

Brain Health Research Study

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OBJECTIVES

Research Objectives

The overarching goal of this research is to explore how consumers understand and perceive brain health and how AARP may affect consumer attitudes and behaviors around brain health in the future. Specific research objectives include:

- **Understand attitudes and behaviors toward healthy living.**
Gauge importance of healthy living and associated activities, understand consumer self-perceptions regarding health, determine level of engagement in activities related to healthy living, and understand the role of specific parts of the body in overall health.
- **Understand attitudes and behaviors toward brain health.**
Understand perceptions of brain deterioration and proactively engaging in activities that improve or maintain brain health.

Research Objectives (continued)

- **Determine awareness, engagement, consideration, and motivation for brain training.**

Determine awareness of brain training. Determine which activities and brain training programs consumers currently engage and which they would consider in the future. Understand what events may trigger the need to start participating or increase participation in activities related to brain training.

- **Determine primary sources for brain health research.**

Determine which sources consumers currently use or would consider using to research brain health and how sources are deemed trustworthy.

METHODOLOGY

Methodology

W5 conducted a targeted total of 1,200 (N=1,200) online interviews with nationwide consumers, including:

- n=500 age 34-49
- n=500 age 50-68
- n=200 age 69-75
- n=207 African-American or Black
- n=110 Asian
- n=248 Acculturated Hispanic

The data were weighted by age to reflect the US population (2010 Census). A more detailed description of the sample frame using the weighted data is shown on the following slide.

The margin of error associated with a 95% confidence interval for the sample size N=1,200 consumers is +/- 2.8%

The survey was fielded August 8-19, 2014. The average time for survey completion was 14 minutes.

Sample Frame (N=1,200)

Gender	
Male	37%
Female	63%
Age	
34-49	45%
50-68	46%
69-75	9%
Region	
New England	5%
Middle Atlantic	13%
South Atlantic	21%
East South Central	5%
East North Central	16%
West South Central	11%
West North Central	6%
Mountain	7%
Pacific	16%
Children in Household	
None	65%
One	17%
Two	12%
Three or more	6%
Education (Does not include "Other" or "I prefer not to answer")	
Some high school/High school	22%
Trade or vocational/Associates degree	18%
Some college	21%
Bachelor's degree	27%
Master's degree/Ph.D.	12%
Conditions	
Dementia	14%
Alzheimer's disease	11%

Marital Status	
Married	55%
Single	19%
Separated, divorced, or widowed	20%
Live with partner	6%
Ethnicity	
Acculturated Hispanic or Latino*	22%
White or Caucasian	67%
Black or African-American	18%
Asian	10%
Other	7%
Annual Household Income (Does not include "I prefer not to answer")	
Less than \$15,000	10%
\$15,000 - \$24,999	13%
\$25,000 - \$49,999	27%
\$50,000 - \$74,999	23%
\$75,000 - \$99,999	11%
\$100,000 or more	14%
Employment Status (Does not include "Other" or "I prefer not to answer")	
Full time	36%
Part-time	12%
Unemployed	11%
Stay-at-home parent	9%
Retired	27%
Student	1%
Organization Membership	
AARP	29%
Church	41%
AAA	29%
Community group	10%
Service organization	7%
Fraternal organization	4%

*Acculturated Hispanic or Latino background asked separately of ethnicity

CONCLUSIONS

Brain Health Perceptions

CONCLUSION A

Maintaining a healthy lifestyle is important to all consumers (99% find it at least somewhat important). Brain health is the second most important component in maintaining a healthy lifestyle, after heart health (37% find brain health most important while 51% find heart health most important).

While adequate rest (86%), reduced stress (86%), proper nutrition (84%), and physical exercise (75%) are seen as the most important components to healthy living, consumers also engage in puzzles and games online (48%) and in newspapers, books, and magazines (37%). To better maintain a healthy lifestyle, consumers are willing to spend money on tools or resources to maintain or improve brain health (50% are very or extremely willing).

See slides 23, 24, 26, 27, 28, 29

Brain Training Engagement

CONCLUSION B

Brain training is a relatively well-known concept among consumers (52% are aware of brain training). Working on puzzles (70%), solving word problems (67%), math problems (59%), and playing memorization games (55%) are all popular cognitive exercises consumers have engaged to improve or maintain brain health. There is also interest in engaging in these activities in the future (43%, 44%, 46%, and 52% would consider these activities in the future respectively).

Consumers are likely to engage in brain training to support living a more enjoyable, self-managed life (91%). Catastrophic events affecting the brain, inability to manage simple tasks, worsening memory, and witnessing a loved one suffer from a decline in brain health are primary motivators to participate in activities to maintain or improve brain health (76%, 74%, 74%, and 73% respectively).

See slides 38, 39, 41, 43, 44

Program Usage

CONCLUSION C

Across brain training programs, consumers are primarily aware of Lumosity (51%) and Mind Games (35%). Brain HQ is the least used program (19% of those aware of the program), but given the most consideration for future usage (72% of those aware of the program).

See slides 49, 50, 51

CONCLUSION D

Consumers primarily look to their doctor and friends or family to learn more about brain health (70% and 51% respectively). When researching brain health, consumers prefer sources supported by doctors (72%) and professionals (69%) that are current and up-to-date with supporting statistical data (57%).

See slides 46, 48

CONCLUSION E

Younger consumers (age 34-49) are more inclined to feel brain health is the most important component to overall health (41% versus 34% of consumers age 50-75). However, they are also more likely to believe brain deterioration cannot be reversed (17% versus 12% of older consumers). Younger consumers believe the age when the brain peaks, begins to deteriorate, and requires planning for future brain health should occur earlier than older consumers (*data shown on the following slide*).

See slides 15, 28

Younger Consumer Opinions

(continued)

DATA SUPPORT FOR CONCLUSION E

The perceived age at which consumers believe the brain is at its peak, begins to deteriorate, and when planning for future brain health should begin is proportional to their age.

	Age		
	34 - 49	50 - 68	69 - 75
Perceived age at which the brain is at its peak	29	35	40
Perceived age at which the brain begins to deteriorate	53	56	61
Perceived age to begin planning future brain health	34	38	42
Time after peak brain performance when future planning should begin	5	3	2

Activities Among Women

CONCLUSION G

Women are more motivated to participate in activities to improve or maintain brain health. Also, women feel it is important to play games and do puzzles online or in print (37% versus 23% of men and 40% versus 26%) and currently engage in such activities (53% versus 39% and 40% versus 32% respectively). As such, women are willing to spend money on tools and resources to maintain or improve brain health (54% are very or extremely willing versus 43% of men).

See slides 26, 27, 29

CONCLUSION H

Consumers who have been affected by Alzheimer's Disease or dementia – either personally or through a family member or friend – are aware of the importance of maintaining and improving brain health. They believe brain health is the most important aspect of overall health (45% versus 35% of unaffected consumers), even above heart disease (44% versus 52%). Because they have seen the effects of brain deterioration, they are already participating in many activities to maintain or improve their brain health and are willing to spend for these activities (56% versus 48%).

Acculturated Hispanic Consumers

CONCLUSION I

Acculturated Hispanic consumers are aware of the importance of brain health on their overall health. They understand maintaining a healthy lifestyle goes beyond physical exercise and are more inclined to believe playing games and working on puzzles online (39% versus 29% non-Hispanic consumers) and in newspapers, books, or magazines (45% versus 32%) are important tools in supporting their health. Given this, they are more aware of (60% versus 50%) and likely to engage in brain training activities (89% versus 83%).

African-American Opinions

CONCLUSION J

African-American consumers have decided opinions regarding the importance of maintaining and improving brain health. They find brain health just as important to their overall health as heart health (43% find both components most important) and are therefore extremely likely to engage in brain training activities (55% versus 43% of non-African-American consumers).

African-American consumers are especially motivated to maintain their brain health as a way to remain independent (70% versus 61% of non-African-American consumers), maintain healthy relationships (56% versus 46%), keep up with technology (37% versus 25%), and help others depending on them (55% versus 43%).

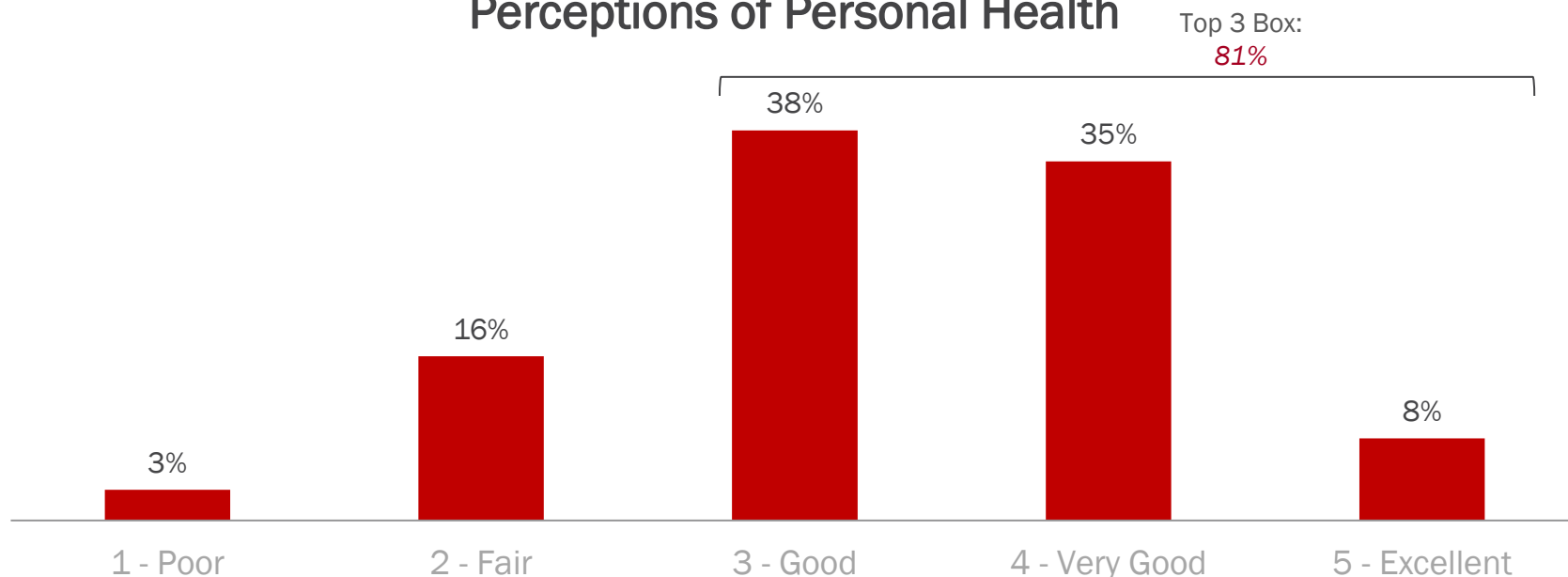
DETAILED FINDINGS

PERCEPTIONS OF HEALTHY LIVING

Health Self-Perception

- Over four-fifths (81%) of consumers feel they are in good, very good, or excellent health.
- Compared to older consumers (age 50-75), a significantly higher percentage of younger consumers (age 34-49) are likely to feel they are in very good or excellent health (47% versus 39%).

Perceptions of Personal Health

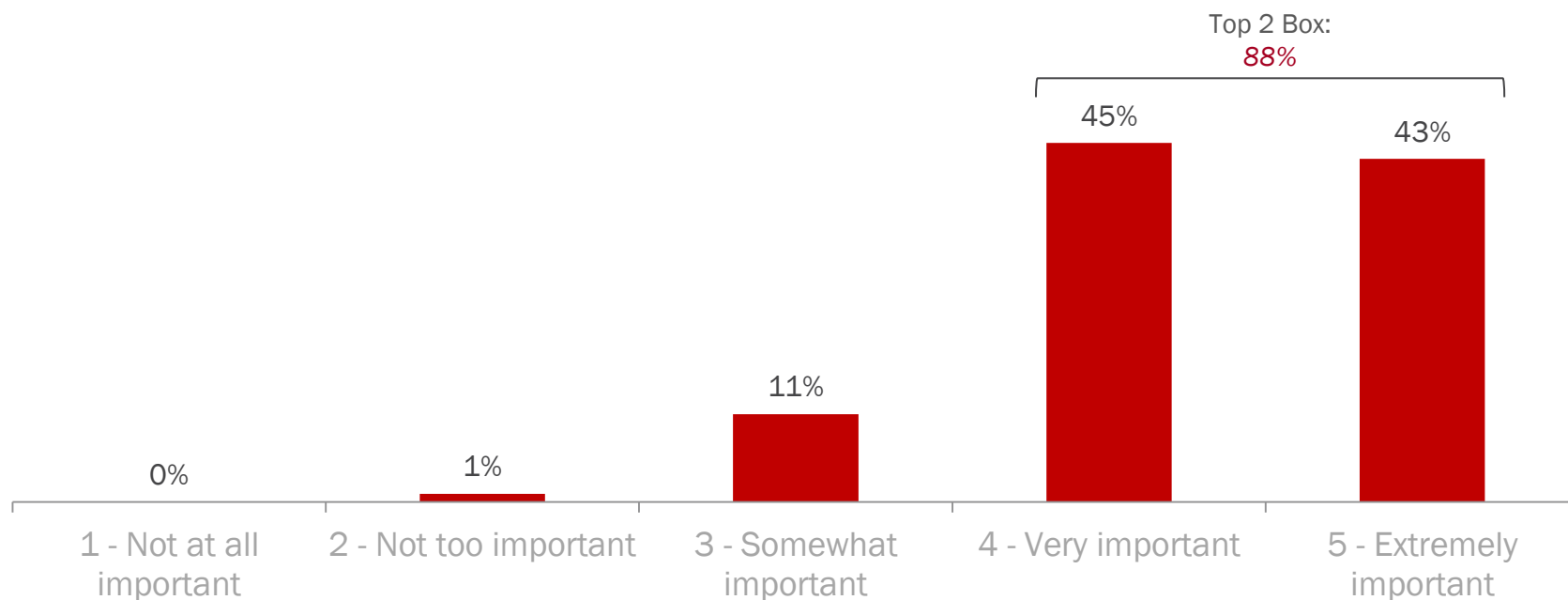


Q1: Please rate your health on a scale of 1 to 5 where 1 means "Poor" and 5 means "Excellent." Base: Total (N=1,200)

Importance of Healthy Living

- Nearly all consumers feel it is important to maintain a healthy lifestyle (99%).
- A significantly greater proportion of consumers who feel they are in very good or excellent health feel it is very or extremely important to maintain a healthy lifestyle, compared to consumers who feel less healthy (94% versus 84%).

Importance of Maintaining a Healthy Lifestyle

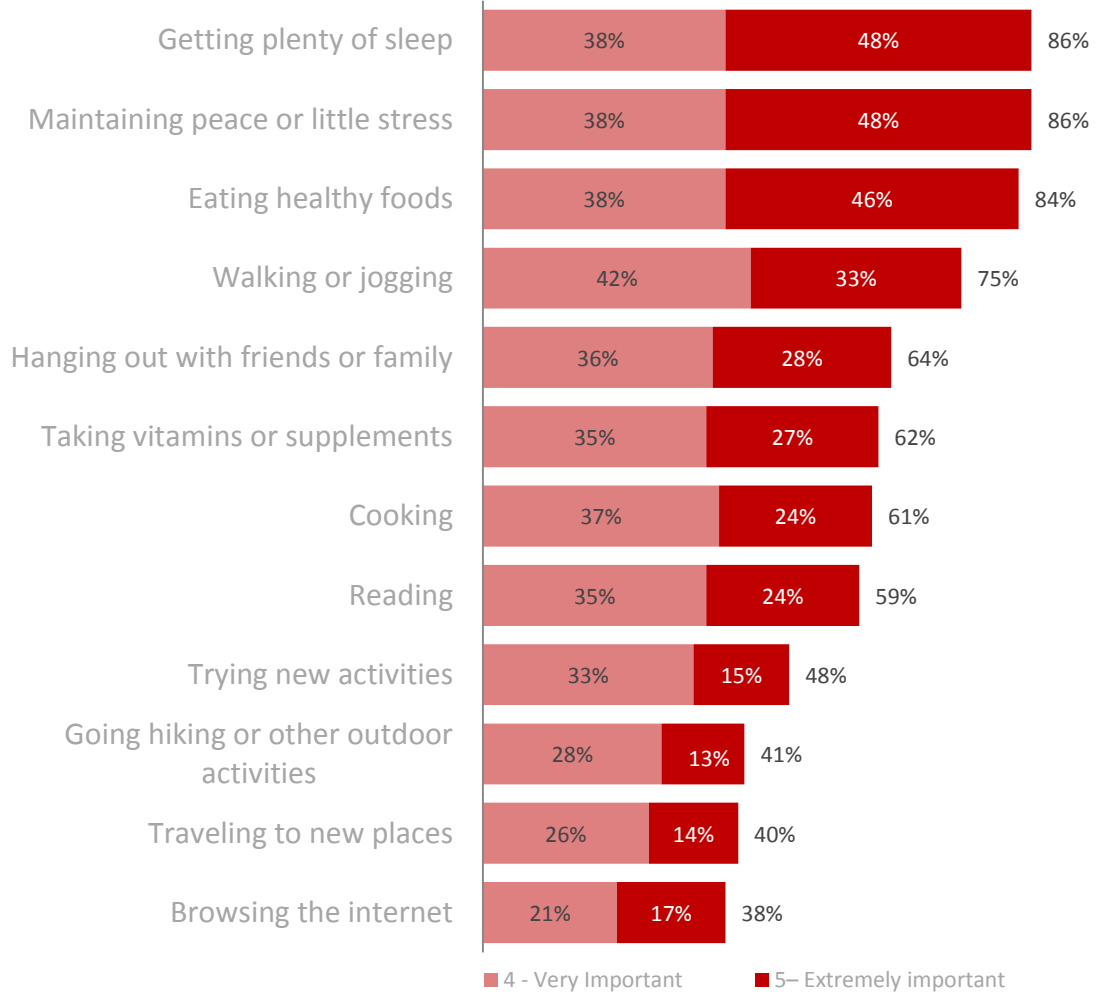


Q2: On a scale from 1 to 5 where 1 means "Not at all important" and 5 means "Extremely important," how important is it to maintain a healthy lifestyle?" Base: Total (N=1,200)

Components of Healthy Living

- Consumers approach healthy living holistically; obtaining plenty of sleep, little stress, proper nutrition, as well as walking or jogging are considered highly important components of healthy living.

Importance of Activities to a Healthy Life



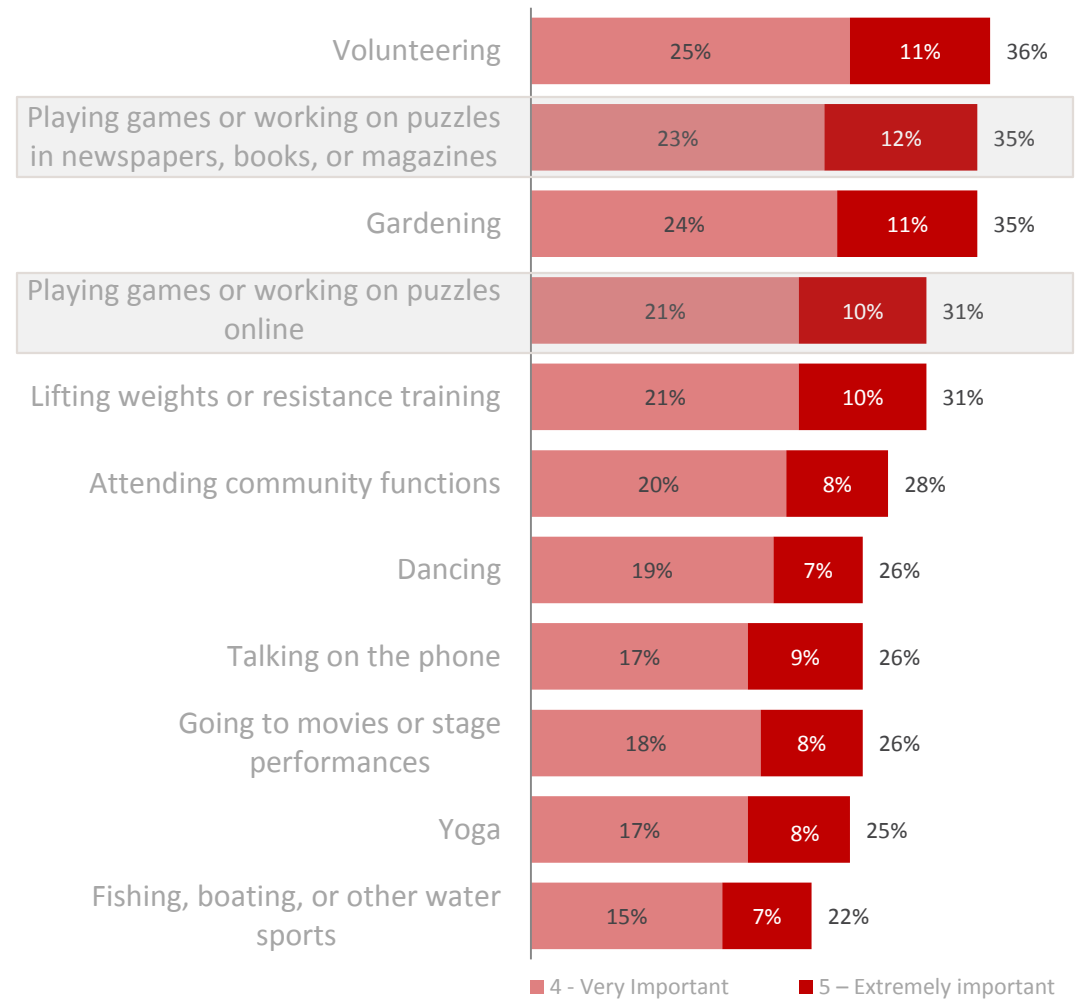
Q3: On a scale from 1 to 5 where 1 means "Not at all important" and 5 means "Extremely important," how important are each of the following to maintaining a healthy lifestyle? Base: Total (N=1,200)

Components of Healthy Living

(continued)

Importance of Activities to a Healthy Life

- Roughly one-third of consumers feel playing games or working on puzzles are important components of a healthy lifestyle (newspapers, books, or magazines 35%; online 31%).

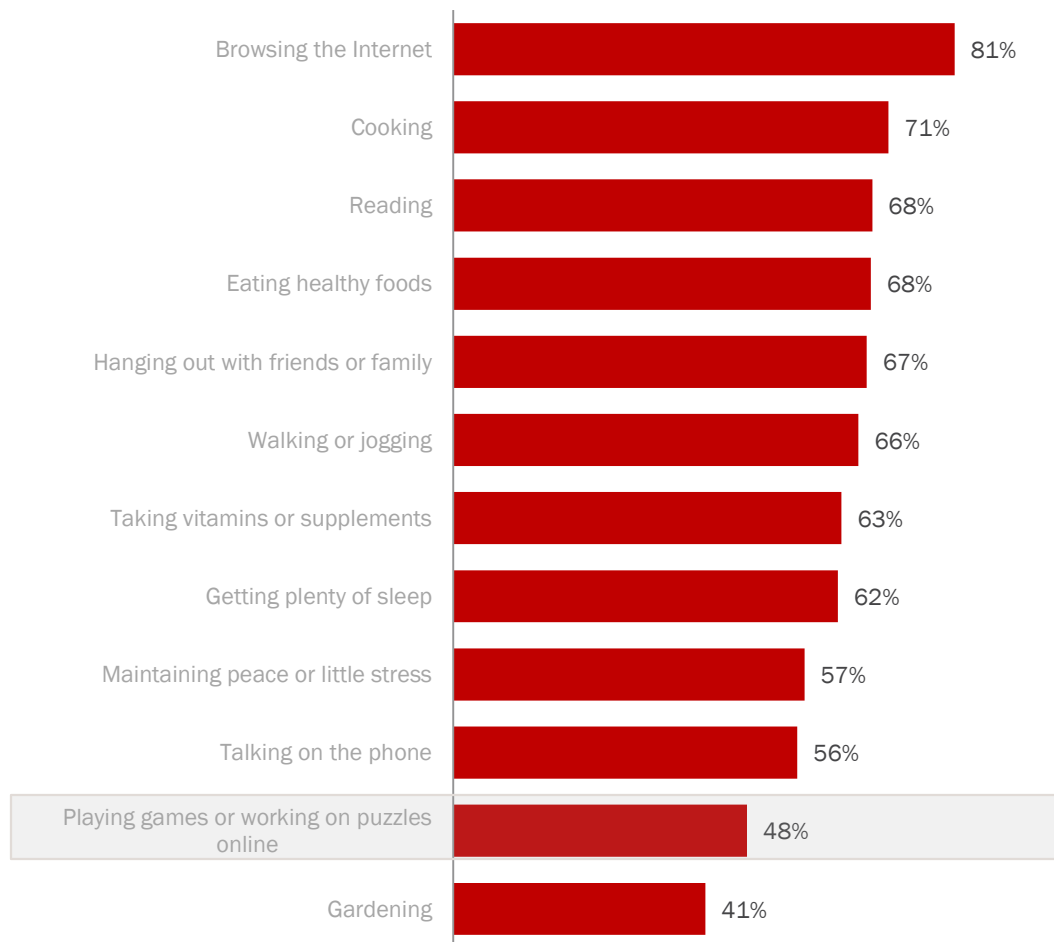


Q3: On a scale from 1 to 5 where 1 means "Not at all important" and 5 means "Extremely important," how important are each of the following to maintaining a healthy lifestyle? Base: Total (N=1,200)

Activity Engagement

- Over four-fifths of consumers regularly browse the Internet (81%).
- Compared to men, a significantly greater proportion of women play games or work on puzzles online (53% versus 39%).

Regular Activities



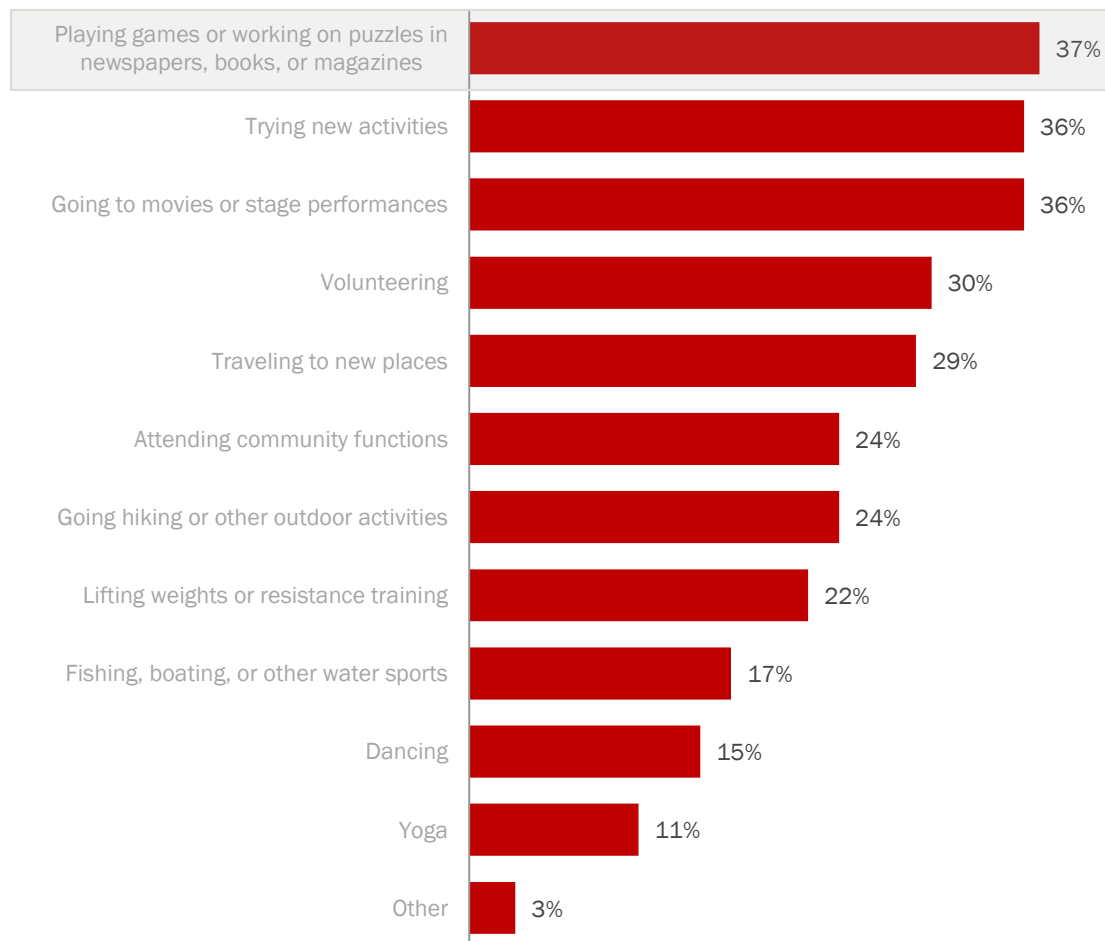
Q4: Which of the following activities do you regularly do? Please select all that apply. Base: Total (N=1,200)

Activity Engagement

(continued)

- While nearly two-fifths of consumers play games or work on puzzles in newspapers, books, or magazines (37%), a significantly greater proportion of women do so than men (40% versus 32%).

Regular Activities

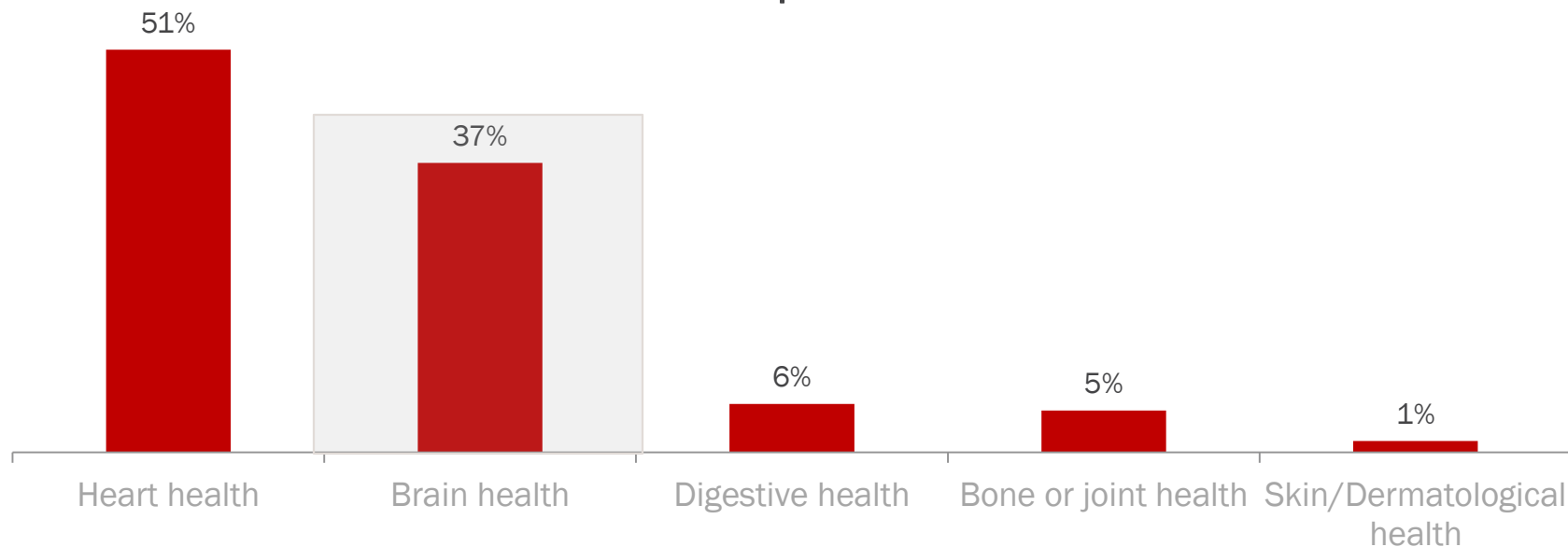


Q4: Which of the following activities do you regularly do? Please select all that apply. Base: Total (N=1,200)

Importance to Overall Health

- When considering overall health, consumers feel heart health (51%) and **brain health** (37%) are of most importance.
- Compared to older consumers (age 50-75), a significantly greater proportion of younger consumers (age 34-49) consider brain health important to overall health (41% versus 34%).

Ranked Most Important to Overall Health

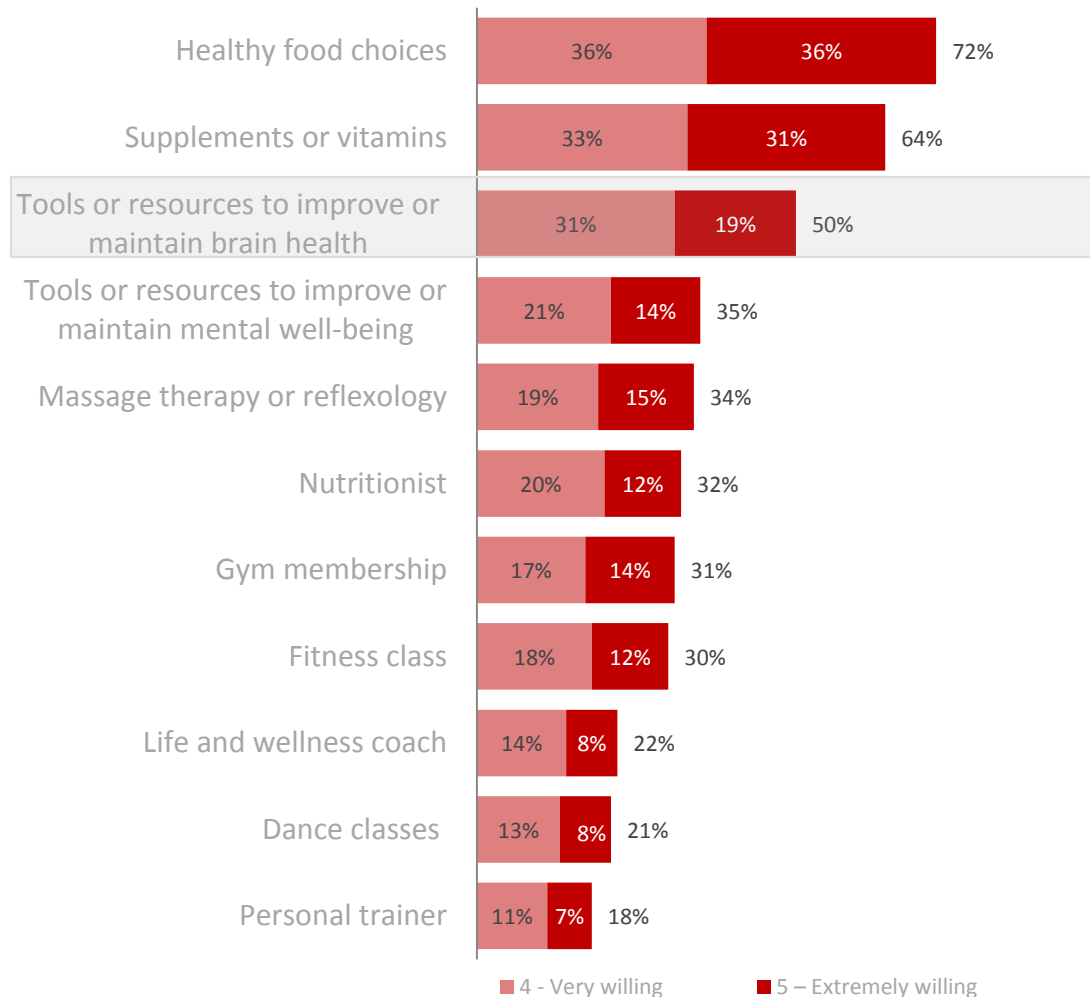


Q5: How important are each of the following to your overall health? Please rank each of the following in order of importance, where the top means "Most important" and the bottom means "Least important." Base: Total (N=1,200)

Willingness to Spend on Health

Activities Willing to Spend Money

- When considering maintaining health, consumers are primarily willing to spend on healthy food choices (72%), supplements (64%), and **tools to improve or maintain brain health (50%)**.
- Compared to men, a significantly greater proportion of women are willing to spend money on tools or resources to improve or maintain brain health (54% versus 43%).

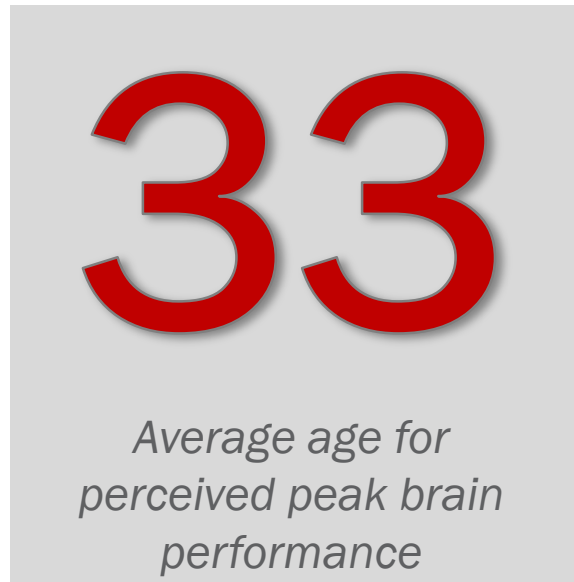


Q6: On a scale from 1 to 5 where 1 means "Not at all willing" and 5 means "Extremely willing," please tell us how willing you are to spend money on each of the following to help maintain a healthy lifestyle. Base: Total (N=1,200)

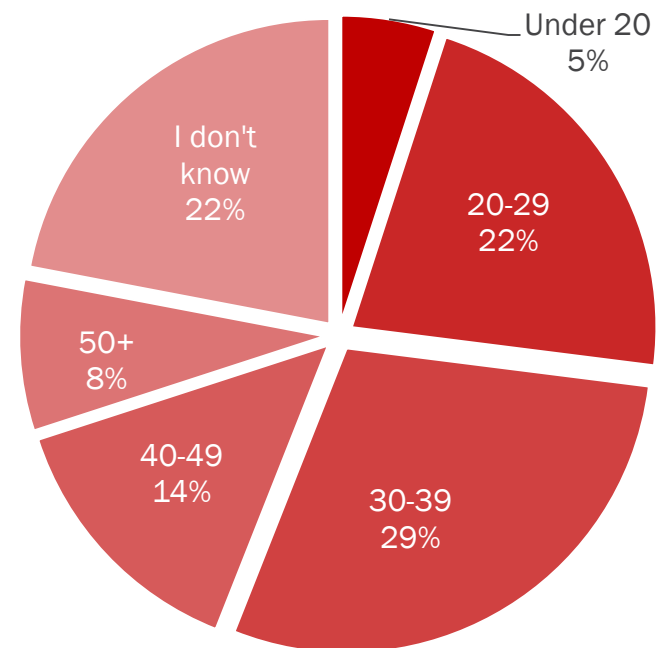
BRAIN HEALTH KNOWLEDGE AND UNDERSTANDING

Brain Peak Performance

- On average, consumers feel the brain is at its peak at 33 years of age.
- For older consumers, the perceived age at which the brain performs best is higher; consumers age 34-49 years feel the brain performs best at age 29, while consumers 50-68 feel it performs best at age 35. Consumers age 69-75 feel it performs best at age 40.



Perceived Age for Peak Brain Performance



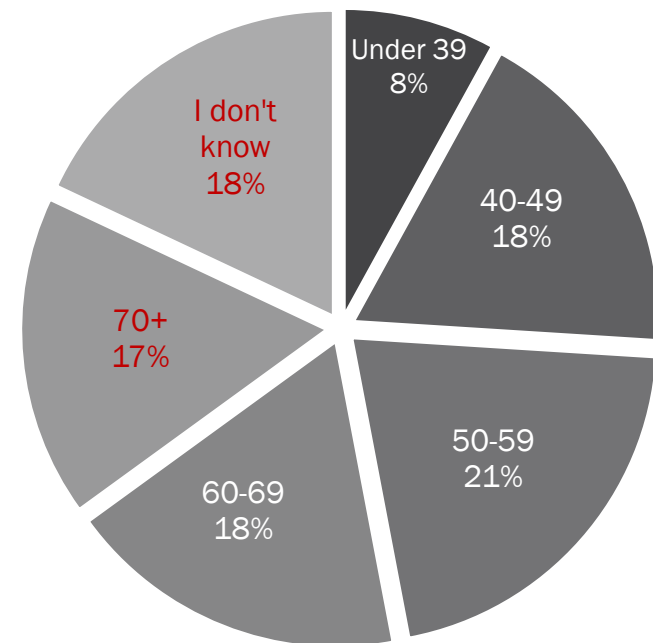
Q7: Approximately, at what age do you feel the brain is at its peak? Base: Total (N=1,200)

Brain Deterioration

- On average, consumers feel brain deterioration begins at age 55.
- Consumers age 34-49 feel deterioration begins at age 53, while consumers age 50-68 feel it begins at age 56. Consumers age 69-75 feel it begins at age 61.



Perceived Age for Brain
Deterioration



Q8: Approximately, at what age do you feel the brain begins to deteriorate? Base: Total (N=1,200)

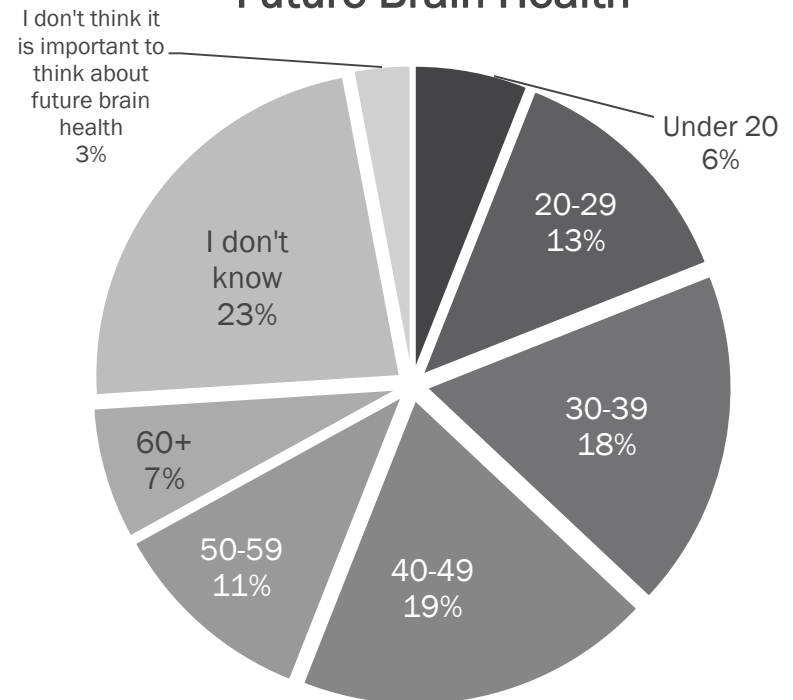
Planning for Future Brain Health

- On average, consumers feel it is important to begin planning for future brain health at age 36.
- Consumers age 34-49 feel planning for future brain health should begin at age 34, while consumers age 50-68 feel it should begin at age 38. Consumers age 69-75 feel it should begin at age 42.

36

Perceived average age to begin planning for future brain health

Age to Begin Preparing for Future Brain Health

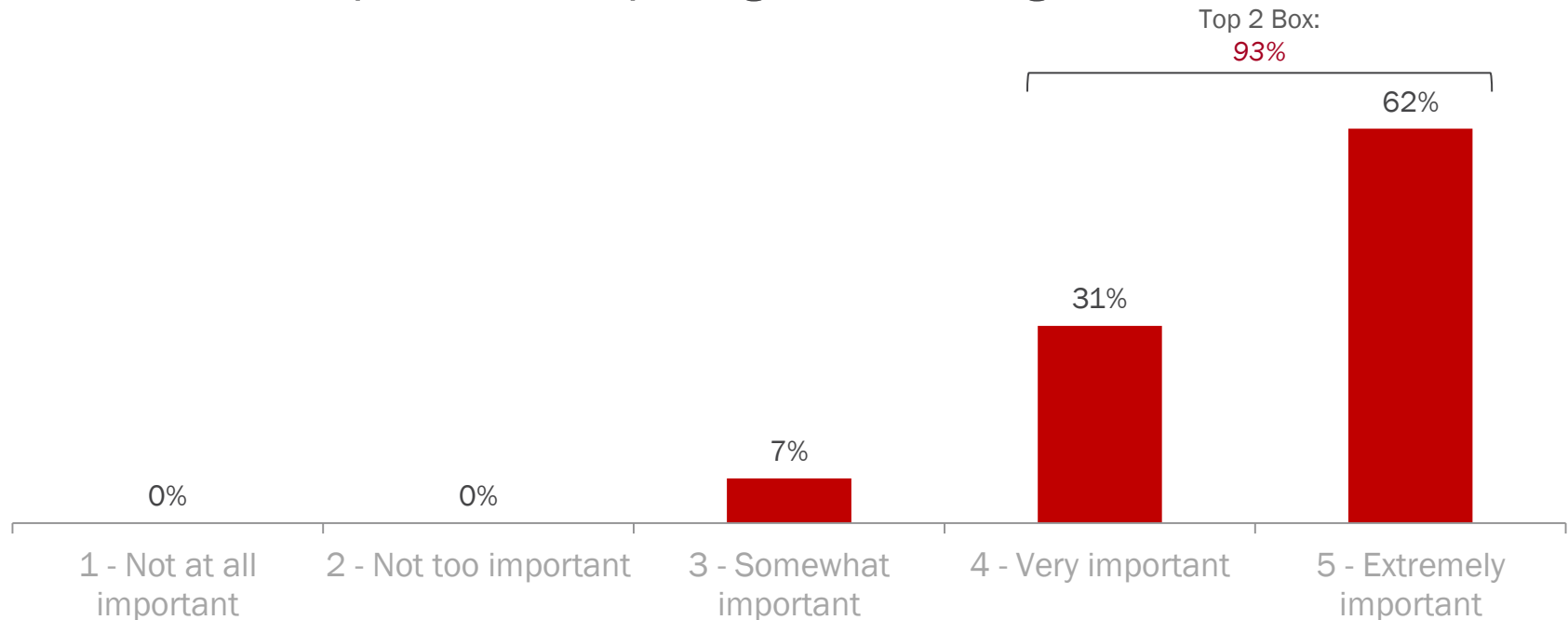


Q9: Approximately, at what age do you feel it is important to start thinking about brain health for the future? Base: Total (N=1,200)

Maintaining Brain Health

- All consumers feel it is at least somewhat important to improve or maintain brain health, and 93% feel it is very or extremely important.

Importance of Improving or Maintaining Brain Health

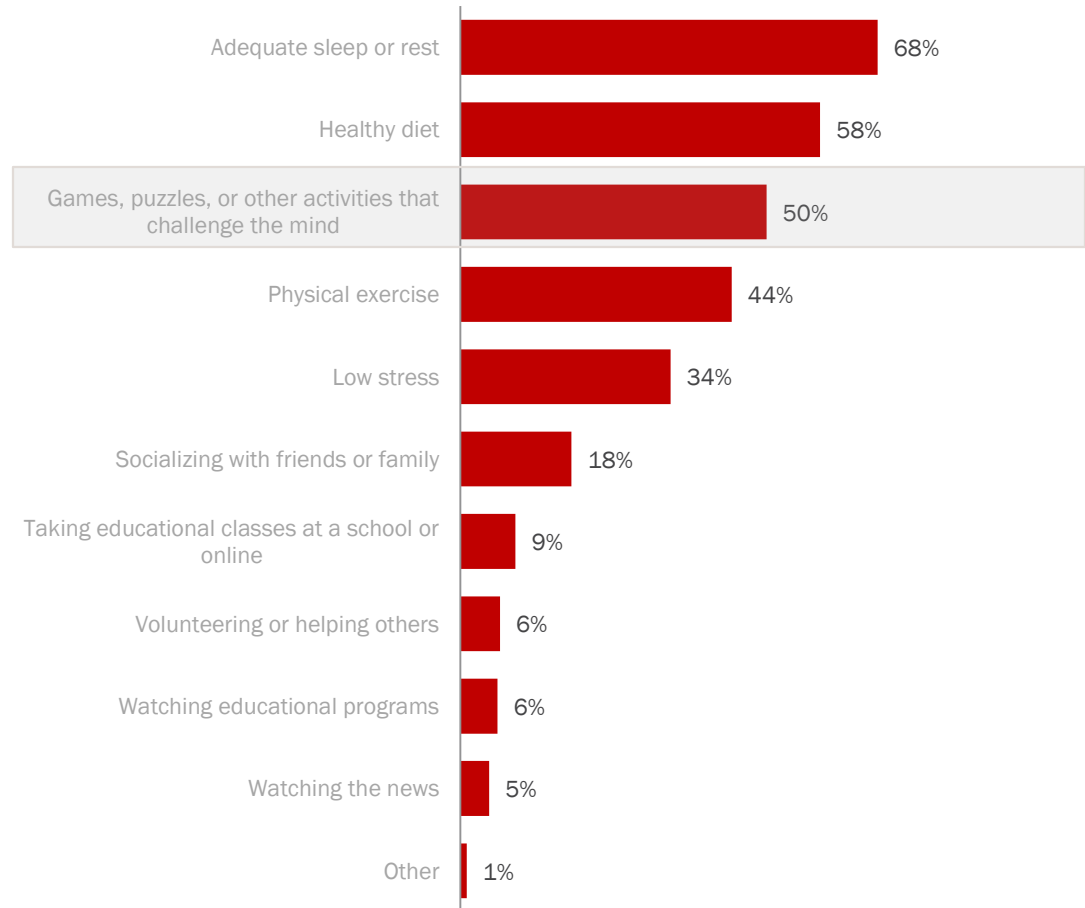


Q10: On a scale from 1 to 5 where 1 means "Not at all important" and 5 means "Extremely important," how important is it to improve or maintain brain function? Base: Total (N=1,200)

Keys to Maintain Brain Health

- Over one-half of consumers feel adequate rest (68%), healthy diet (58%), and stimulating brain exercises such as games or puzzles (50%) are key to improving or maintaining a healthy brain.

Ranked Top 3 Most Important to Improving or Maintaining Brain Health



Q11: Please rank the top 3 activities that are most important to improving or maintaining brain function, prior to brain deterioration.
Base: Total (N=1,200)

Reversing Brain Deterioration

- Just under 60% of consumers feel brain deterioration can be reversed or improved.

Perceptions Toward Reversing or Improving Brain Deterioration

(Does not include "I don't know")

59%

*Brain deterioration
CAN be reversed or
improved*

14%

*Brain deterioration
CANNOT be reversed
or improved*

Q12: Once brain deterioration has begun, do you feel it can be reversed or improved? Base: Total (N=1,200)

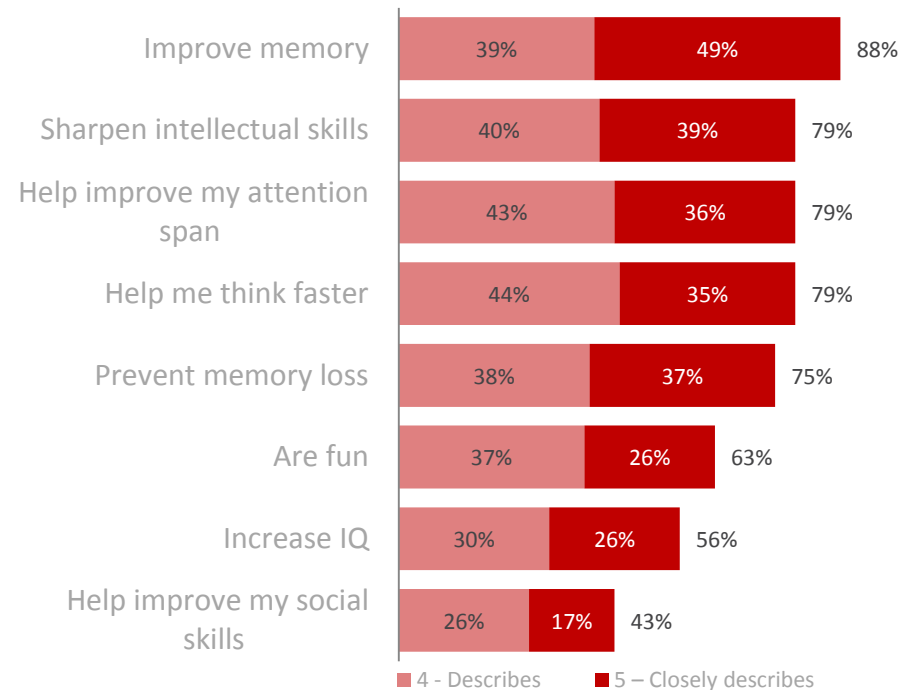
BRAIN HEALTH AWARENESS,
ENGAGEMENT,
CONSIDERATION, AND
MOTIVATION

Brain Training Awareness

- Among the 52% of consumers aware of brain training, at least three-quarters feel it is best described as an activity that improves memory (88%), sharpens intellectual skills (79%), improves attention span (79%), promotes faster thinking (79%), and prevents memory loss (75%).



Brain Training is Exercises or Activities that ...



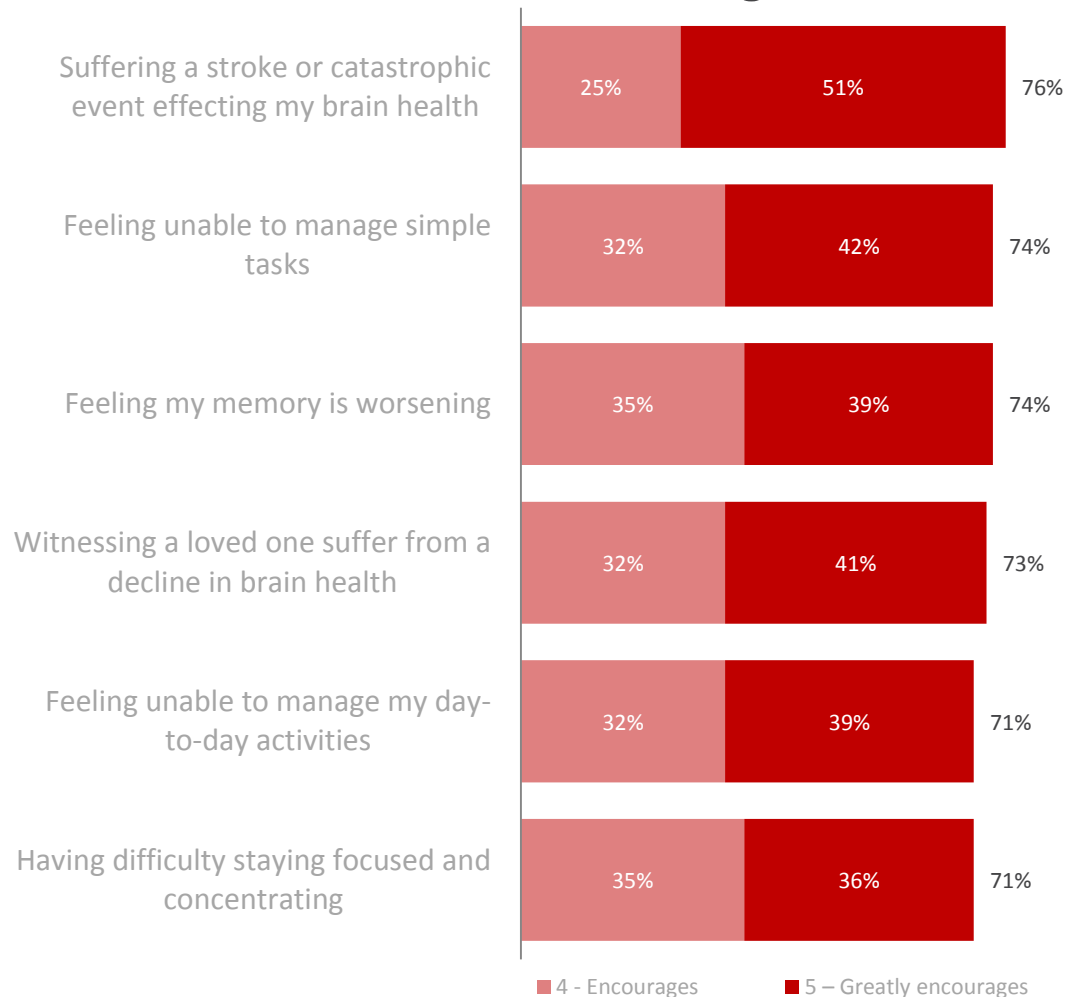
Q13: Have you ever heard of "brain training?" Base: Total (N=1,200)

Q14. On a scale from 1 to 5 where 1 means "Doesn't describe at all" and 5 means "Closely describes," how well does each of the following statements describe "brain training?" Base: Respondents aware of brain training (n=626)

Brain Health Motivators

- A stroke or catastrophic event affecting brain health would be the primary motivator to engage in activities to improve or maintain brain health, with 76% of consumers agreeing they would be encouraged by this type of event.
- Inability to manage simple tasks, memory worsening, and witnessing a loved one suffer from a decline in brain health are also likely to encourage consumers to proactively manage brain health (74%, 74%, and 73%, respectively).

Brain Training Motivators



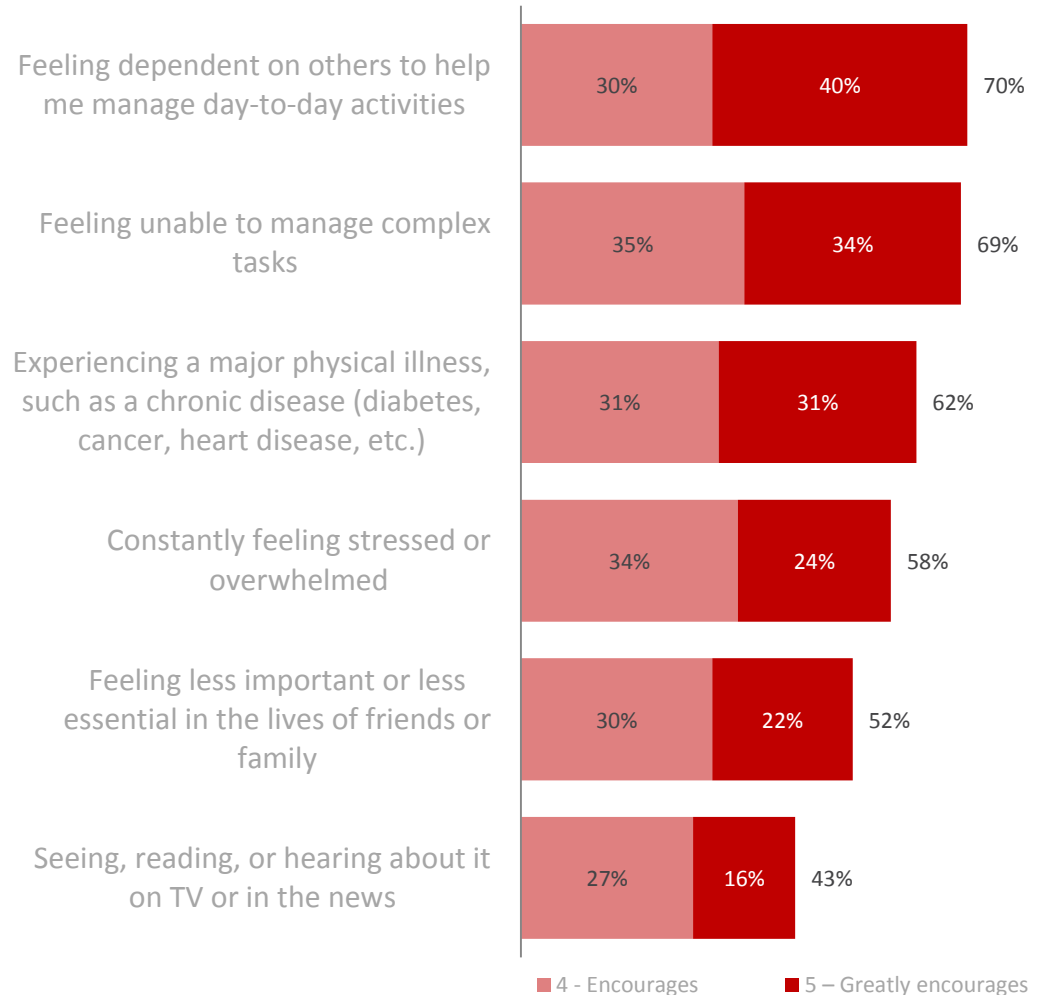
Q15: On a scale from 1 to 5 where 1 means "Doesn't encourage at all" and 5 means "Greatly encourages," how would each of the following influence your decision to participate in activities to improve brain health? Base: Total (N=1,200)

Brain Health Motivators

(continued)

- Though 43% of consumers are encouraged to participate in activities related to brain health based on advertising, it is less motivating compared to events affecting brain health.

Brain Training Motivators

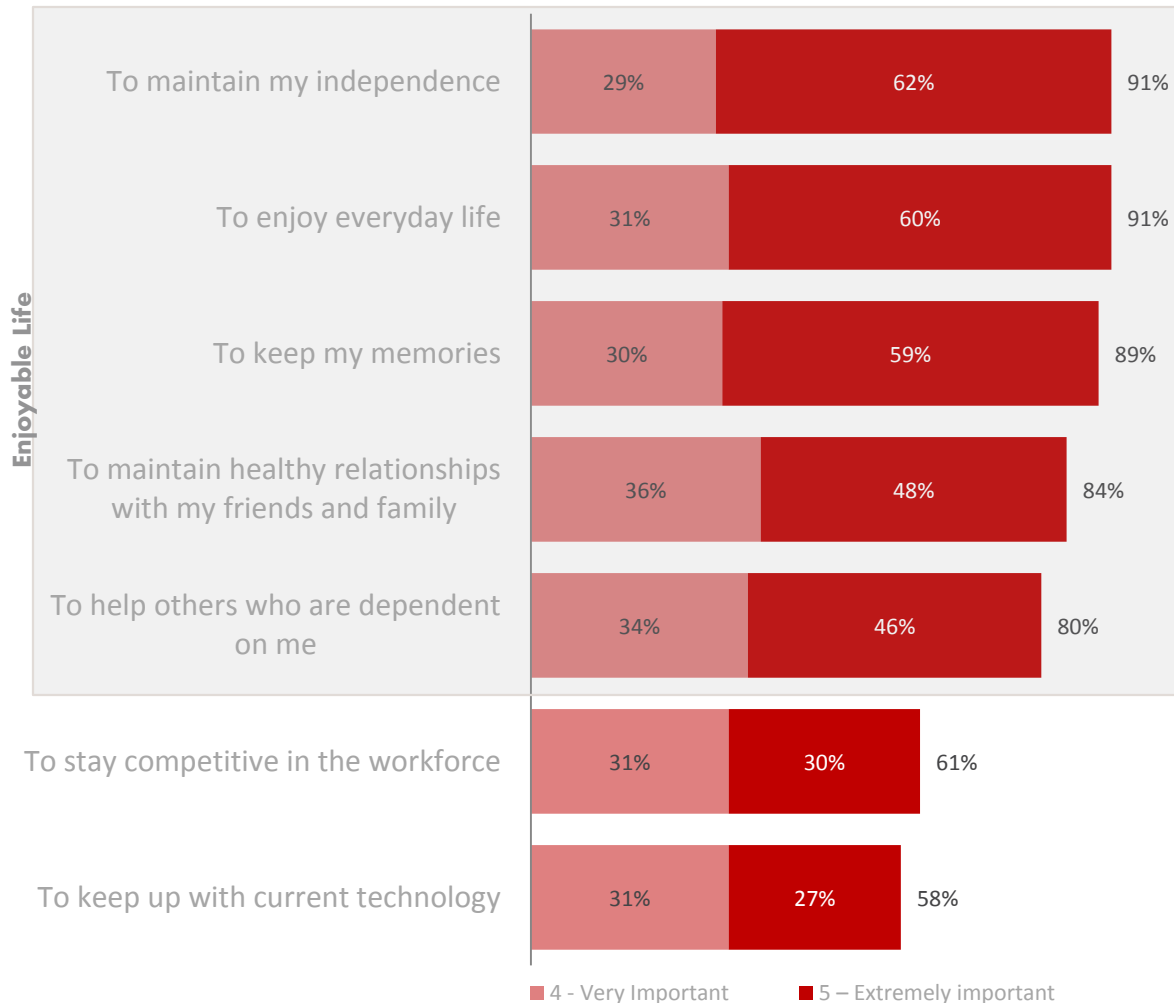


Q15: On a scale from 1 to 5 where 1 means "Doesn't encourage at all" and 5 means "Greatly encourages," how would each of the following influence your decision to participate in activities to improve brain health? Base: Total (N=1,200)

Reasons for Brain Health

- Consumers primarily feel improving or maintaining brain health is important to living a more enjoyable life; roughly 90% feel it is important to maintaining independence, enjoying everyday life, and keeping memories.

Reasons for Maintaining Brain Health

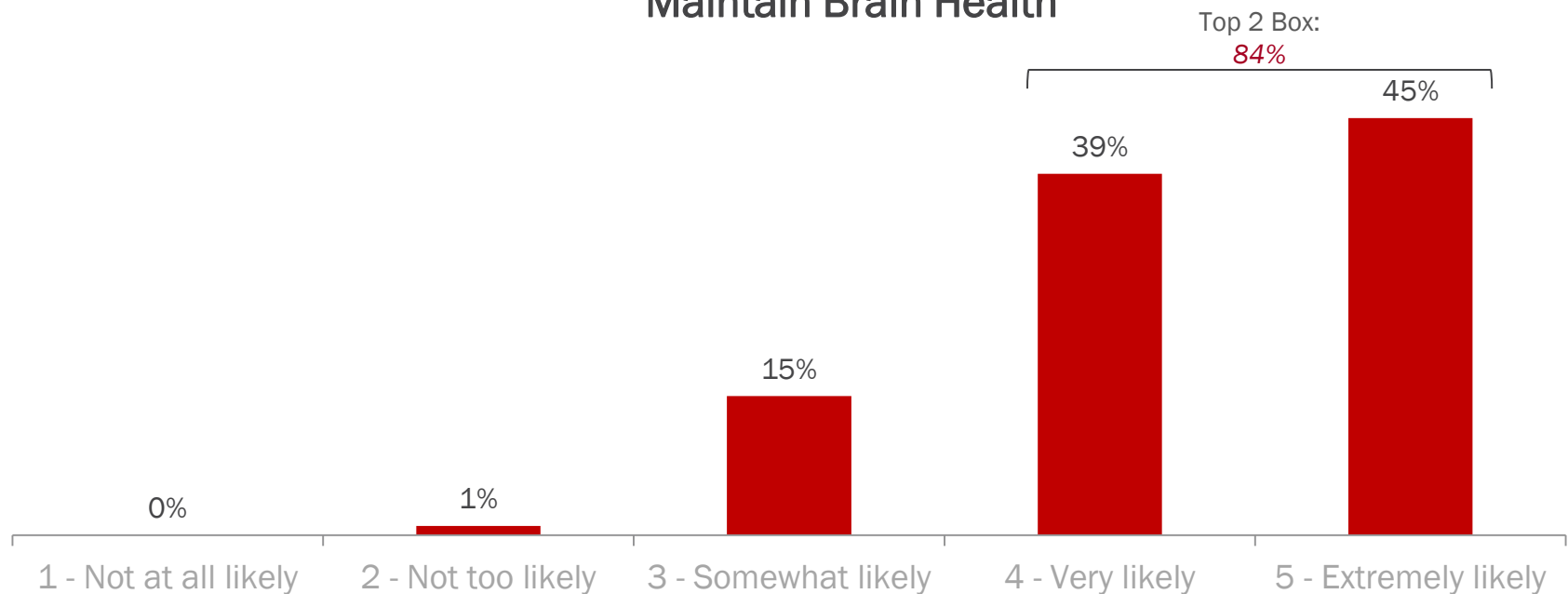


Q16: On a scale from 1 to 5 where 1 means "Not at all important" and 5 means "Extremely important," how important is it to improve or maintain brain health for each of the following? Base: Total (N=1,200)

Future Brain Health Engagement

- Over 80% of consumers are very or extremely likely to engage in brain health activities in the future.
- Compared to men, a significantly greater proportion of women are likely to engage in activities in the future to improve or maintain brain health (87% versus 80%).

Likelihood to Engage in Activities in the Future to Improve or Maintain Brain Health

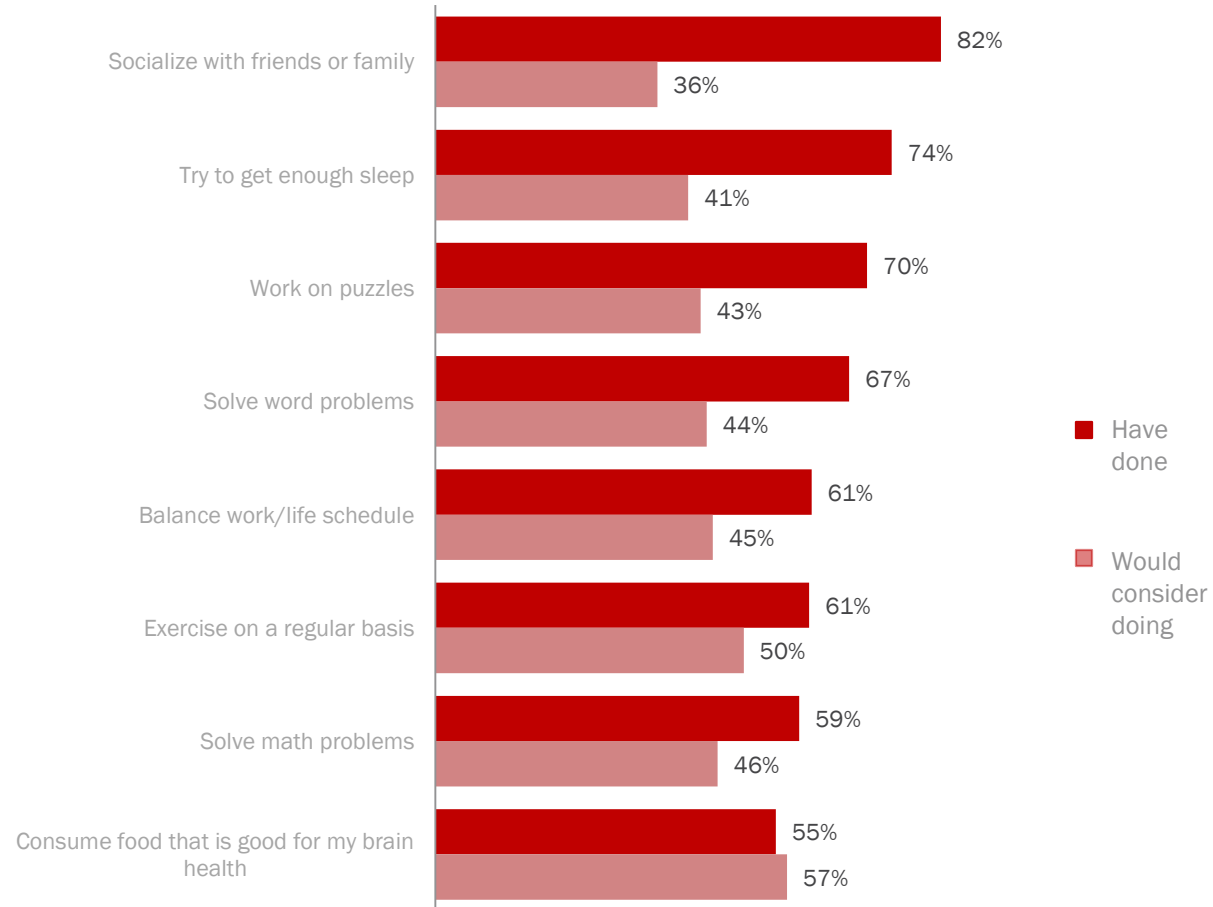


Q17: On a scale from 1 to 5 where 1 means "Not at all likely" and 5 means "Extremely likely," how likely would you be to engage in activities, in the future, to improve or maintain your brain health? Base: Total (N=1,200)

Brain Health Activities

- Among those likely to consider engaging in activities to improve or maintain brain health, 82% have socialized with friends or family to maintain brain health.
- Around two-thirds of consumers likely to consider engaging in brain health activities have used puzzles or word problems to aid brain health (70% and 67% respectively).

Participation in Brain Health Activities



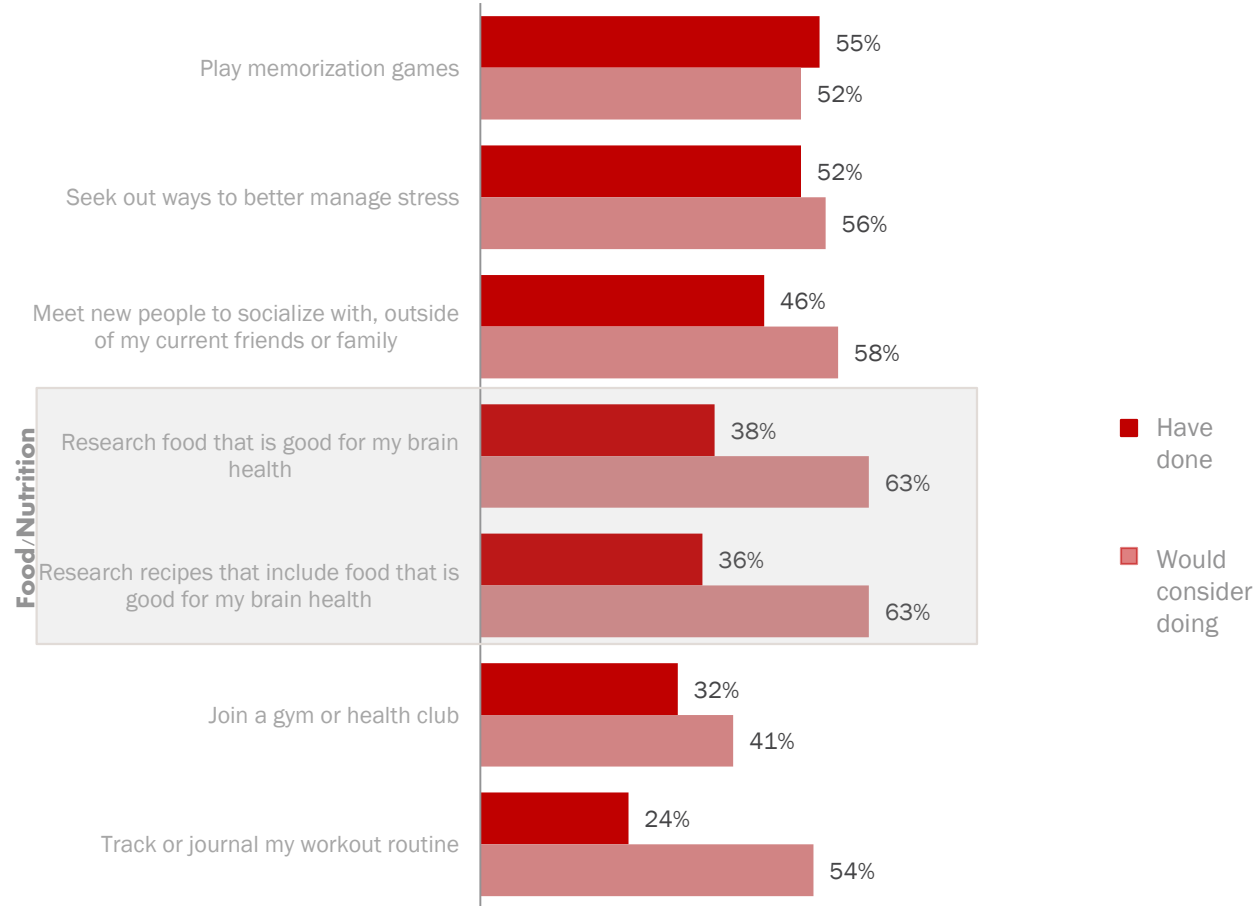
Q19: Considering improving or maintaining your brain health, please tell us your level of participation for each of the following.
Base: Respondents likely to consider engaging in activities to improve or maintain brain health (n=1,186)

Brain Health Activities

(continued)

- Nearly two-thirds of consumers likely to engage in brain health activities would consider researching food and recipes including foods that maintain or improve brain health (63% and 63% respectively).

Participation in Brain Health Activities



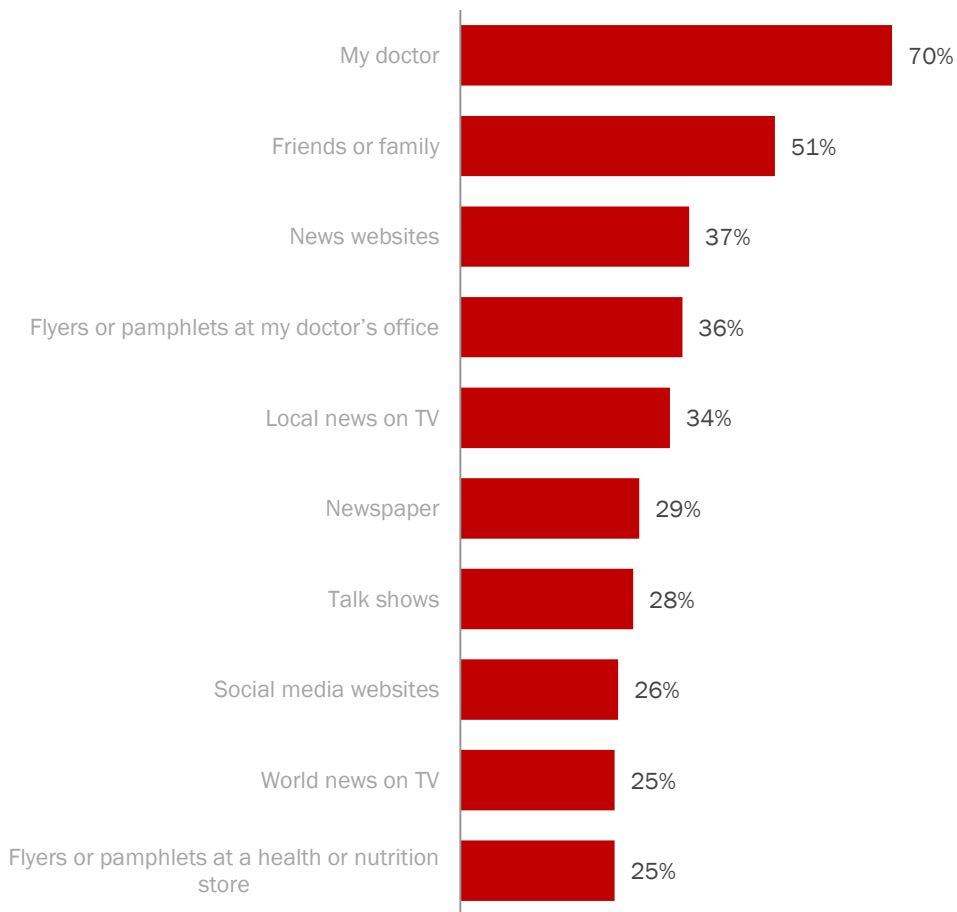
Q19: Considering improving or maintaining your brain health, please tell us your level of participation for each of the following.
Base: Respondents likely to consider engaging in activities to improve or maintain brain health (n=1,186)

BRAIN TRAINING PROGRAMS

Brain Health Information Sources

Information Sources for Learning About Brain Health

- Consumers primarily look to their doctor and friends or family to learn more about brain health (70% and 51% respectively).
- Compared to younger consumers (age 34-49), a significantly greater proportion of older consumers (age 50-75) look to their doctor (74%), flyers or pamphlets at their doctor's office (42%), newspapers (34%), and world news on TV (30%) to learn more about brain health.



Q21: Which of the following sources if any, do you currently use or would consider using to learn about brain health?

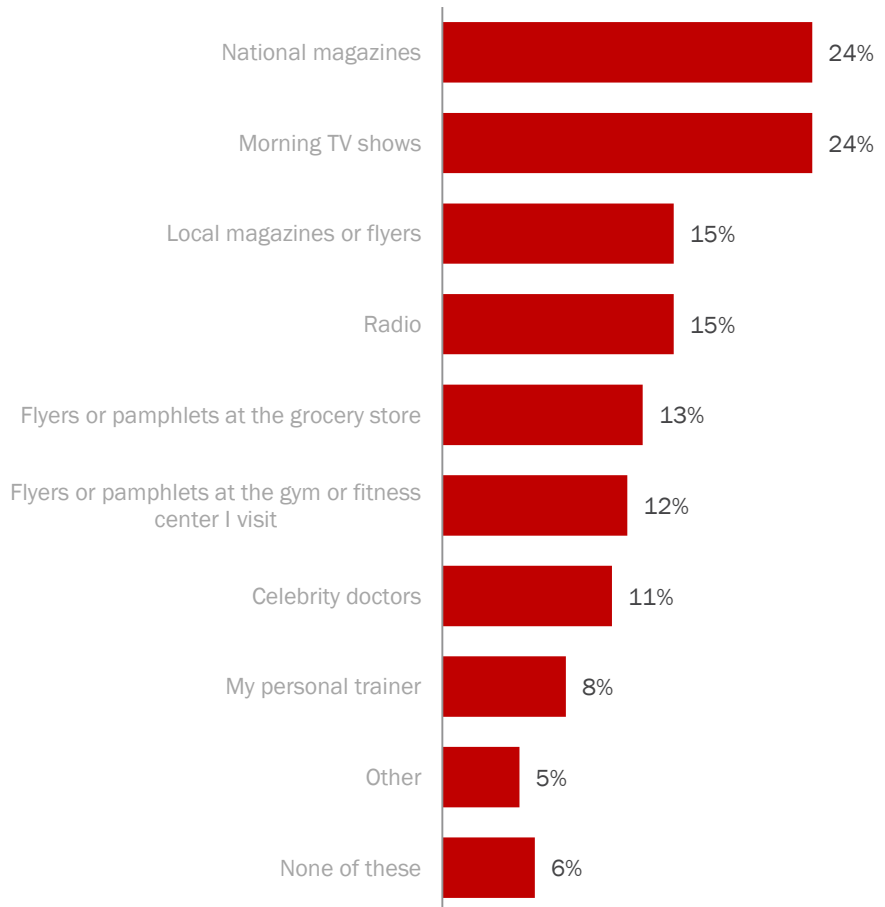
Base: Total (N=1,200)

Brain Health Information Sources

(continued)

Information Sources for Learning About Brain Health

- Less than 15% of consumers look to flyers in grocery stores (13%) and gyms or fitness centers (12%) or endorsements by celebrity doctors (11%) to learn about brain health.

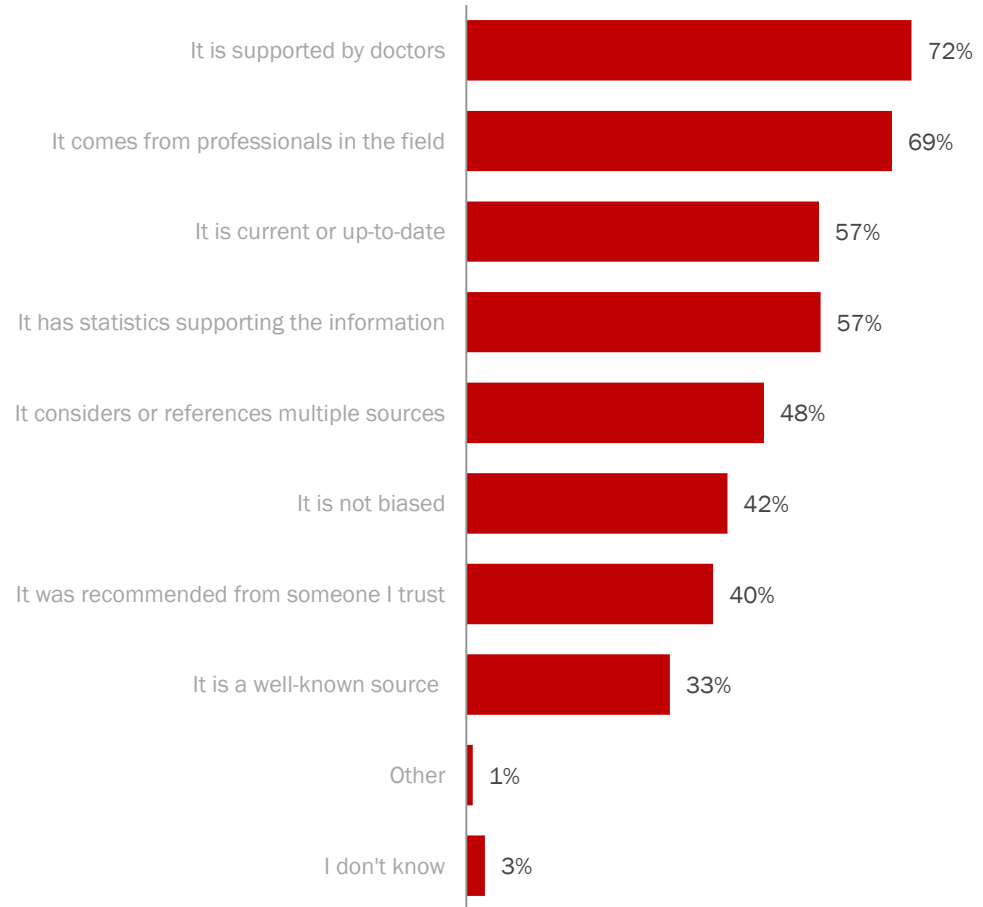


Q21: Which of the following sources if any, do you currently use or would consider using to learn about brain health?
 Base: Total (N=1,200)

Information Source Credibility

Determining Trustworthiness of Information Sources

- Roughly 70% of consumers who have researched or would consider researching brain health feel information regarding brain health is more reliable when it is supported by doctors (72%) or professionals in the field (69%).

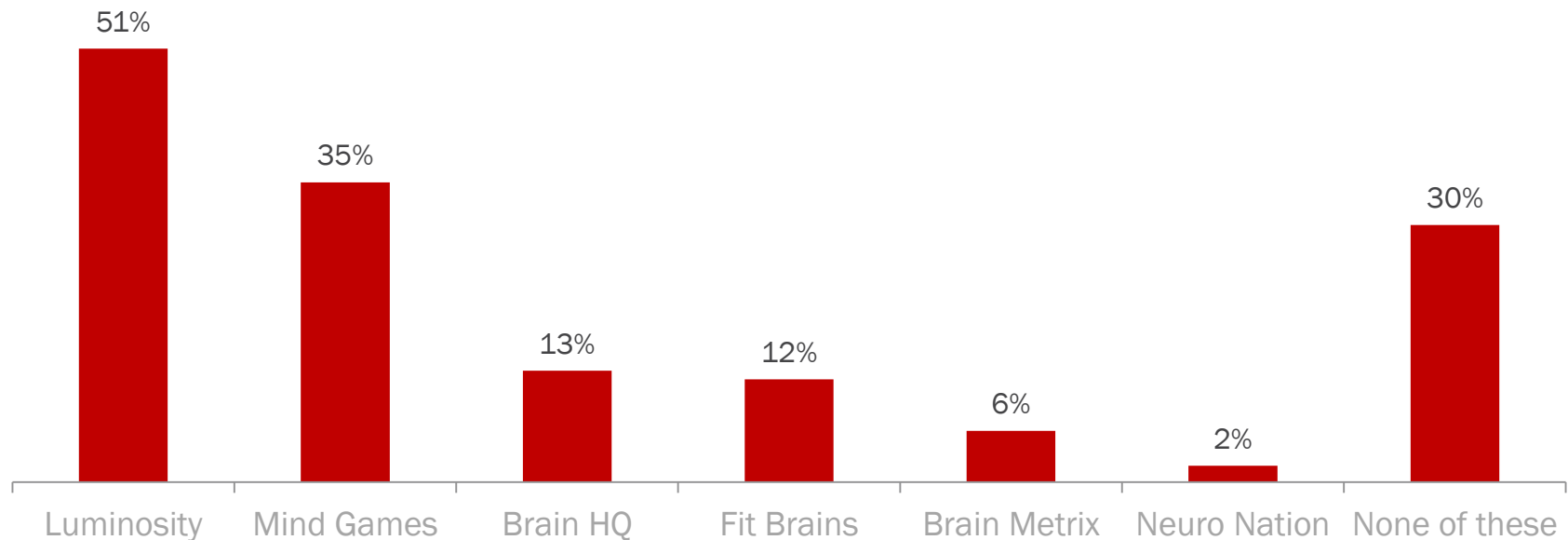


Q22: When considering researching brain health, what makes a source trustworthy or reliable?
Base: Respondents who have researched or would consider researching brain health (n=1,131)

Brain Training Programs

- While around one-half of consumers are aware of Luminosity, one-third are aware of Mind Games (51% and 35% respectively).
- Nearly one-third of consumers are not aware of any brain training programs (30%).

Brain Training Program Awareness

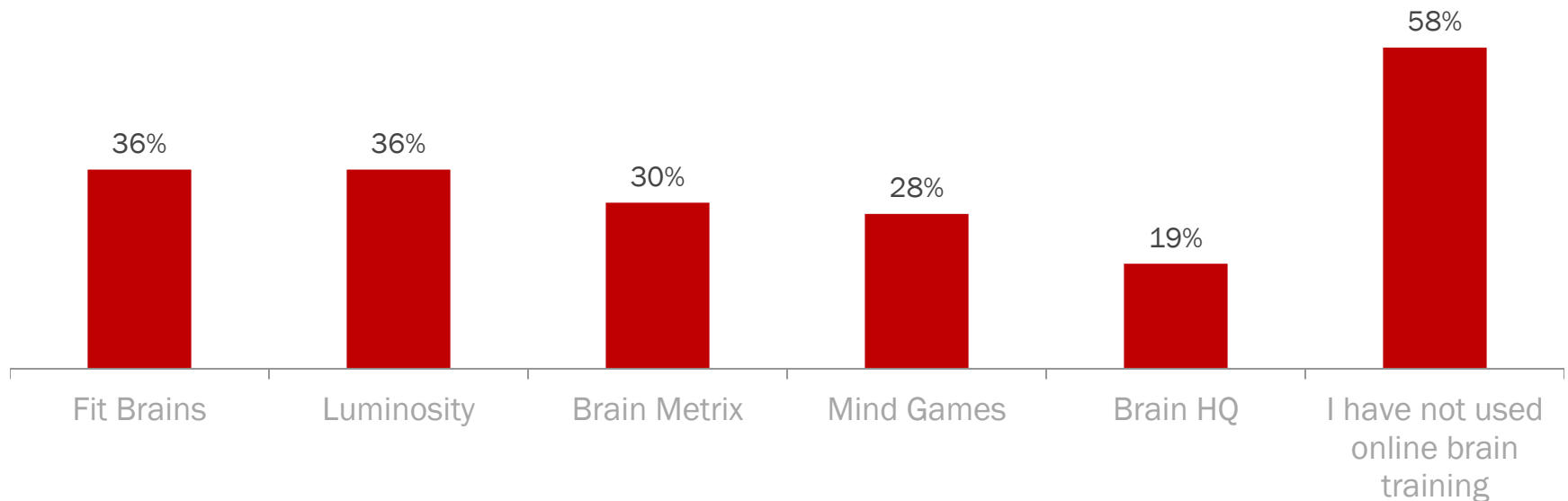


Q23: Have you seen or heard about any of the following brain training programs? Base: Total (N=1,200)

Program Usage

- Among consumers aware of respective programs, roughly one-third have used Fit Brains (36%) or Luminosity (36%), while just over one-quarter have used Brain Metrix (30%) or Mind Games (28%).
- A significantly greater proportion of younger consumers (age 34-49) have used Mind Games, compared to older consumers (age 50-75) (36% versus 19%).

Brain Training Program Usage



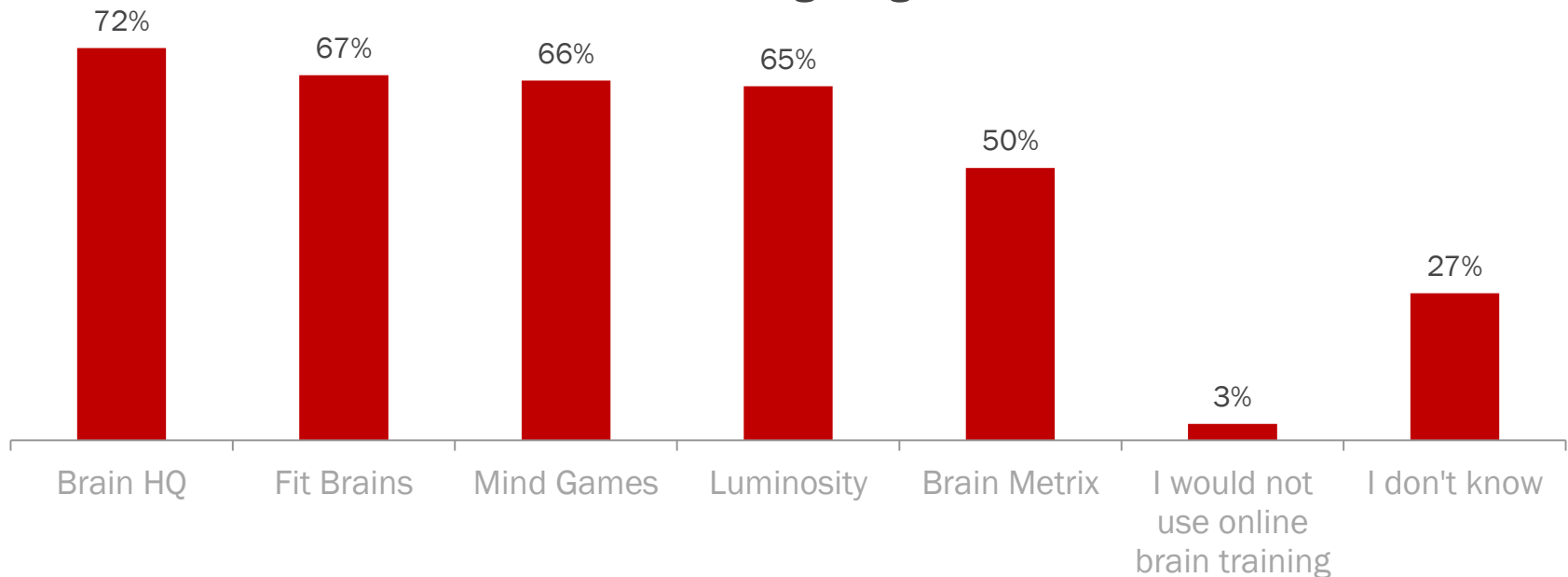
Q24: Which of the following, if any, brain training programs have you ever used? Base: Respondents aware of programs

Note: Neuro Nation not shown due to low base size (n<50)

Future Program Consideration

- Among consumers aware of respective brain training programs, over 70% would consider using Brain HQ in the future, while two-thirds would consider Fit Brains (67%), Mind Games (66%), and Luminosity (65%).
- Only nominal percentage of consumers indicate they would not use online brain training.

Future Brain Training Program Consideration



Q25: Which of the following, if any, brain training programs would you consider using in the future? Base: Respondents aware of programs
Note: Neuro Nation not shown due to low base size (n<50)



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AARP is a nonprofit, nonpartisan organization, with a membership of nearly 38 million, that helps people turn their goals and dreams into real possibilities, strengthens communities and fights for the issues that matter most to families such as healthcare, employment and income security, retirement planning, affordable utilities and protection from financial abuse. We advocate for individuals in the marketplace by selecting products and services of high quality and value to carry the AARP name as well as help our members obtain discounts on a wide range of products, travel, and services. A trusted source for lifestyle tips, news and educational information, AARP produces AARP The Magazine, the world's largest circulation magazine; AARP Bulletin; www.aarp.org; AARP TV & Radio; AARP Books; and AARP en Español, a Spanish-language website addressing the interests and needs of Hispanics. AARP does not endorse candidates for public office or make contributions to political campaigns or candidates. The AARP Foundation is an affiliated charity that provides security, protection, and empowerment to older persons in need with support from thousands of volunteers, donors, and sponsors. AARP has staffed offices in all 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. Learn more at www.aarp.org.