor retained in regression model?</i>	<i>yes</i>	<i>no</i>		<i>no</i>			<i>no</i>	
Other museum visitors	56%	64%	88%	67%	33%	73%	55%	28%
Non-visitors	49%	61%	84%	67%	35%	71%	54%	29%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Historic site visitors	56%	65%	88%	68%	33%	72%	54%	28%
Non-visitors	47%	60%	83%	66%	35%	72%	54%	29%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>

	Health	Mental health	Satisfaction with life			Satisfaction with feeling part of community (belonging)		
Arts, culture, and heritage activities	Very good or excellent (as %)	Very good or excellent (as %)	7 or higher (as %)	8 or higher (as %)	9 or 10 (as %)	7 or higher (as %)	8 or higher (as %)	9 or 10 (as %)
Listened to recorded music (in any format)	53%	63%	85%	66%	33%	72%	54%	28%
Non-listeners	39%	52%	84%	71%	44%	74%	59%	34%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>yes (worse)</i>	<i>no</i>	<i>no</i>	<i>yes (worse)</i>
Additional groupings								
Attendees at live music (either pop or classical)	57%	65%	88%	69%	33%	35%	74%	56%
Non-attendees	47%	60%	83%	65%	35%	41%	70%	53%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>yes (worse)</i>	<i>yes</i>	<i>no</i>
<i>Factor retained in regression model?</i>	<i>yes</i>	<i>yes</i>		<i>yes</i>			<i>yes</i>	
Attendees at any of 6 performing arts / festival activities	56%	65%	88%	68%	34%	74%	55%	29%
Non-attendees	43%	57%	80%	63%	35%	68%	52%	29%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>
Attendees at any of 4 museum / heritage activities	55%	65%	87%	68%	34%	73%	54%	28%
Non-attendees	44%	56%	80%	63%	34%	69%	54%	30%
<i>Statistically significant difference?</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>

Appendix 2) Data source and methods

This report is based on Statistics Canada's 2016 *General Social Survey*, a representative survey of 9,844 Canadians 15 years of age or older. Respondents were reached by telephone or online. The survey design excluded residents of the three territories.⁹

General Social Survey questions related to arts, culture, and heritage activities

The 2016 *General Social Survey* (GSS) included 29 culture-related questions: eight options regarding active arts participation and 21 questions regarding other arts, culture, and heritage activities.

The question related to active arts participation was phrased as: "Now, some questions about cultural activities or hobbies you are involved in. In the past 12 months, which of the following have you actively participated in?"

- Making music (e.g., singing, playing an instrument, or remixing music)
- Theatre (e.g., acting, storytelling, or comedy)
- Audio-visual and interactive media (e.g., making films, animation, or videos)
- Dance (e.g., socially, in a performance or choreography)
- Visual arts (e.g., painting, photography, sculpture, or drawing)

- Crafts (e.g., needlework, scrapbooking, woodwork, metalwork, or pottery)
- Writing (e.g., poetry, plays, stories, editorials, and reviews)
- Other" (specified by respondents)¹⁰

The 21 questions about respondents' arts, culture, and heritage activities are listed below. Most questions, including attendance related ones, were phrased as: "During the past 12 months, how often did you:

- Attend a performance of popular music, excluding at festivals?
- Attend a performance of symphonic or classical music, excluding at festivals?
- Attend a live performance, such as a drama, musical theatre, dinner theatre or comedy, excluding at festivals?
- Attend a cultural or artistic festival, such as film, jazz, folk or comedy?
- Attend a performance of heritage or ethnic dance, theatre or music, for example, Aboriginal peoples, Chinese or Ukrainian?
- Attend any other kind or type of cultural performance not already described?
- Visit a public art gallery or art museum, including special art exhibits?
- Visit museums other than public art galleries or art museums?
- Visit a historic site?
- Visit a zoo, aquarium, botanical garden, planetarium, or observatory?
- Visit a conservation area or nature park?
- Go to a movie theatre?

⁹ All computations, use, and interpretation of these data are entirely that of Hill Strategies Research, not Statistics Canada.

¹⁰ Statistics Canada, 2016 General Social Survey questionnaire,

https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assemblableInstr&lang=en&Item_Id=302913

- Watch a movie or film viewed from a DVD, Blu-ray disc, online or any other source?
- Read or scan the news online?
- Read a print copy of a newspaper?
- Read a magazine online?
- Read a print copy of a magazine?
- Listen to music on your computer, mobile device, tablet or MP3 player?
- Listen to music on a CD, cassette, or vinyl record?"

Two questions asked respondents how many books they read. "During the past 12 months:

- How many books did you read in hard copy or print form?
- How many e-books did you read?"¹¹

This report combines the responses to some of the GSS questions into key indicators such as overall active arts participation, live music attendance (combining popular and classical music), performing arts or festival attendance, and overall heritage attendance.

The 2016 GSS did not contain questions specifically related to dance or opera performances, as well as literary readings. These activities might have been included by respondents in "other kinds of cultural performances".

The 2016 survey did not include any detailed questions regarding, for example, the specific types of performances attended, exhibitions visited, or books read. In addition, there were no questions about motivations for participating or barriers to participating.

General Social Survey (GSS) questions related to health and well-being

The questions related to the four aspects of health and well-being are:

- Self rated health: "In general, would you say your health is: excellent? very good? good? fair? poor?"
- Self rated mental health: "In general, would you say your mental health is: excellent? very good? good? fair? poor?"
- Feelings about life as a whole / satisfaction with life: "Using a scale of 0 to 10, where 0 means 'Very dissatisfied' and 10 means 'Very satisfied'", how do you feel about your life as a whole right now?"
- Level of satisfaction - Feeling part of the community: "On a scale from 0 to 10, where 0 means you feel 'Not at all satisfied' and 10 means you are 'Completely satisfied', how satisfied are you with feeling part of your community?"

Details of the cultural participation index

Details of the scoring used to create the cultural participation index follows. Higher points were allocated for more frequent participation. The index was designed to have a maximum potential score of 100, but the highest actual score is 77.

For each of the following eight active participation activities, which did not include a frequency indicator, respondents were allocated three points for having participated

¹¹ Statistics Canada, 2016 General Social Survey questionnaire,

https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assemblInstr&lang=en&Item_Id=302913

during the year and zero points for not having participated:

- Participation in making music
- Participation in theatre
- Participation in audio-visual and interactive media
- Participation in dance
- Participation in visual arts
- Participation in crafts
- Participation in writing
- Participation in another cultural activity (specified by respondents)

For each of the following 12 attendance activities, respondents were allocated one point for attending between one and four times, three points for attending between five and 11 times, four points for attending at least once a month, and zero points for not attending at all during the year:

- Attend a performance of popular music, excluding at festivals
- Attend a performance of symphonic or classical music, excluding at festivals
- Attend a live performance, such as a drama, musical theatre, dinner theatre or comedy, excluding at festivals
- Attend a cultural or artistic festival, such as film, jazz, folk or comedy
- Attend a performance of heritage or ethnic dance, theatre or music, for example, Aboriginal peoples, Chinese or Ukrainian
- Attend any other kind or type of cultural performance not already described
- Visit a public art gallery or art museum, including special art exhibits
- Visit a museum other than a public art gallery or an art museum
- Visit a historic site
- Visit a zoo, aquarium, botanical garden, planetarium, or observatory

- Visit a conservation area or nature park
- Go to a movie theatre

For watching a movie online or on DVD, respondents were allocated one point for watching once during the year, two points for watching every three months, three points for watching once a month, four points for watching at least once a week, and zero points for not watching at all.

For two questions related to music listening (one related to digital formats and one related to CDs or vinyl), respondents were allocated one point for listening once a month or less during the year, two points for listening once a week, three points for listening daily, and zero points for not listening at all.

For two questions related to book reading (one related to e-books and one related to hard copies), respondents were allocated one point for reading one book during the year, two points for reading two books, three points for reading three or four books, four points for reading more than four books, and zero points for not reading any.

The survey included four questions related to magazine or newspaper reading (online and print versions for each activity). For these questions, respondents were allocated one point for reading once a month or less, two points for reading more than once a month, and zero points for not reading at all.