7.35 Figure Checklist

The figure checklist may be helpful to ensure that your figure communicates effectively and conforms to the style guidelines presented in this chapter.

Figure Checklist

- Is the figure necessary?
- Does the figure belong in the print and electronic versions of the article, or can it be placed in supplemental materials?
- Is the figure being submitted in a file format acceptable to the publisher?
- Has the file been produced at a sufficiently high resolution to allow for accurate reproduction?
- Are figures of equally important concepts prepared according to the same size and scale?
- Are all figures numbered consecutively with Arabic numerals in the order in which they are first mentioned in the text? Is the figure number bold and flush left?
- Are all figures called out or referred to in the text?
- Is the figure title brief but explanatory? Is it written in italic title case and flush left?

- Is the figure image simple, clear, and free of extraneous detail?
- Are all elements of the image clearly labeled?
- Are the magnitude, scale, and direction of grid elements clearly labeled?
- Has the figure been formatted properly? Is the font sans serif within the image portion of the figure and between 8 and 14 points in size?
- Are all abbreviations explained (with exceptions as noted in Section 7.15), as well as the use of special symbols?
- If the figure includes a legend to define symbols, line styles, or shading variants, does the legend appear within or below the image? Are words in the legend written in title case?
- Have all substantive modifications to photographic images been disclosed?
- Are the figure notes, if needed, in the order of general note, specific note, and probability note? Are the notes double-spaced and flush left and in the same font as the text of the paper?
- If all or part of a figure is reprinted or adapted, is there a copyright attribution? If permission was necessary to reproduce the figure, have you received written permission for reuse (in print and electronic forms) from the copyright holder and sent a copy of that written permission with the final version of your paper?

7.36 Sample Figures

Many types of figures can be used to present data to readers. The more common types of figures used in qualitative, quantitative, and mixed methods research are presented next. There are many variations and versions of each, and the distinctions among many of them are not clear. For situations not addressed here, consult similar published articles to see examples of current standards and practices and follow those examples.

- **graphs** (Figures 7.2–7.3): Graphs typically display the relationship between two quantitative indices or between a continuous quantitative variable (usually displayed on the y-axis) and groups of participants or subjects (usually displayed on the x-axis). Bar graphs (Figure 7.2) and line

graphs (Figure 7.3) are two examples of graphs.

- **charts** (Figures 7.4–7.11): Charts generally display nonquantitative information with the use of enclosed boxes, squares, or circles connected with straight or curved lines or arrows. They are used to
  - show the flow of participants or subjects, such as through a study process (Figure 7.4) or in a randomized clinical trial (Figure 7.5; this is referred to as a CONSORT flow diagram; for a downloadable template, see the CONSORT website at http://www.consort-statement.org/consort-statement/flow-diagram);
  - illustrate models—for example, conceptual or theoretical models (Figure 7.6), structural equation models (Figure 7.7), confirmatory factor analysis models (Figure 7.8), and path models (Figure 7.9); and
  - illustrate qualitative (Figure 7.10) and mixed methods (Figure 7.11) research designs or frameworks.
- **drawings** (Figures 7.12–7.13): Drawings show information pictorially and can be used to illustrate, for example,
  - experimental setups (Figure 7.12) and
  - experimental stimuli (Figure 7.13).
- **maps** (Figure 7.14): Maps generally display spatial information—for example, geographic census information. This information often comes from government sources (e.g., the U.S. Census Bureau or the Centers for Disease Control and Prevention); to reprint or adapt tables or figures from these sources, see Section 12.16.
- **plots** (Figures 7.15–7.16): Plots present individual data points as a function of axis variables. Common types of plots include
  - the scatterplot (Figure 7.15), which is used to explore the relationship between two variables (e.g., a linear relationship may be indicated if the data points are clustered along the diagonal), and
  - multidimensional scaling (Figure 7.16), in which similar points or stimuli are presented close together in a multidimensional space and those that are dissimilar appear farther apart.
- **photographs** (Figure 7.17): Photographs (see Section 7.30) contain direct visual representations of information. They are often used to present information that would be difficult to portray effectively with drawings,

such as facial expressions or precise placement of stimuli in an environment.

Multipanel Figures. A multipanel figure may combine bar graphs, line graphs, histograms, and other figure types into one figure (see Figure 7.18 for an example; see also Section 7.26). Whether it is advisable to combine panels into one figure or to present panels as separate figures will depend on the size of the figures and the nature of the information being presented.

Figures for Electrophysiological, Radiological, Genetic, and Other Biological Data. A variety of figures are used to present biological data. These data include

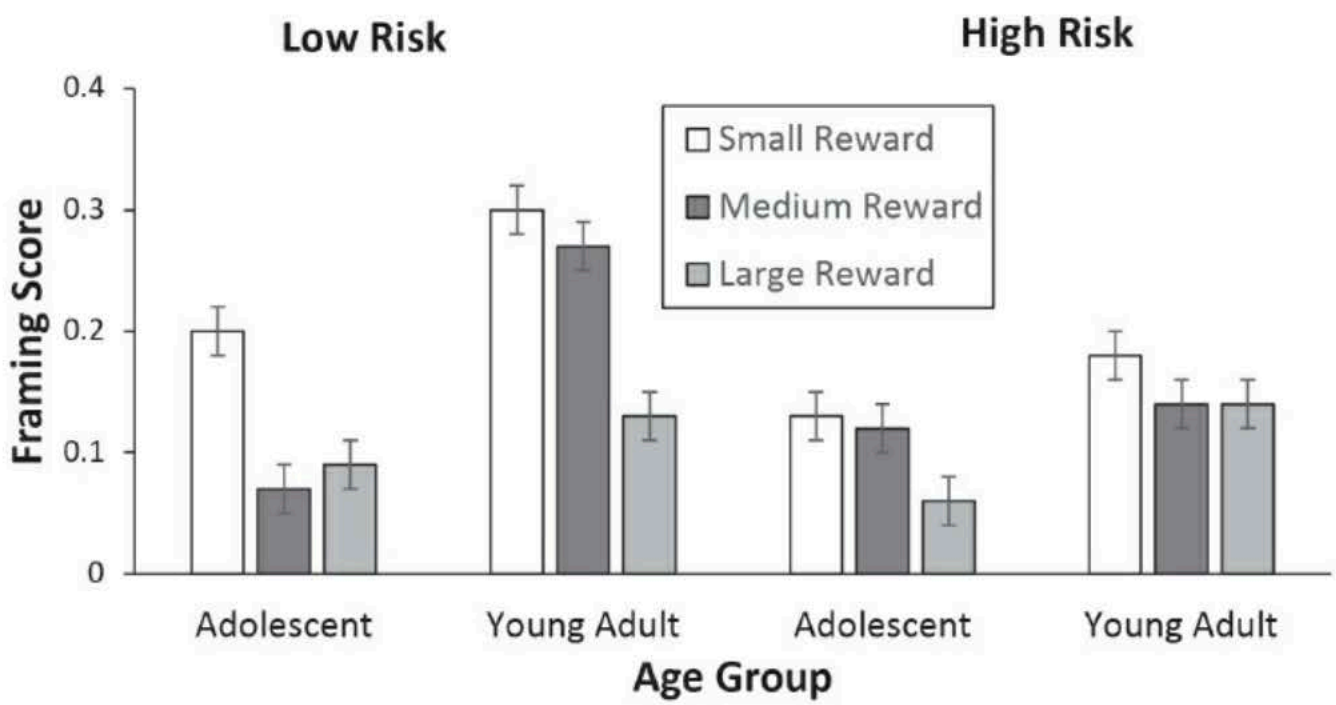
- event-related potentials (Figure 7.19),
- fMRI data (Figure 7.20), and
- genetic maps (Figure 7.21).

Sample Figures

Figure 7.2 Sample Bar Graph

Figure 1

Framing Scores for Different Reward Sizes

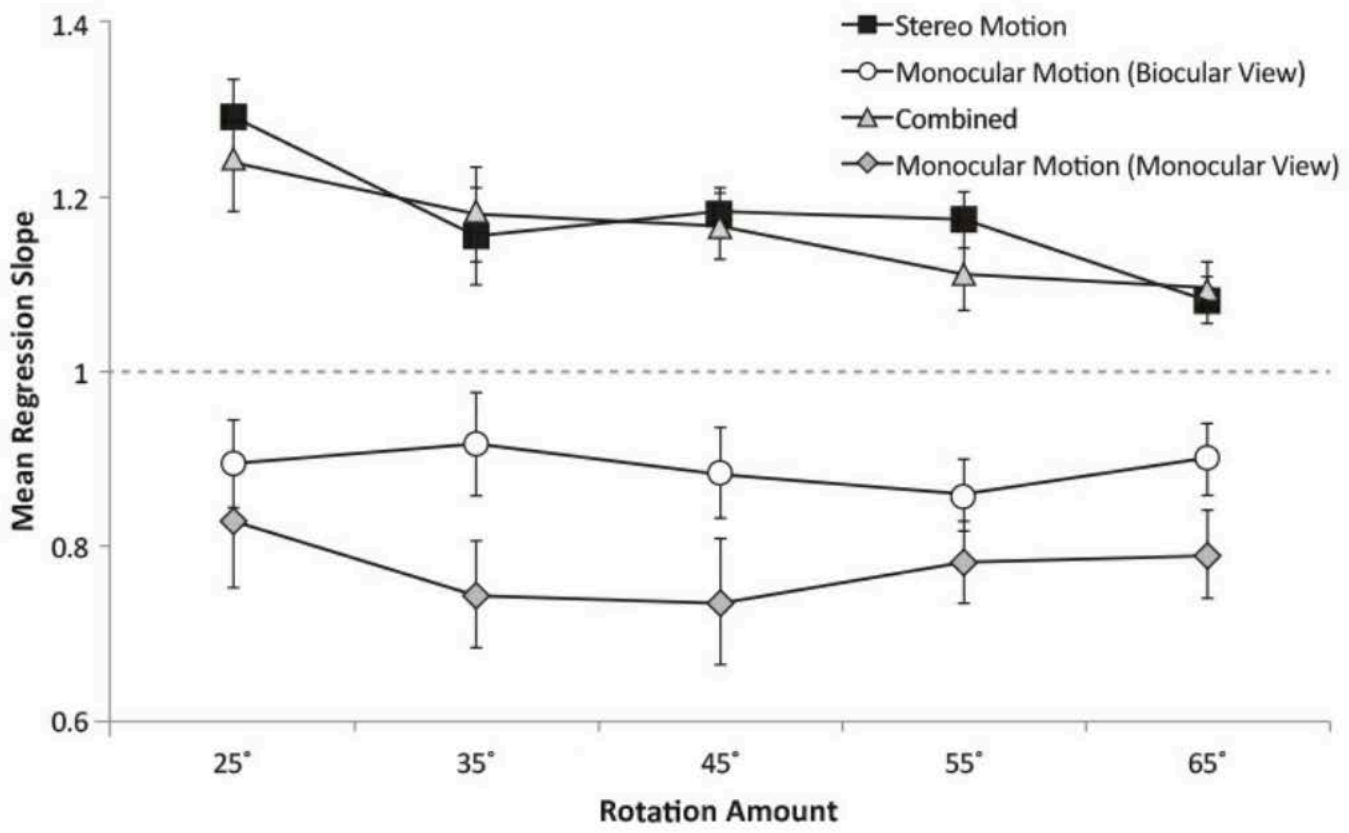


Note. Framing scores of adolescents and young adults are shown for low and high risks and for small, medium, and large rewards. Framing scores were calculated as the proportion of risky choices in the gain frame from the proportion of risky choices in the loss frame. Error bars show standard errors.

Figure 7.3 Sample Line Graph

Figure 3

Mean Regression Slopes in Experiment 1



Note. Mean regression slopes in Experiment 1 are shown for the stereo motion, biocularly viewed monocular motion, combined, and monocularly viewed monocular motion conditions, plotted by rotation amount. Error bars represent standard errors. From "Large Continuous Perspective Change With Noncoplanar Points Enables Accurate Slant Perception," by X. M. Wang, M. Lind, and G. P. Bingham, 2018, *Journal of Experimental Psychology: Human Perception and Performance, 44*(10), p. 1513 (https://doi.org/10.1037/xhp0000553). Copyright 2018 by the American Psychological Association.

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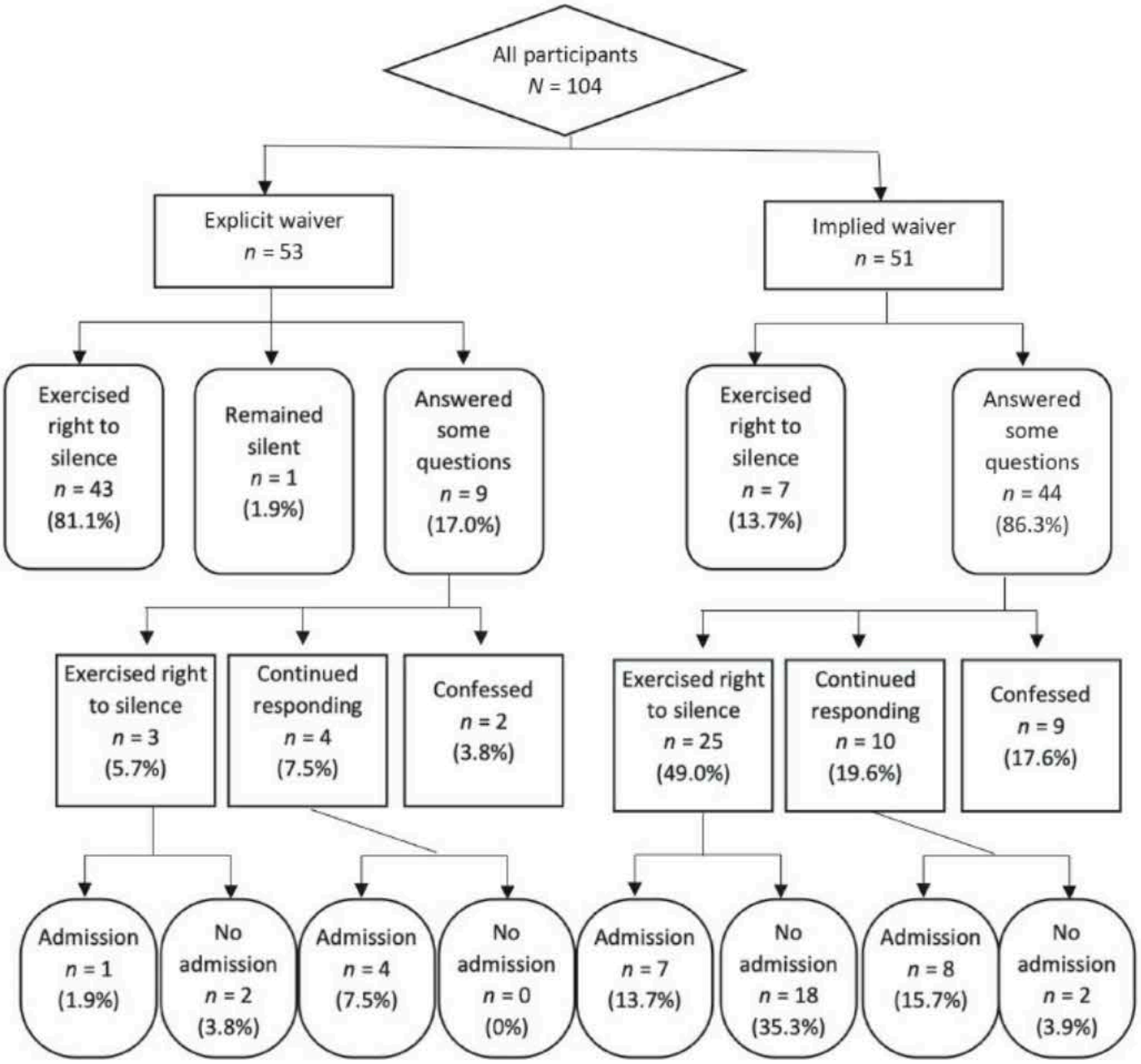
Figure 7.4 Sample Figure Showing the Flow of Participants Through a Study Process

Figure 1

Flowchart of Participant Decisions



Note. Participant decisions regarding the right to silence, confessions, and admissions of incriminatory information are shown.

Figure 7.5 Sample CONSORT Flow Diagram

Figure 7.5

CONSORT Flowchart of Participants

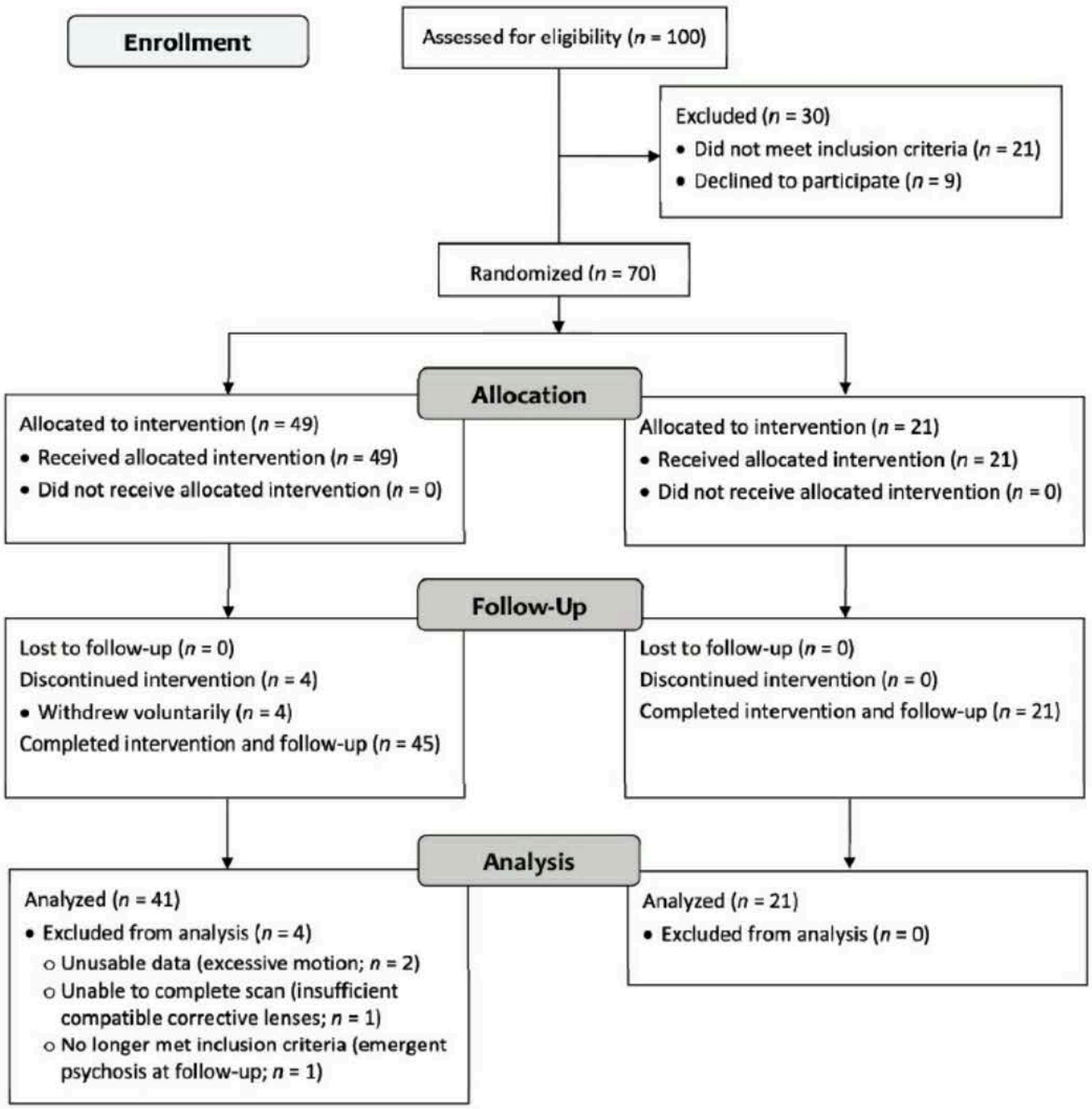
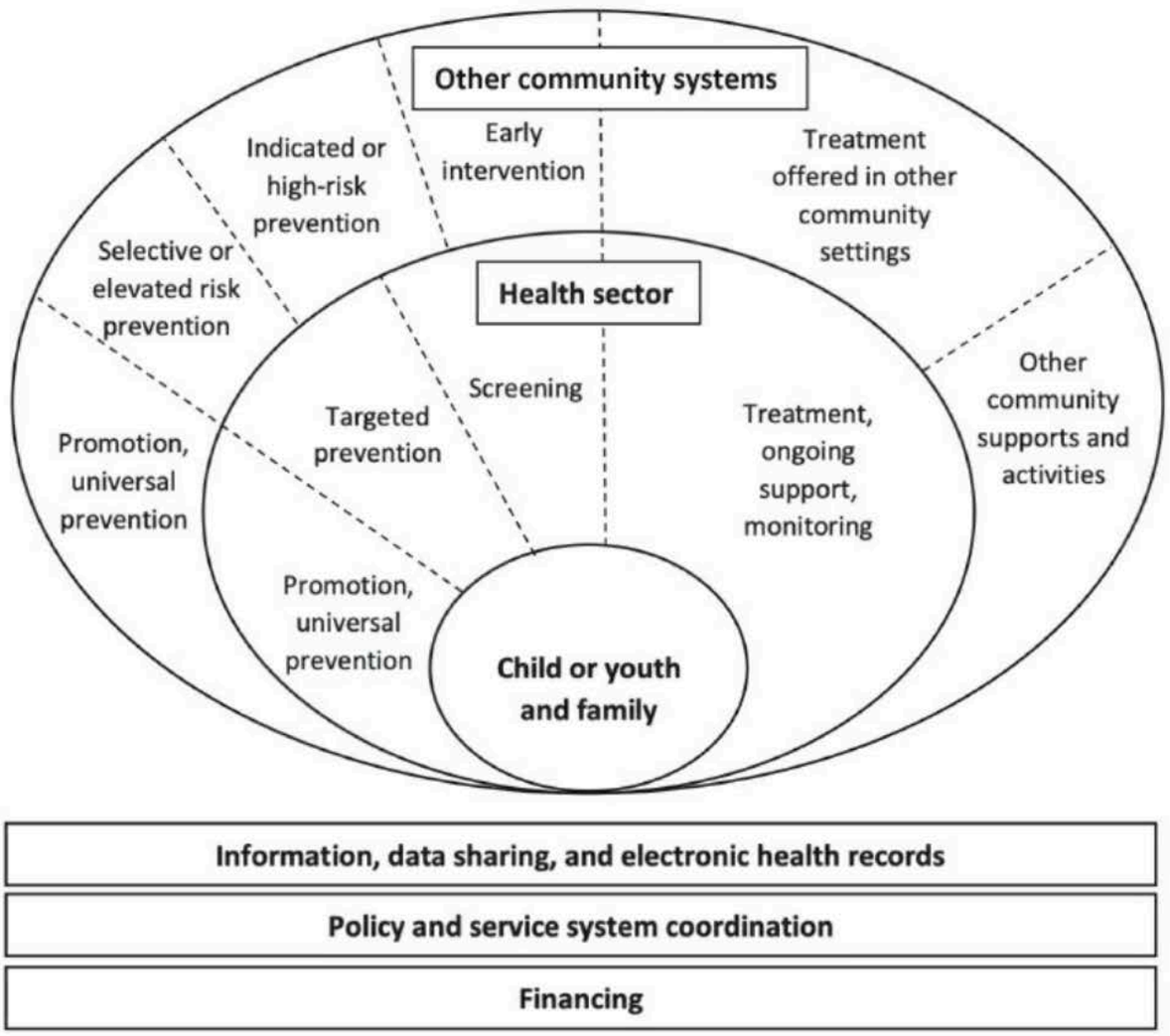


Figure 7.6 Sample Conceptual Model

Figure 2

Integrated Child and Youth Behavioral Health System

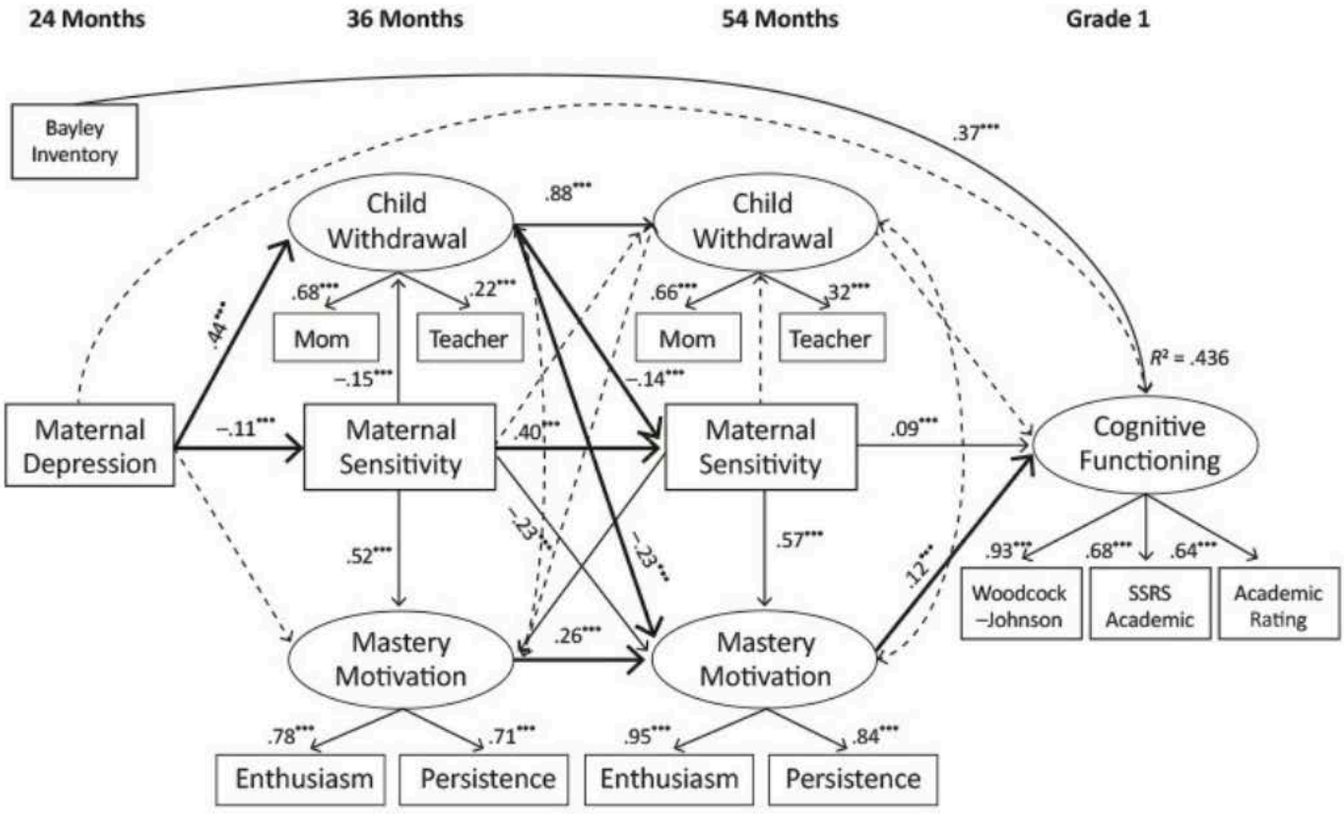


Note. This model shows that the integrated child and youth behavioral health system is centered on the child or youth and family and includes promotion; prevention; screening; and treatment, ongoing support, and monitoring both in the health sector and in other community systems. This structure is supported by information systems, policy and service system coordination, and financing, which are shown in rectangles beneath the ovals to illustrate this support.

Figure 7.7 Sample Structural Equation Model

Figure 2

Structural Equation Model Predicting Children's Cognitive Functioning



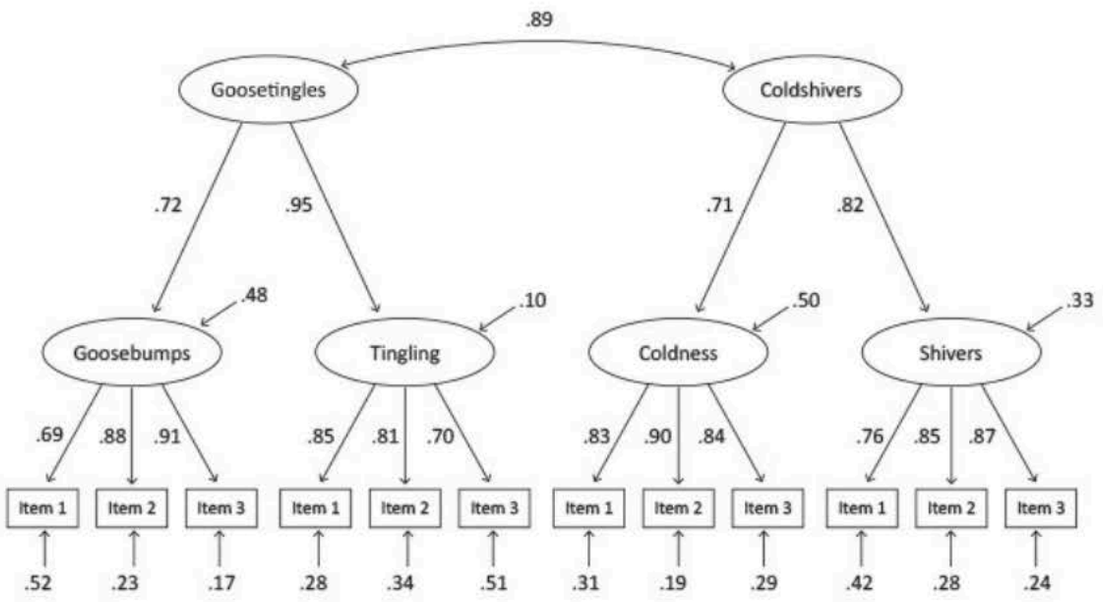
Note. This structural equation model predicts children's cognitive functioning from mothers' early depressive symptoms, with mediating effects of child withdrawal and mastery motivation. Statistics are standardized regression coefficients. Maternal depression is averaged across 6, 15, and 24 months. Dotted lines represent nonsignificant relations; bold lines represent significant indirect paths. SSRS = Social Skills Rating System.

$^{**}p < .01$. $^{***}p < .001$.

Figure 7.8 Sample Confirmatory Factor Analysis Results Figure

Figure 2

Second-Order Confirmatory Factor Analysis for Study 2

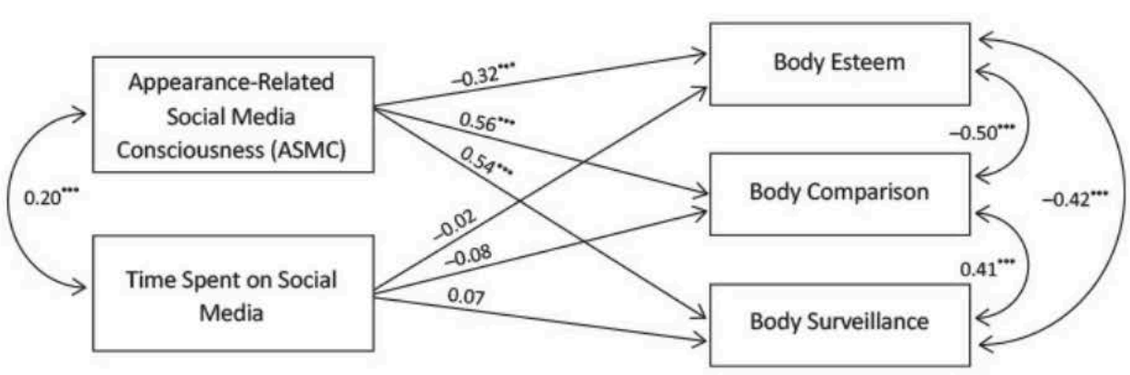


Note. Items are numbered in the order presented in the text. All modeled correlations and path coefficients are significant ($p < .05$).

Figure 7.9 Sample Path Model

Figure 1

Path Analysis Model of Associations Between ASMC and Body-Related Constructs



Note. The path analysis shows associations between ASMC and endogenous body-related variables (body esteem, body comparison, and body surveillance), controlling for time spent on social media. Coefficients presented are standardized linear regression coefficients.

***$p < .001$.

Figure 7.10 Sample Qualitative Research Figure

Figure 1

Organizational Framework for Racial Microaggressions in the Workplace

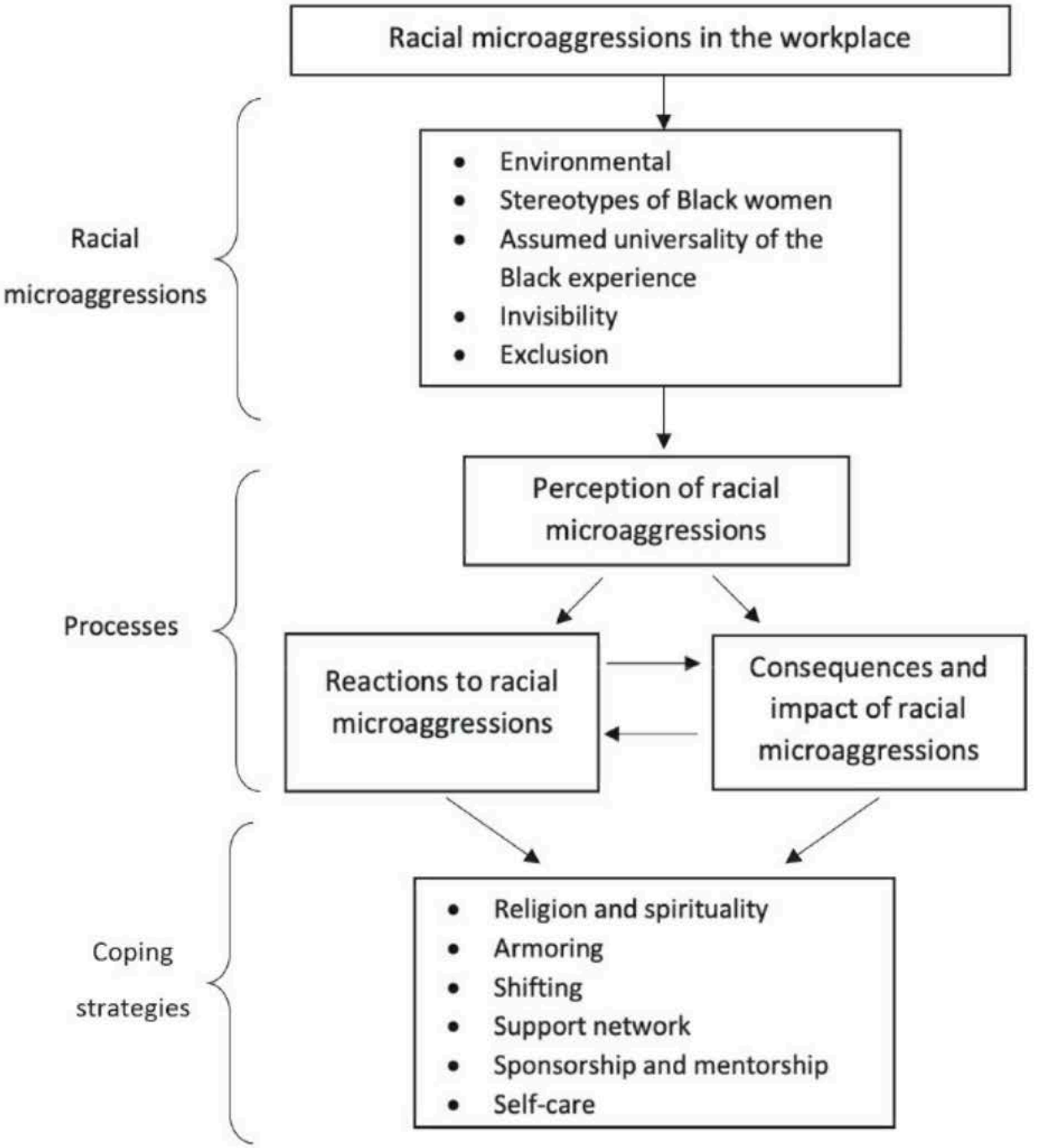
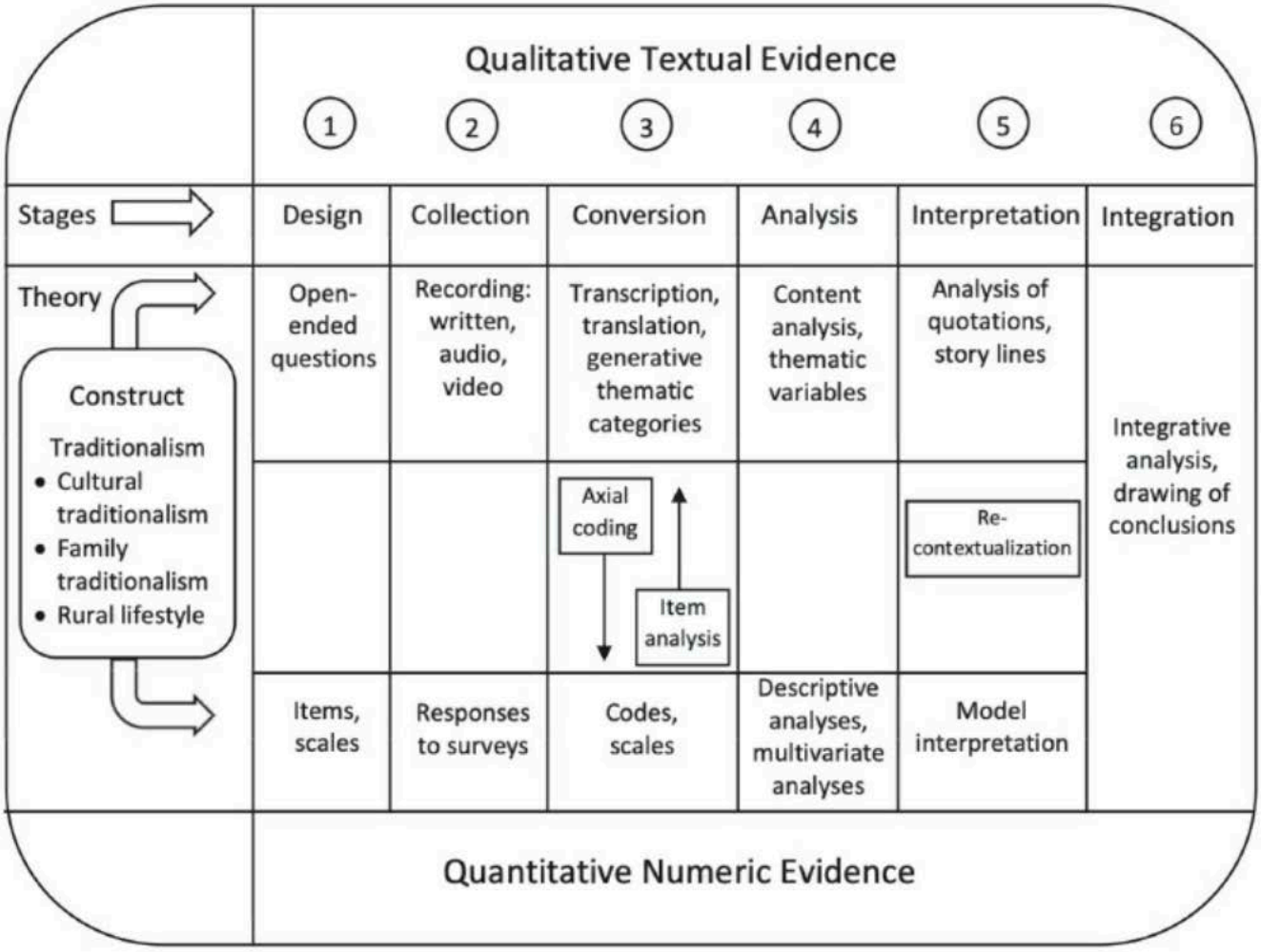


Figure 7.11 Sample Mixed Methods Research Figure

Figure 1

A Multistage Paradigm for Integrative Mixed Methods Research

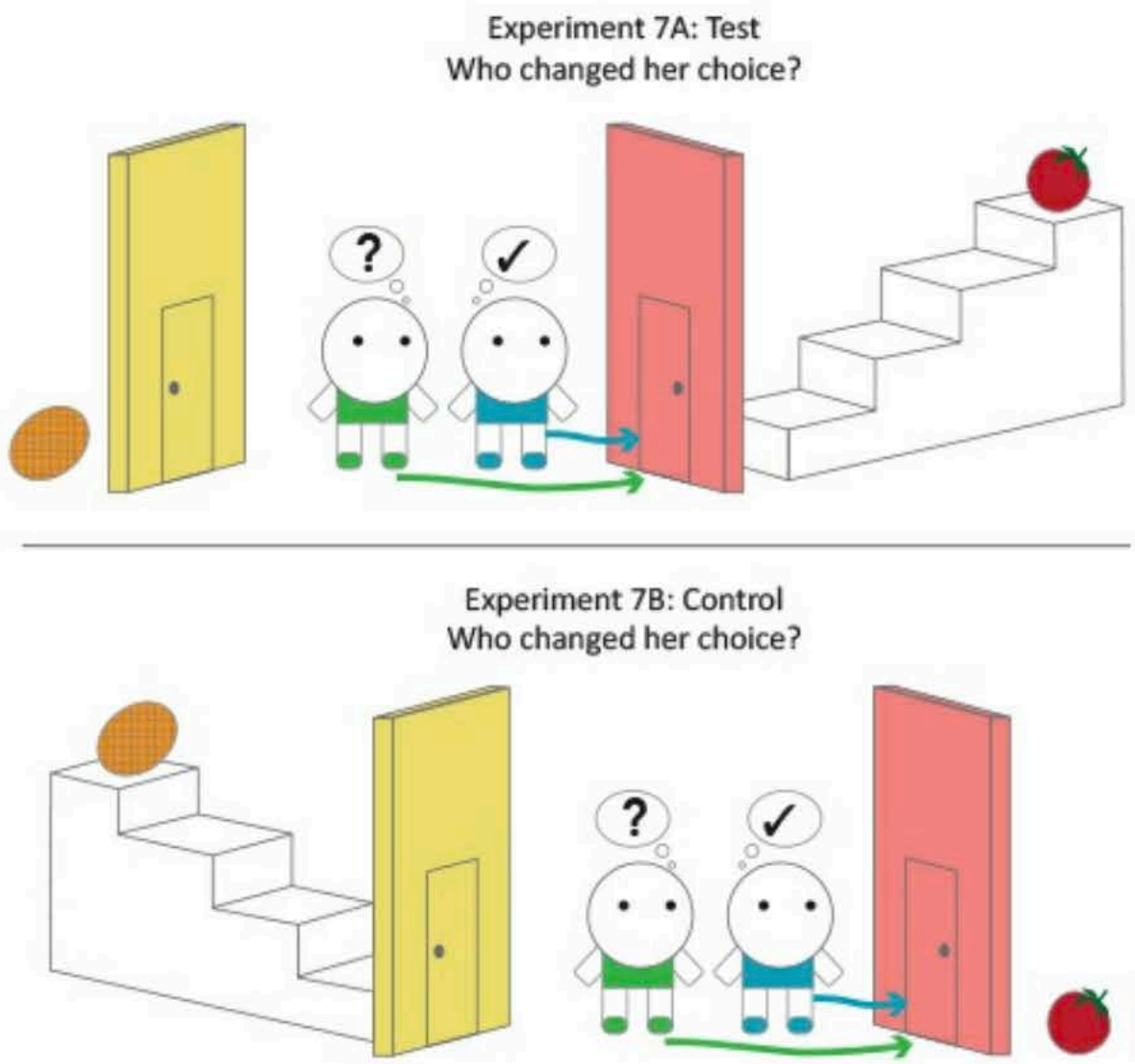


Note. Items are numbered in the order presented in the text. All modeled correlations and path coefficients are significant ($p < .05$).

Figure 7.12 Sample Illustration of Experimental Setup

Figure 7

Design of Experiment 7

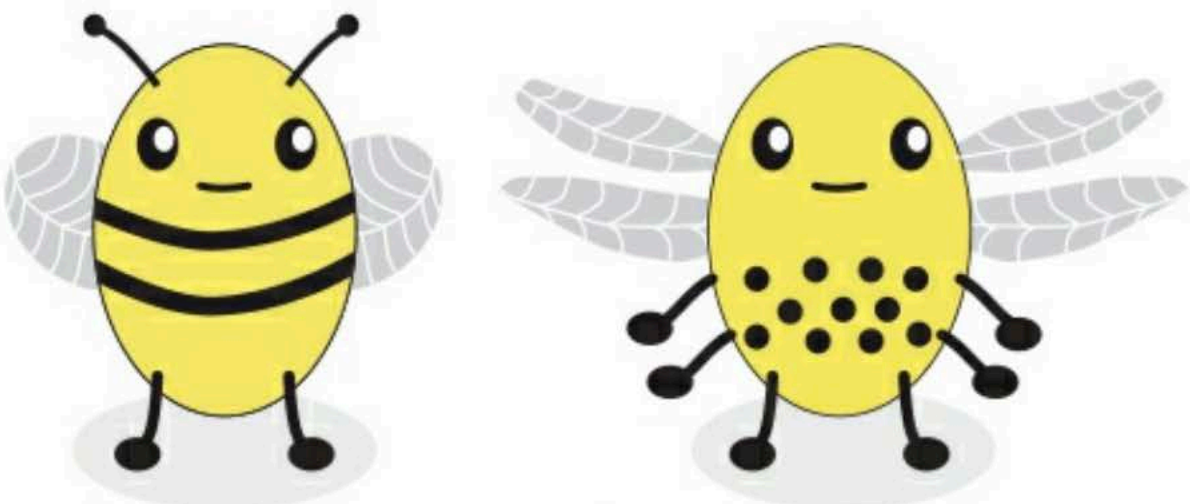


Note. Children watched two puppets–one who knew about the unobservable set of stairs and one who did not—choose the tomato over the corn (high-cost choice in Experiment 7A and low-cost choice in Experiment 7B). Children then learned that one puppet changed her choice after opening the door and were asked to infer who that was.

Figure 7.13 Sample Illustration of Experimental Stimuli

Figure 4

Examples of Stimuli Used in Experiment 1

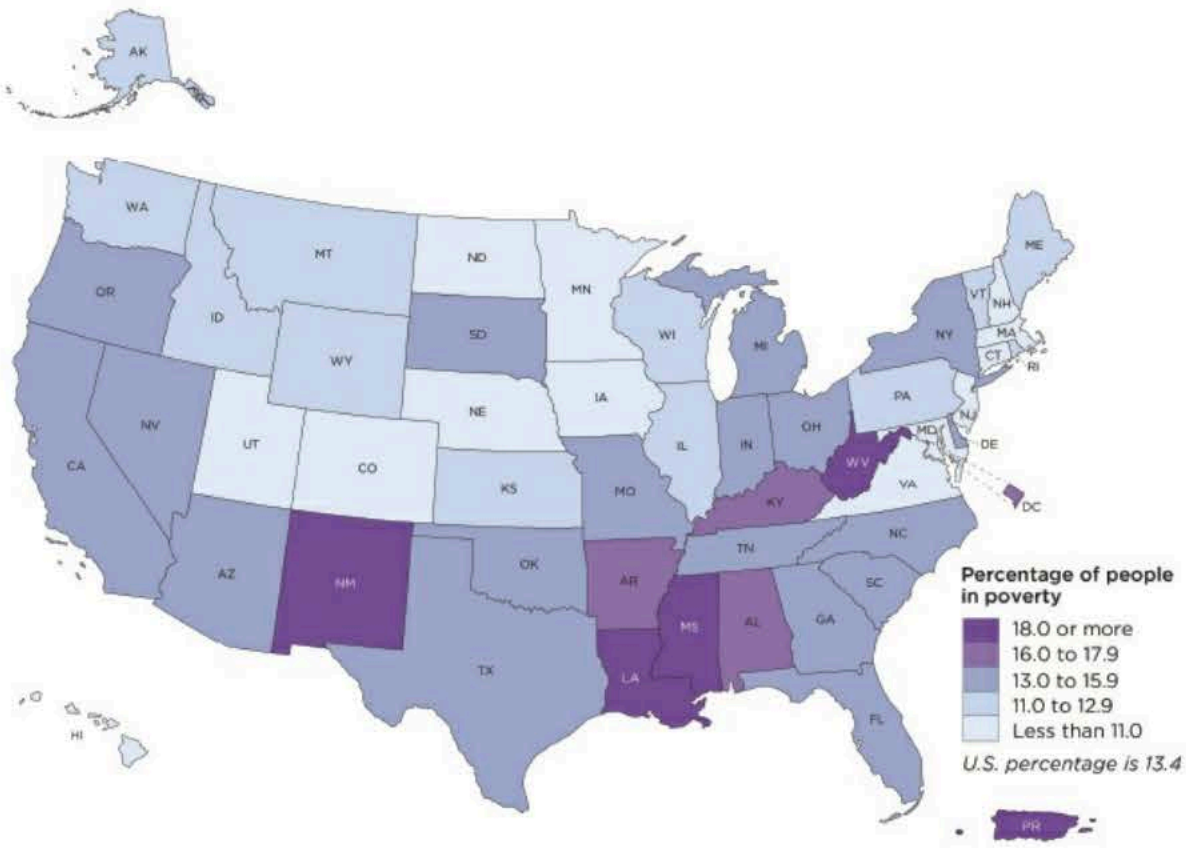


Note. Stimuli were computer-generated cartoon bees that varied on four binary dimensions, for a total of 16 unique stimuli. They had two or six legs, a striped or spotted body, single or double wings, and antennae or no antennae. The two stimuli shown here demonstrate the use of opposite values on all four binary dimensions.

Figure 7.14 Sample Map

Figure 1

Poverty Rate in the United States, 2017



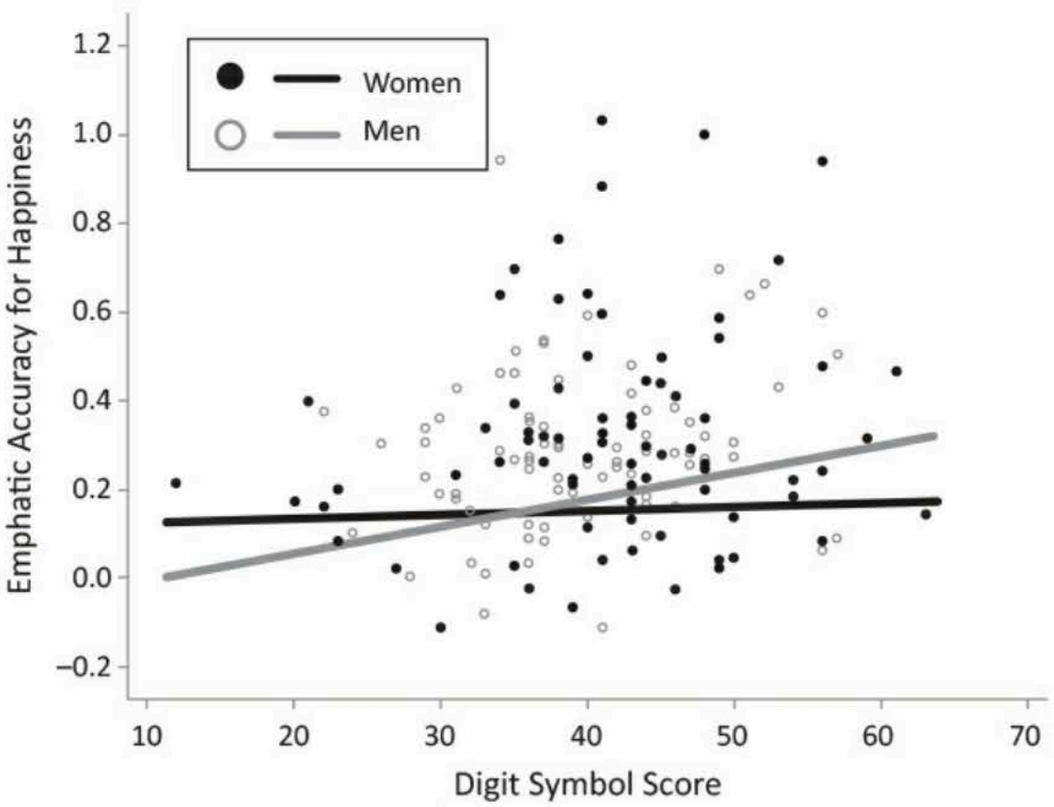
Note. The U.S. percentage does not include data for Puerto Rico. Adapted from 2017 *Poverty Rate in the United States*, by U.S. Census Bureau, 2017 (https://www.census.gov/library/visualizations/2018/comm/acs-poverty-map.html). In the public domain.

example copyright attribution for an adapted figure in the public domain

Figure 7.15 Sample Scatterplot

Figure 2

Association Between Perceptual Speed and Empathic Pattern Accuracy for Happiness

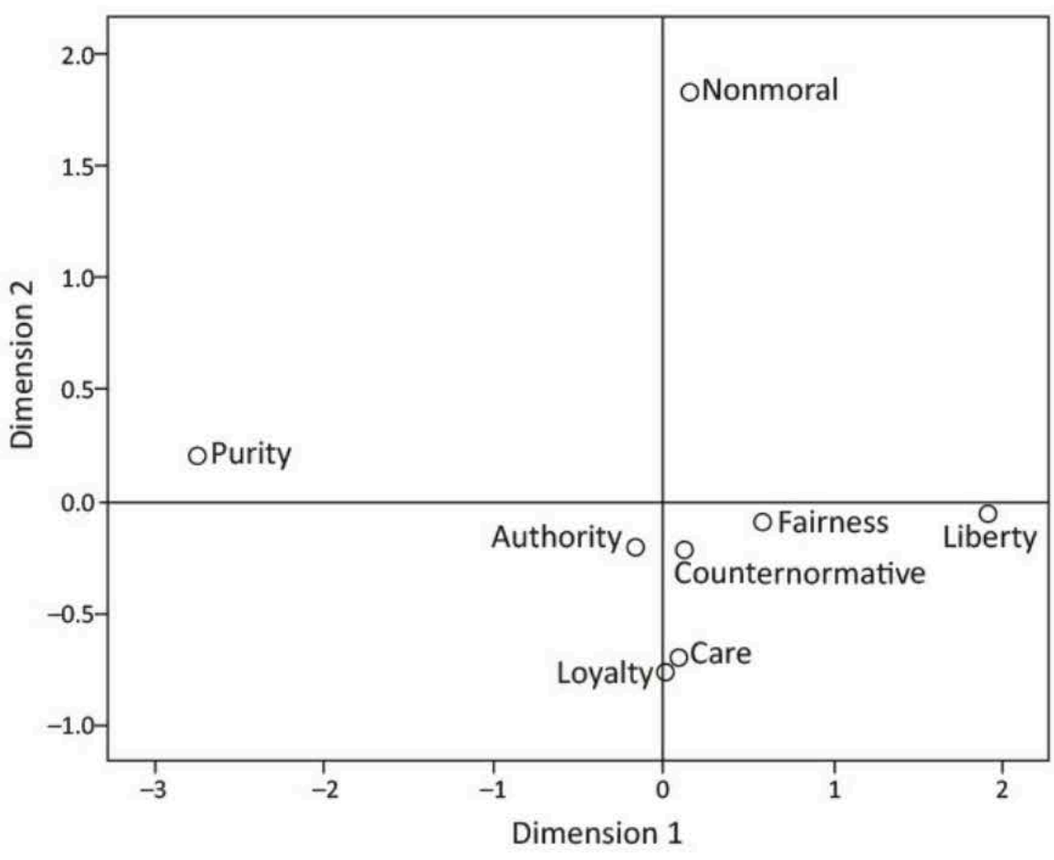


Note. Each dot represents an individual participant. Scores for empathic pattern accuracy for happiness were obtained in a zero-order multilevel model in which a target's self-reported happiness was the only predictor of a rater's perceptions (the estimate plotted on the *y*-axis is equivalent to β_{1i} in Equation 4). Among men, higher levels of digit symbol performance were associated with higher empathic pattern accuracy for happiness in daily life (gray line). Among women, the association was not significant (black line).

Figure 7.16 Sample Multidimensional Scaling Figure

Figure 3

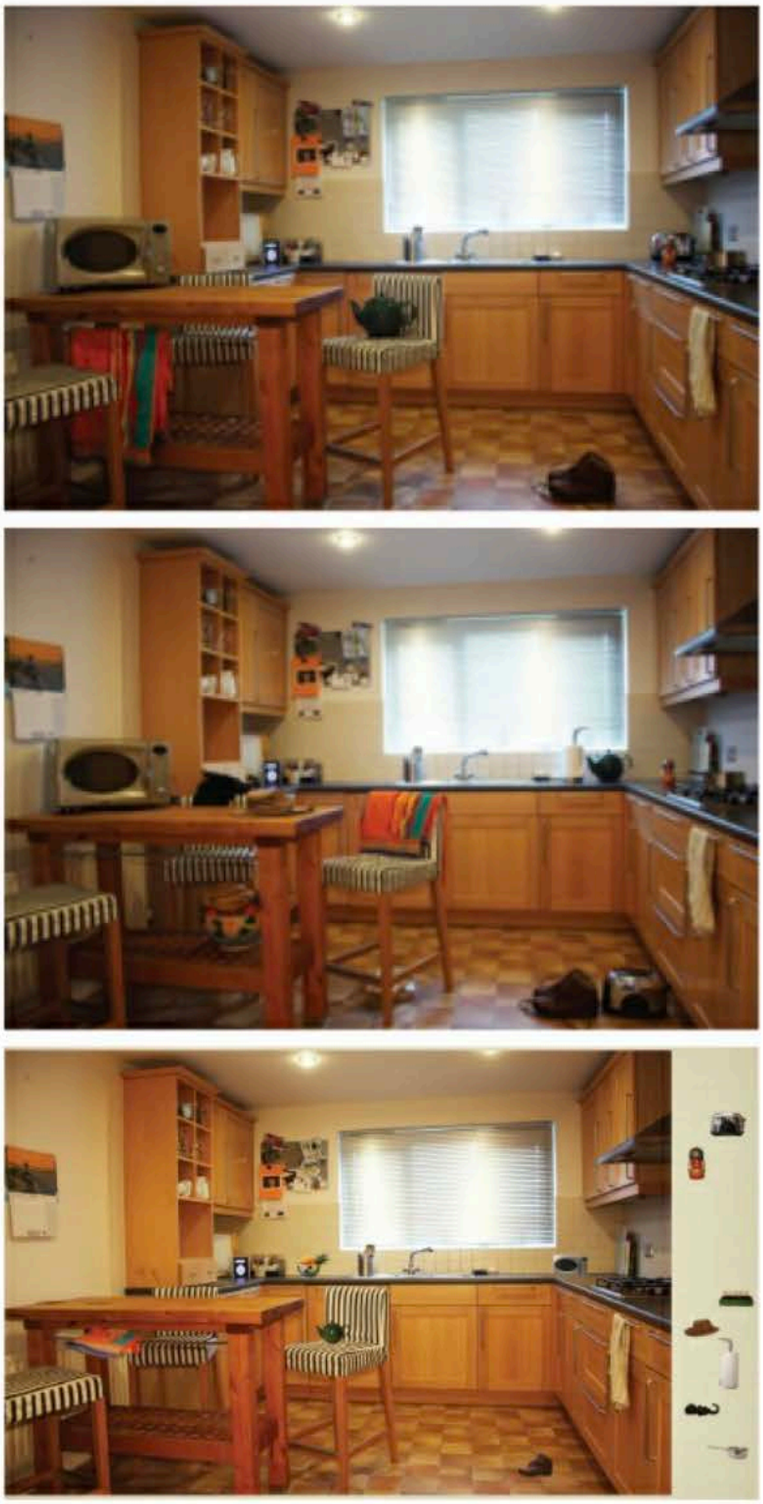
Two-Dimensional Solution Derived From Multidimensional Scaling of Relatedness Scores



Note. Relatedness scores were defined as the mean likelihood judgment within category pairs. Violations of care, authority, fairness, and loyalty and counternormative actions are quite close to one another in the resultant two-dimensional space, whereas liberty violations, and especially purity violations and nonmoral actions, are more distant. Model stress was .08.

Figure 1

Example Scenes of Participant Response to Locations of Schema-Irrelevant Objects

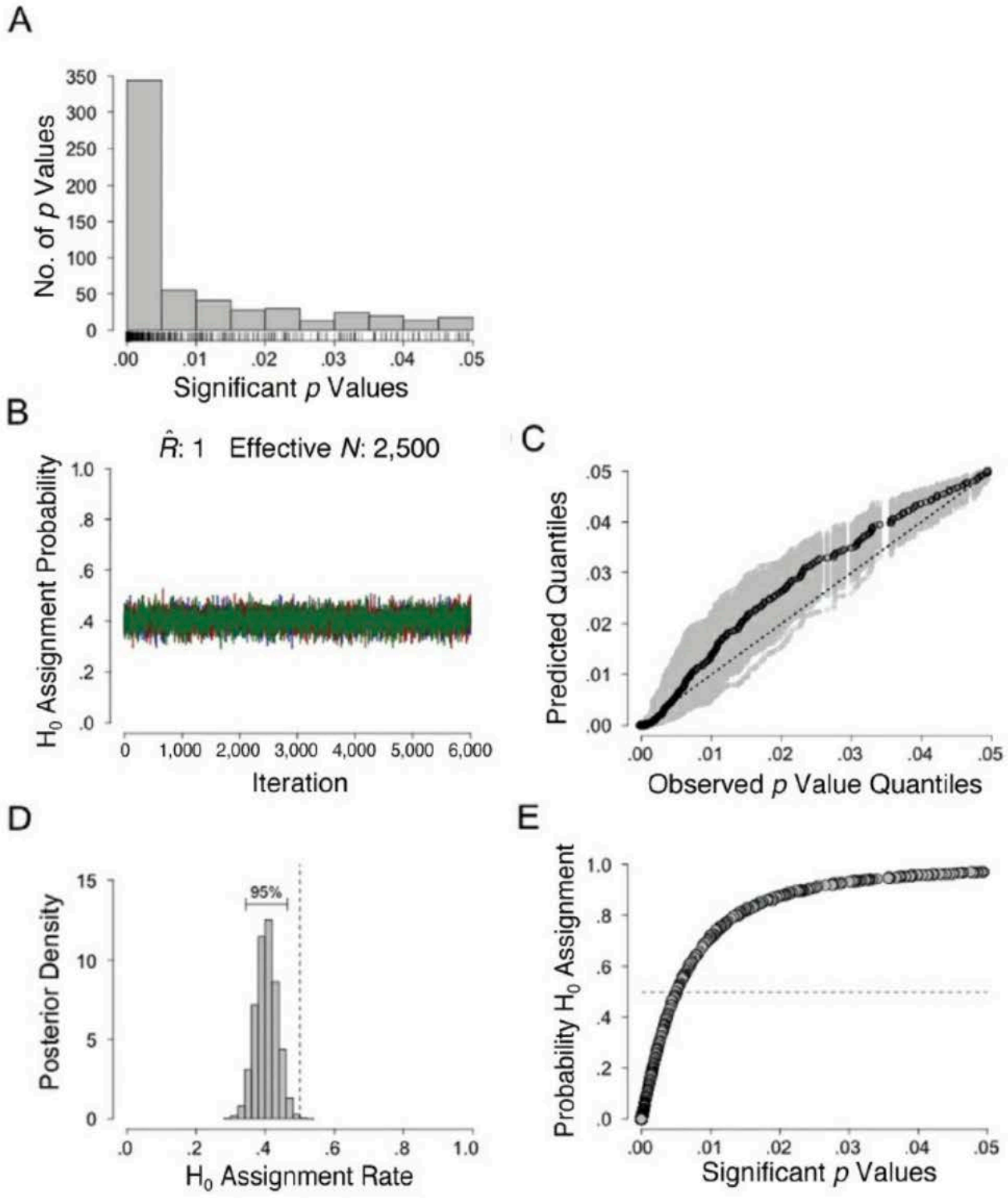


Note. Top panel: A version of the kitchen scene using schema-irrelevant objects (walking boots, bath towel, and teapot) in unexpected locations (right side of the floor, rail beneath table, and stool, respectively). Middle panel: One of the possible test images (out of two) associated with the study image depicted in the top panel used in Study 1 (shift-to-expected condition). Bottom panel: Example participant response when the participant originally studied the image in the top panel in the recall task of Study 2. Schema-relevant objects in expected places at study are the metal pot and toaster; those in unexpected places are the microwave and teapot; those not present are the fruit bowl and paper towel roll.

Figure 7.18 Sample Complex Multipanel Figure

Figure 2

Application of the Bayesian Mixture Model to Example 1

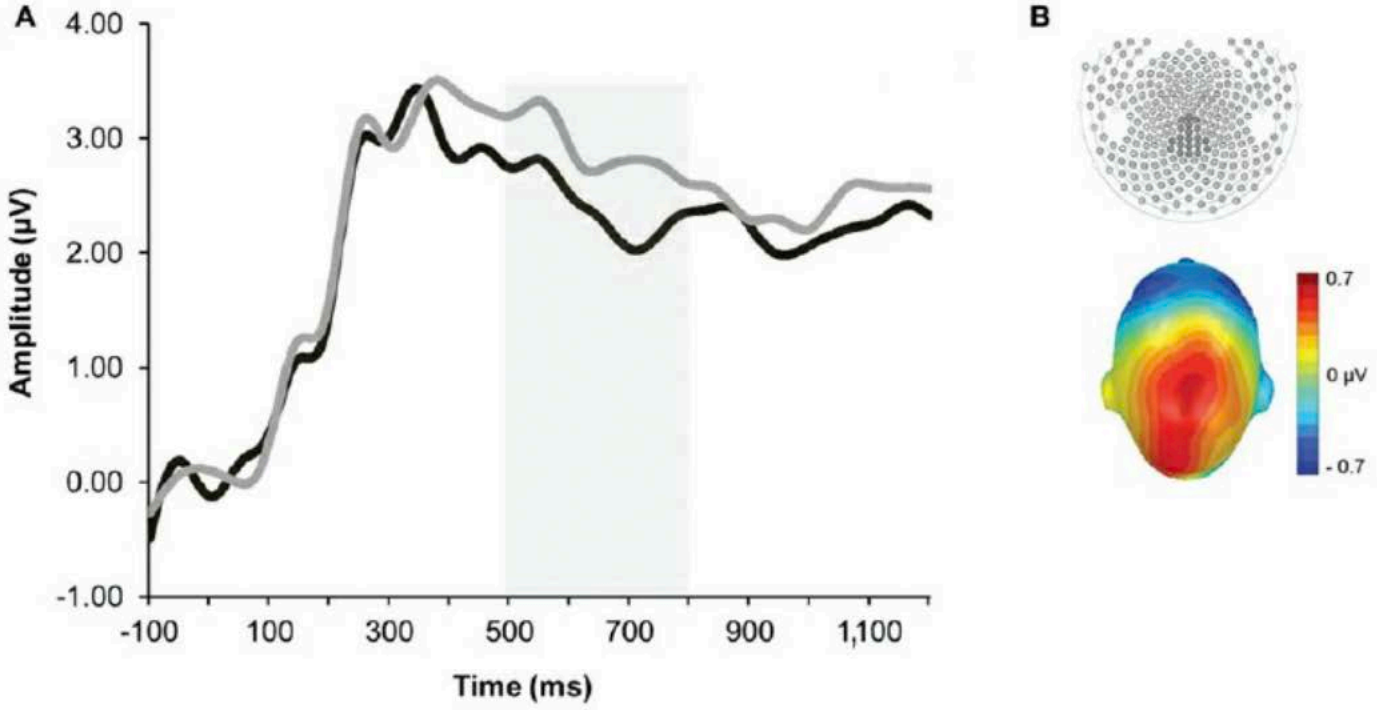


Note. Example 1 contained 587 *t*-test *p* values. Panel A: Distribution of observed *p* values. Panel B: Trace plot of the Markov chain Monte Carlo chains for the H_0 assignment rate. Panel C: Q-Q plot for comparing the observed *p* value distribution with the posterior predictive distribution. Panel D: Posterior distribution of the H_0 assignment rate. Panel E: Individual H_0 assignment probabilities.

Figure 7.19 Sample Event-Related Potential Figure

Figure 1

Centroparietal Late Positive Potential as a Function of Trustworthiness

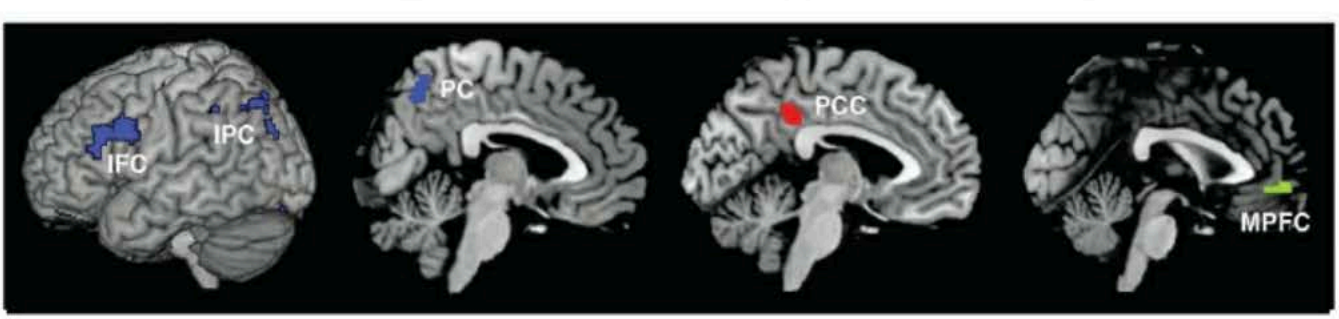


Note. Panel A: Event-related potential waveforms for untrustworthy (gray line) and trustworthy (black line) faces. Panel B: Display of the scalp topographies for untrustworthy as compared with trustworthy faces in the selected time window (500–800 ms).

Figure 7.20 Sample fMRI Figure

Figure 3

Brain Regions Sensitive to Ratings of Dehumanization, Liking, and Similarity to the Self

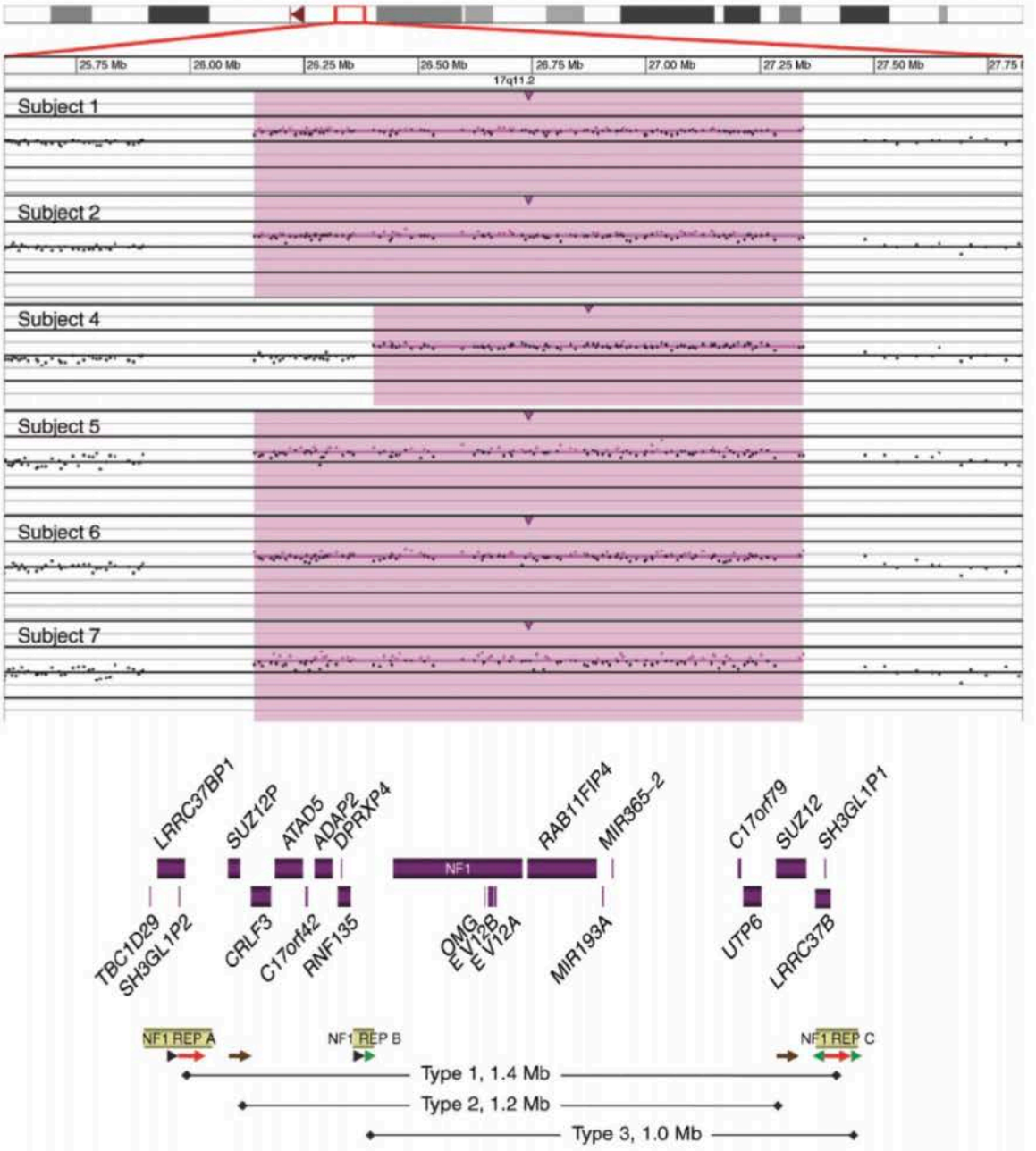


Note. Brain regions where activity is sensitive to parametric ratings of dehumanization (blue), liking (red), and similarity to the self (green) are shown. Dehumanization and liking are thresholded at $p < .05$, corrected; similarity is thresholded at $p < .001$, uncorrected. IFC = inferior frontal cortex; IPC = inferior parietal cortex; PC = precuneus; PCC = posterior cingulate cortex; MPFC = medial prefrontal cortex.

Figure 7.21 Sample Display of Genetic Material (Physical Map)

Figure 1

Microduplications Encompassing NF1 *for Subjects With Oligonucleotide Microarray Analysis*



[1]Table entries and column headings are written in sentence case in a table but in title case if they are referred to in the text.

[2]WCAG 2.0 refers to the Web Content Accessibility Guidelines, Version 2.0 (Web Accessibility Initiative, 2018).