

Supplementary Material

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Supplementary Table 15. Associations of symptom dimensions with the significant variables identified in the multivariable model

Supplementary Figure 1. Manhattan plots for the exposome-wide association analyses in psychiatric diagnostic domains using the discovery and replication datasets

Supplementary Figure 2. Strength of association between psychiatric diagnostic domains and significant correlates in the exposome-wide association study

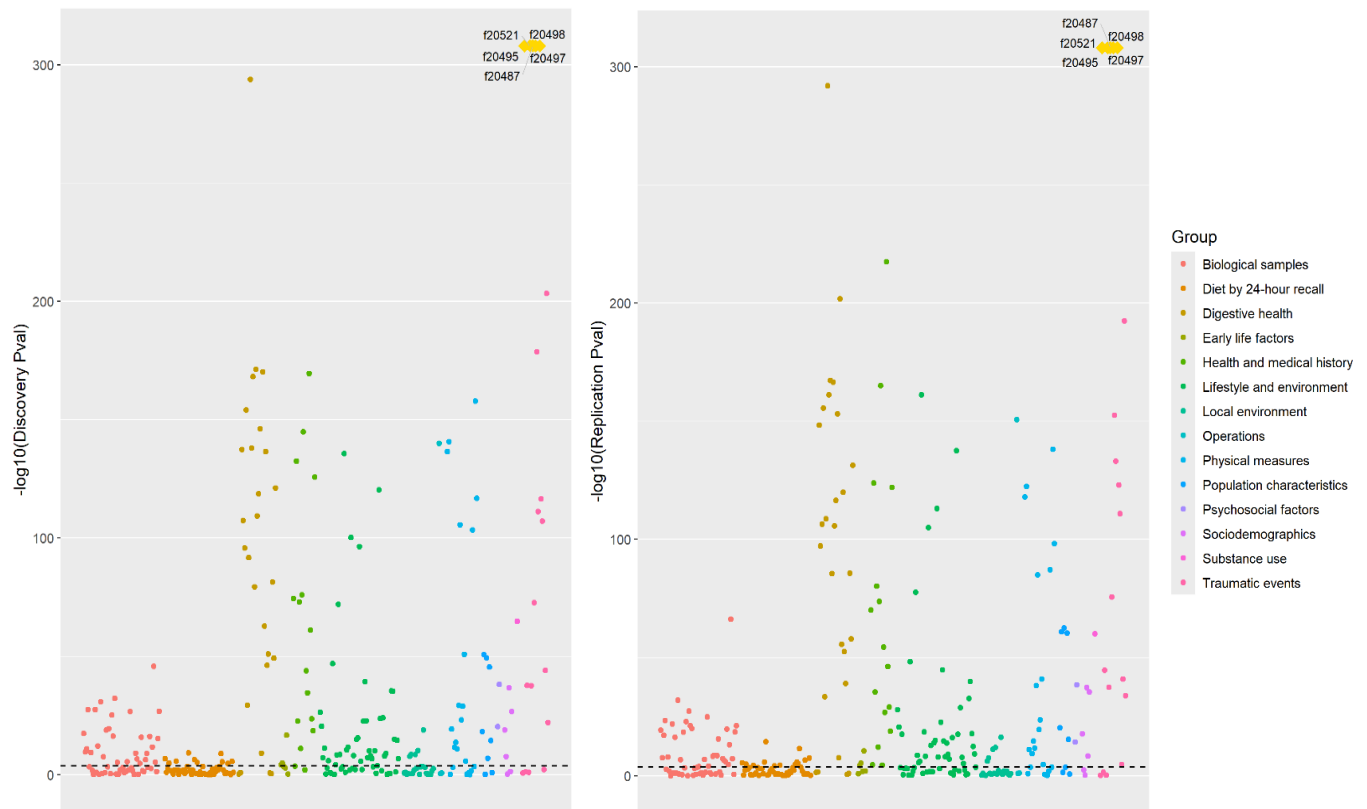
Supplementary Figure 3. Manhattan plots for the exposome-wide association analyses in symptom dimensions using the discovery and replication datasets

Supplementary Figure 4. Strength of association between symptom dimensions and significant correlates in the exposome-wide association study

This supplemental material has been provided by the authors to give readers additional information about their work.

Supplementary Figure 1. Manhattan plots for the exposome-wide association analyses in psychiatric diagnostic domains using the discovery and replication datasets

a. Depressive disorders



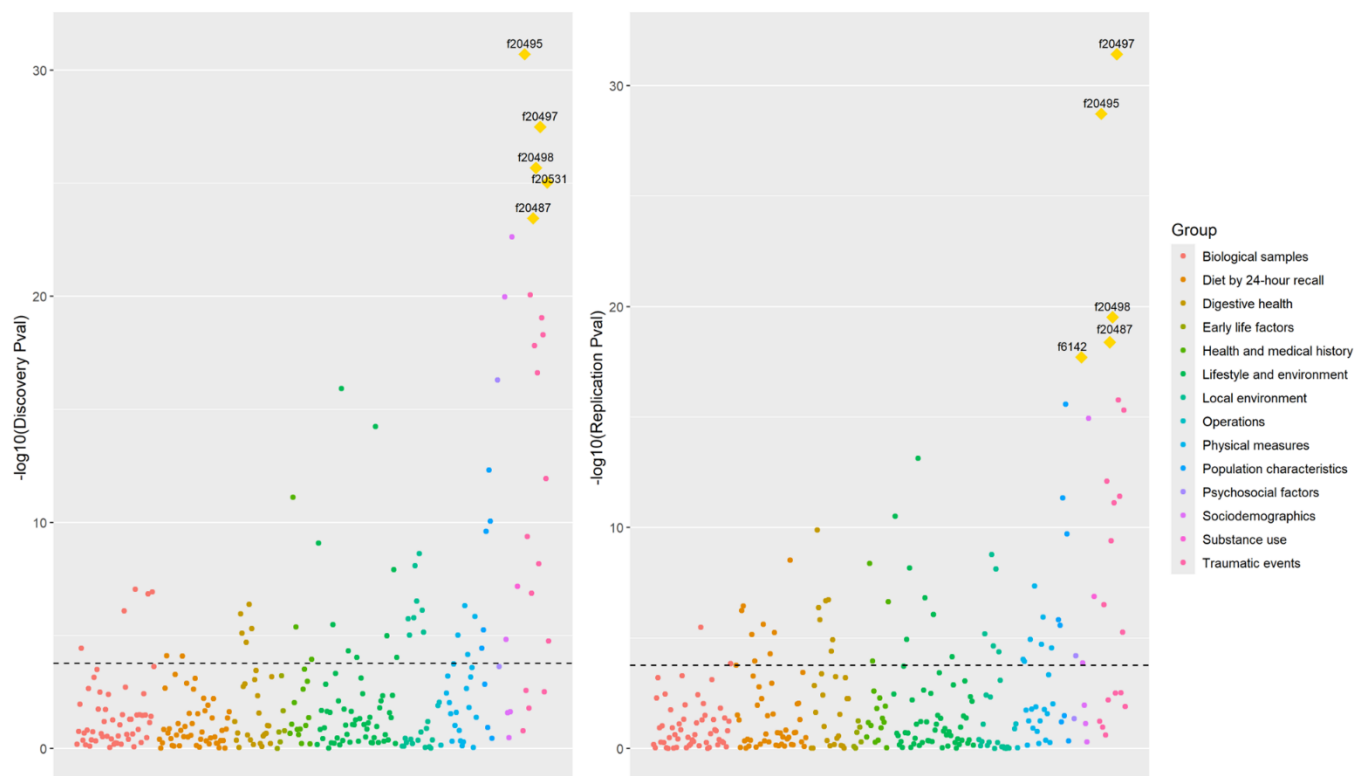
Note: Each dot refers to an individual variable on the x-axis. The log-transformed ($-\log_{10}$) P-values of the ExWAS are plotted on the y-axis. The variables are coded and grouped in UK Biobank categories (see legend for details). Black dotted line indicates the P-value threshold (1.70×10^{-4}) after Bonferroni correction. The field numbers of the top five variables with the smallest P-values correspond to “childhood and adult traumatic events” (f20487, f20495, 20497, f20498, f20521).

b. Anxiety disorders



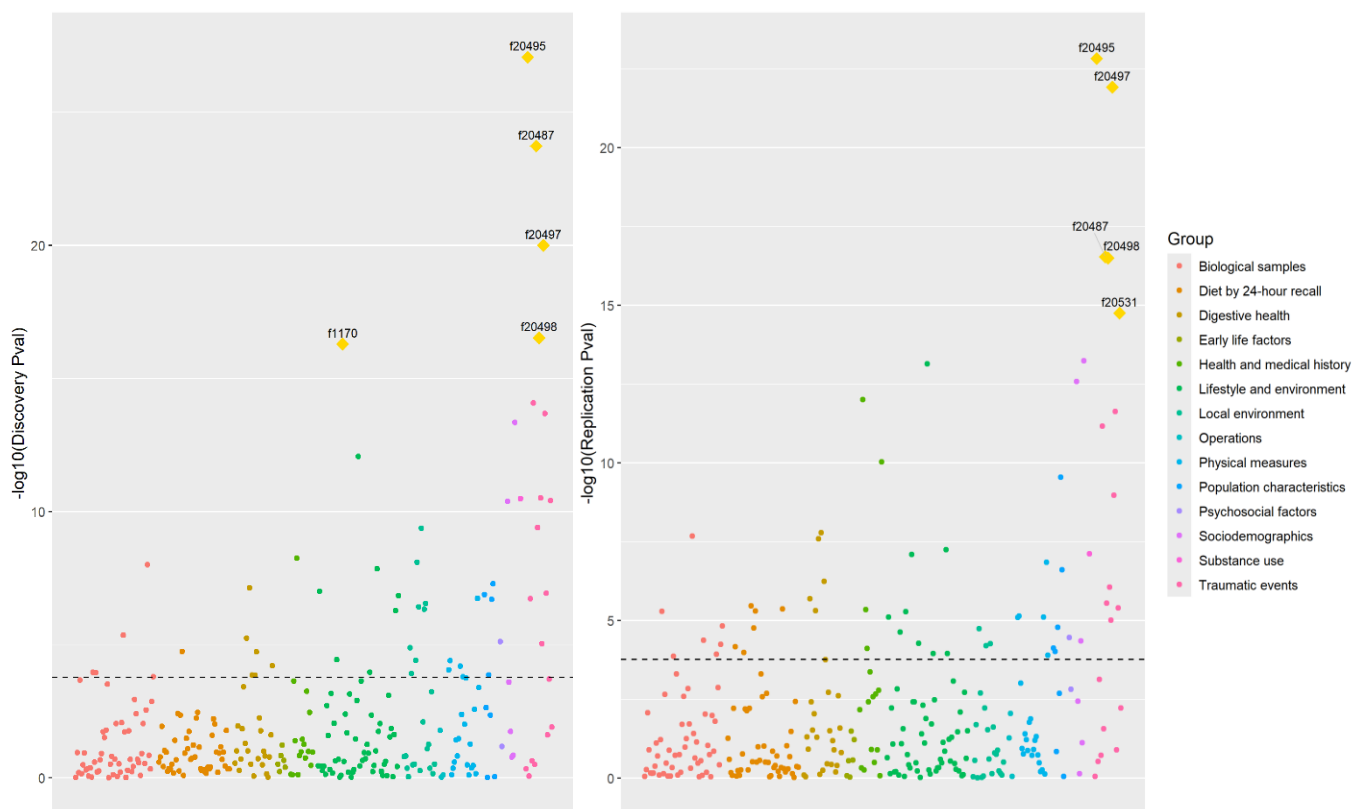
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c. Psychotic disorders



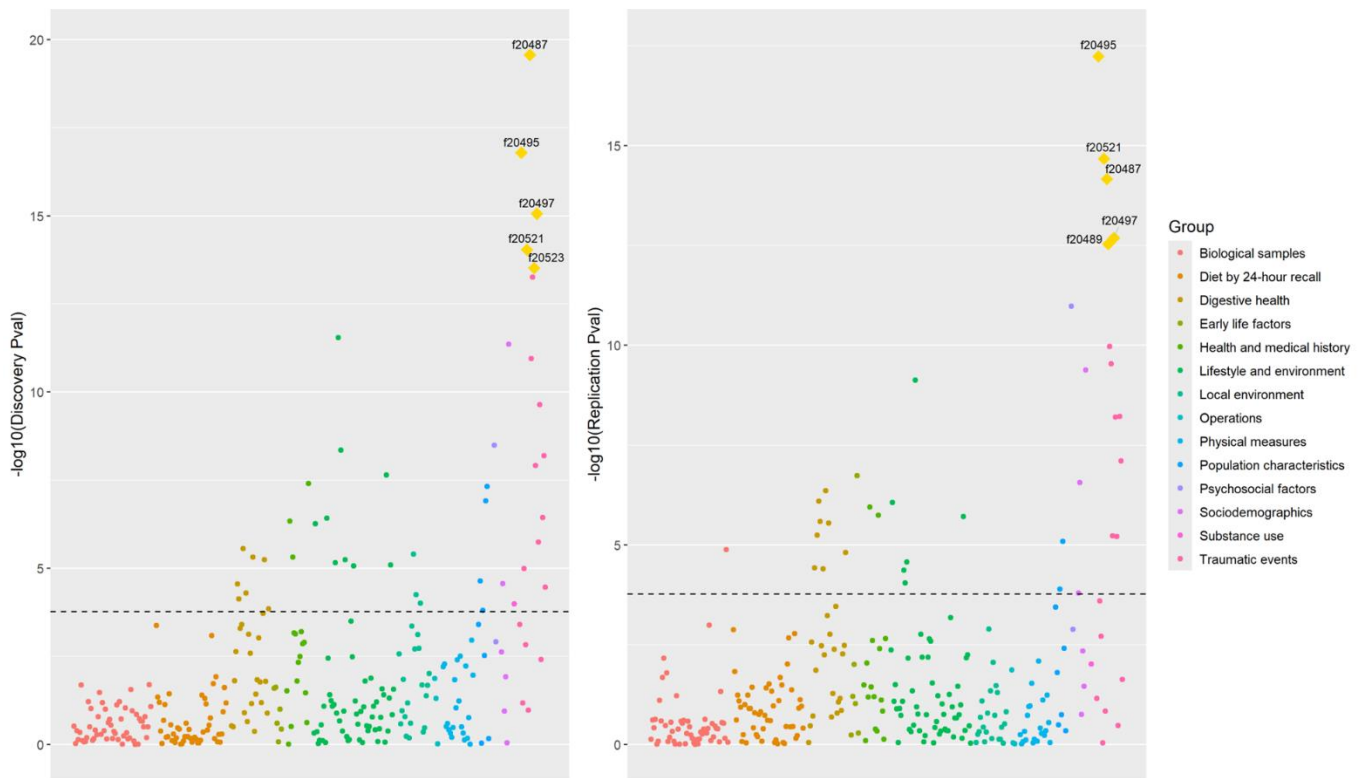
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d. Bipolar manic disorders



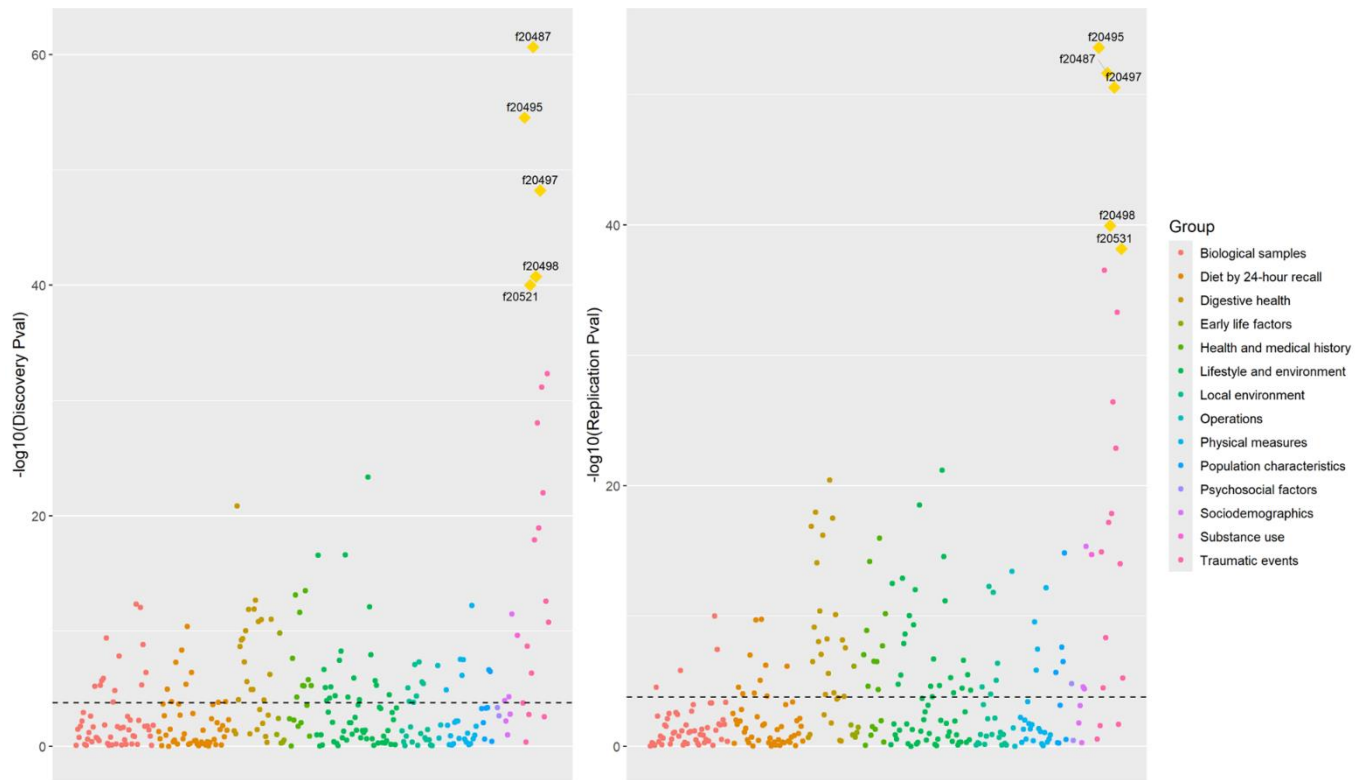
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e. Neurodevelopmental disorders



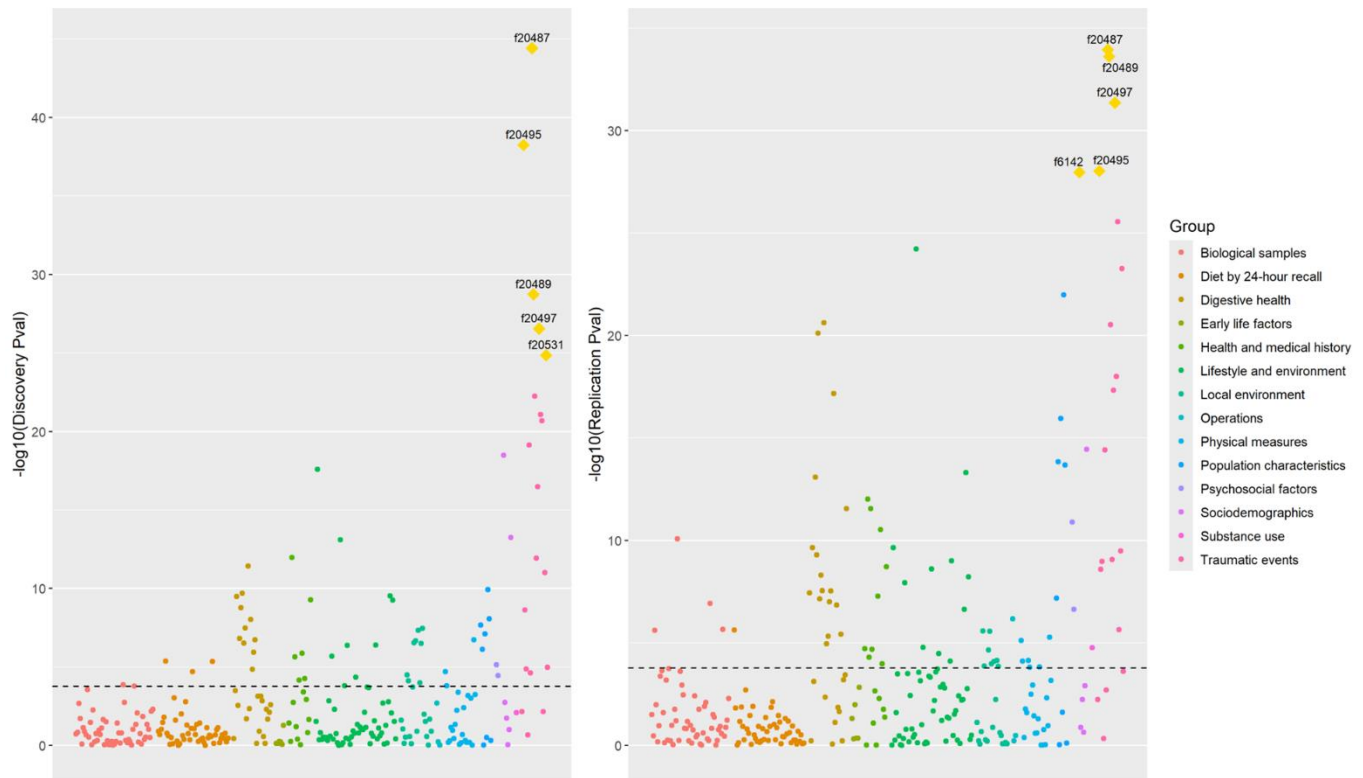
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f. Eating disorders



Note: Each dot refers to an individual variable on the x-axis. The log-transformed ($-\log_{10}$) P-values of the ExWAS are plotted on the y-axis. The variables are coded and grouped in UK Biobank categories (see legend for details). Black dotted line indicates the P-value threshold (1.70×10^{-4}) after Bonferroni correction. The field numbers of the top five variables with the smallest P-values correspond to “childhood and adult traumatic experiences” (f20487, f20495, f20497, f20498, f20521, f20531).

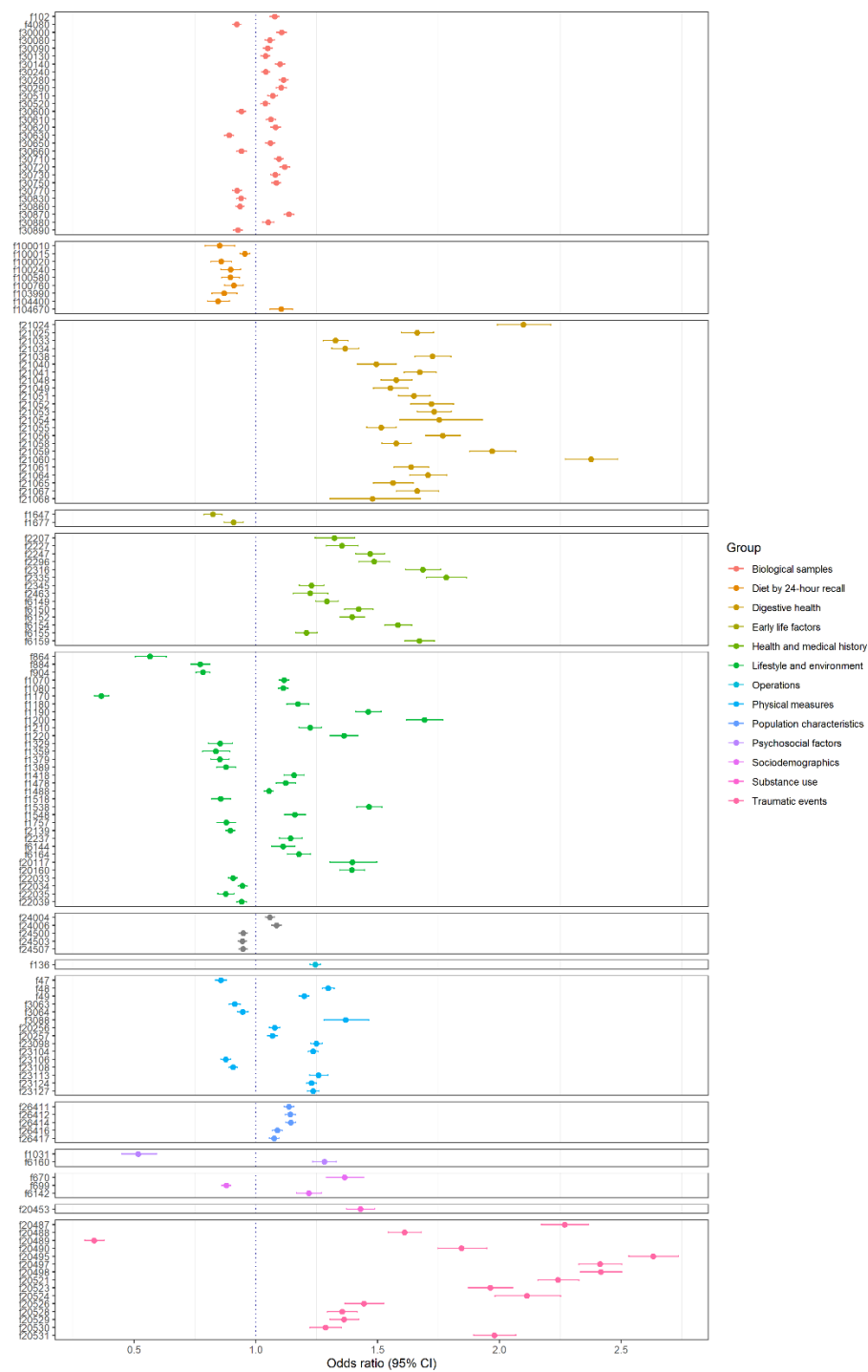
g. Personality disorders



Note: Each dot refers to an individual variable on the x-axis. The log-transformed ($-\log_{10}$) P-values of the ExWAS are plotted on the y-axis. The variables are coded and grouped in UK Biobank categories (see legend for details). Black dotted line indicates the P-value threshold (1.70×10^{-4}) after Bonferroni correction. The field numbers of the top five variables with the smallest P-values correspond to: “childhood and adult traumatic experiences” (f20487, f20489, f20495, 20497, f20531) and “current employment status” (f6142).

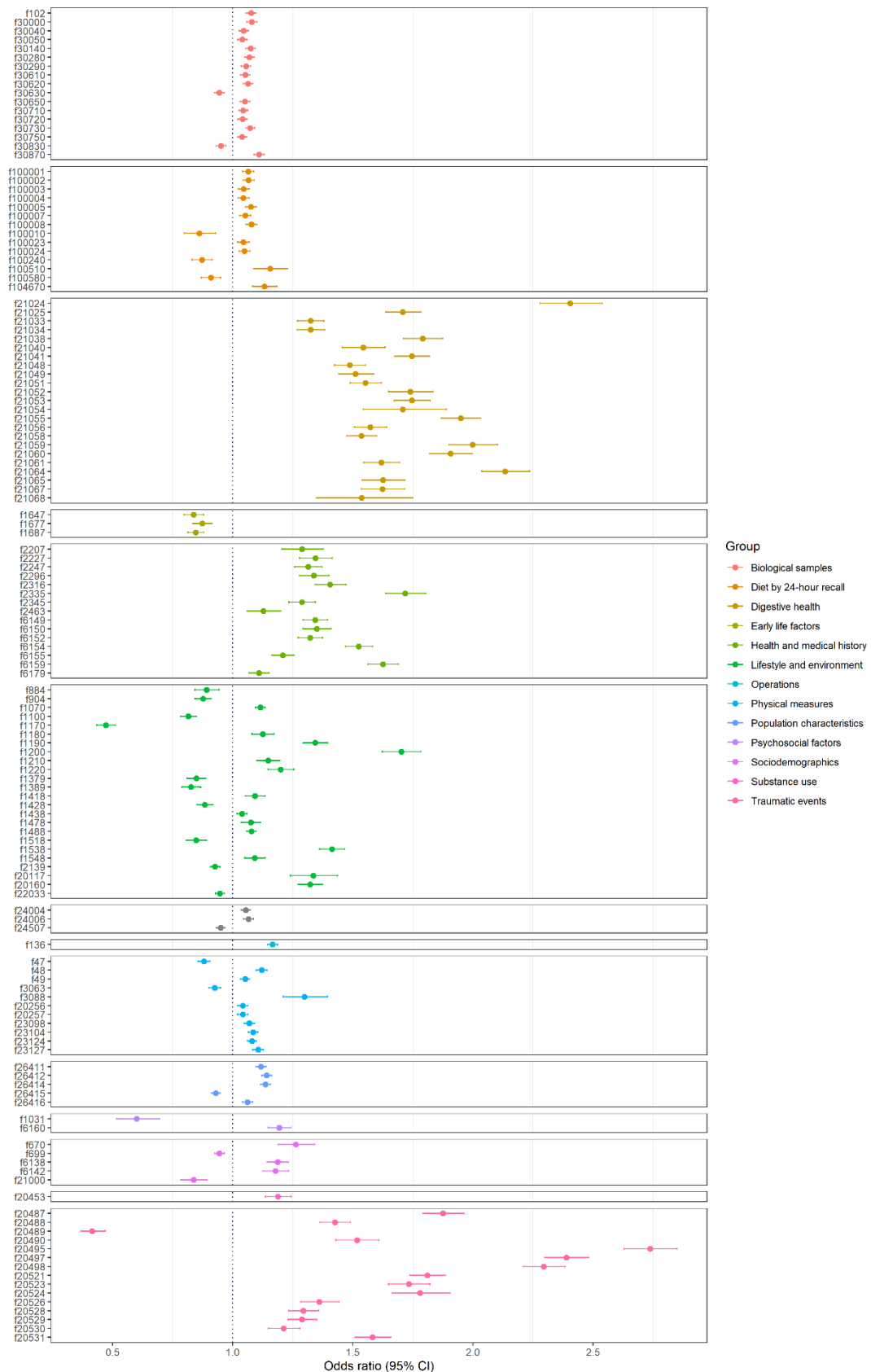
Supplementary Figure 2. Strength of association between psychiatric diagnostic domains and significant correlates in the exposome-wide association study

a. Depressive disorders



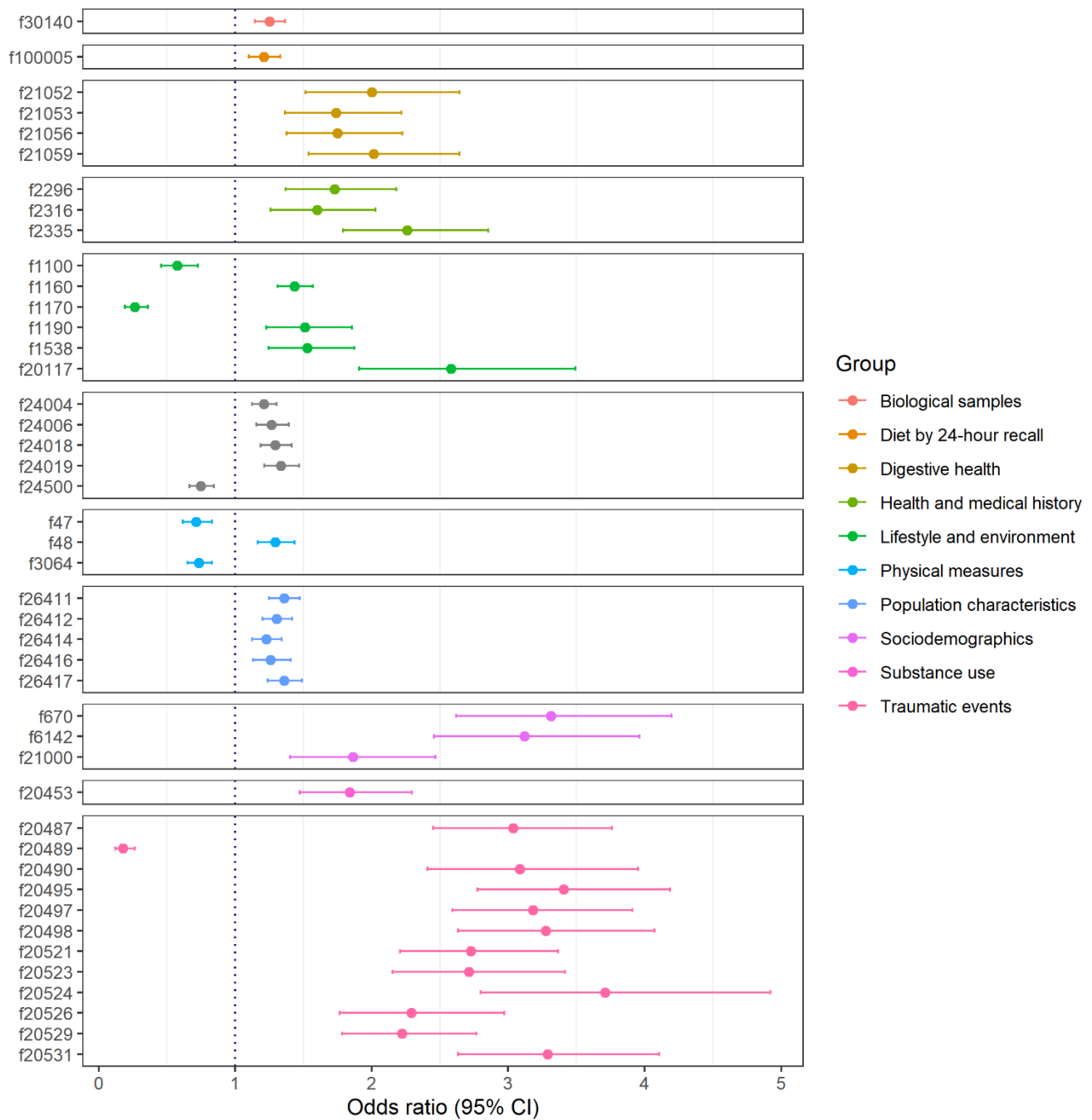
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

b. Anxiety disorders



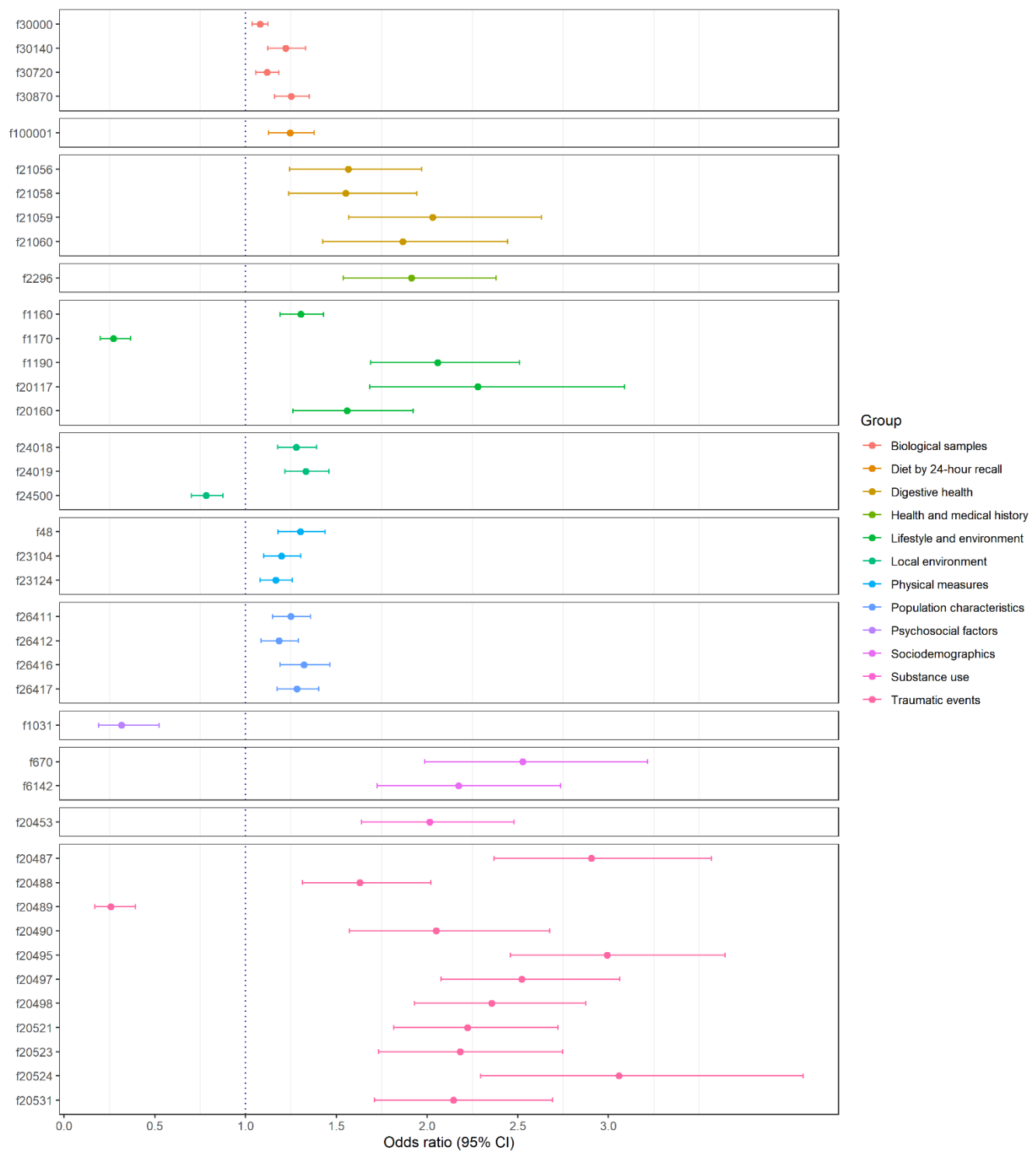
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c. Psychotic disorders



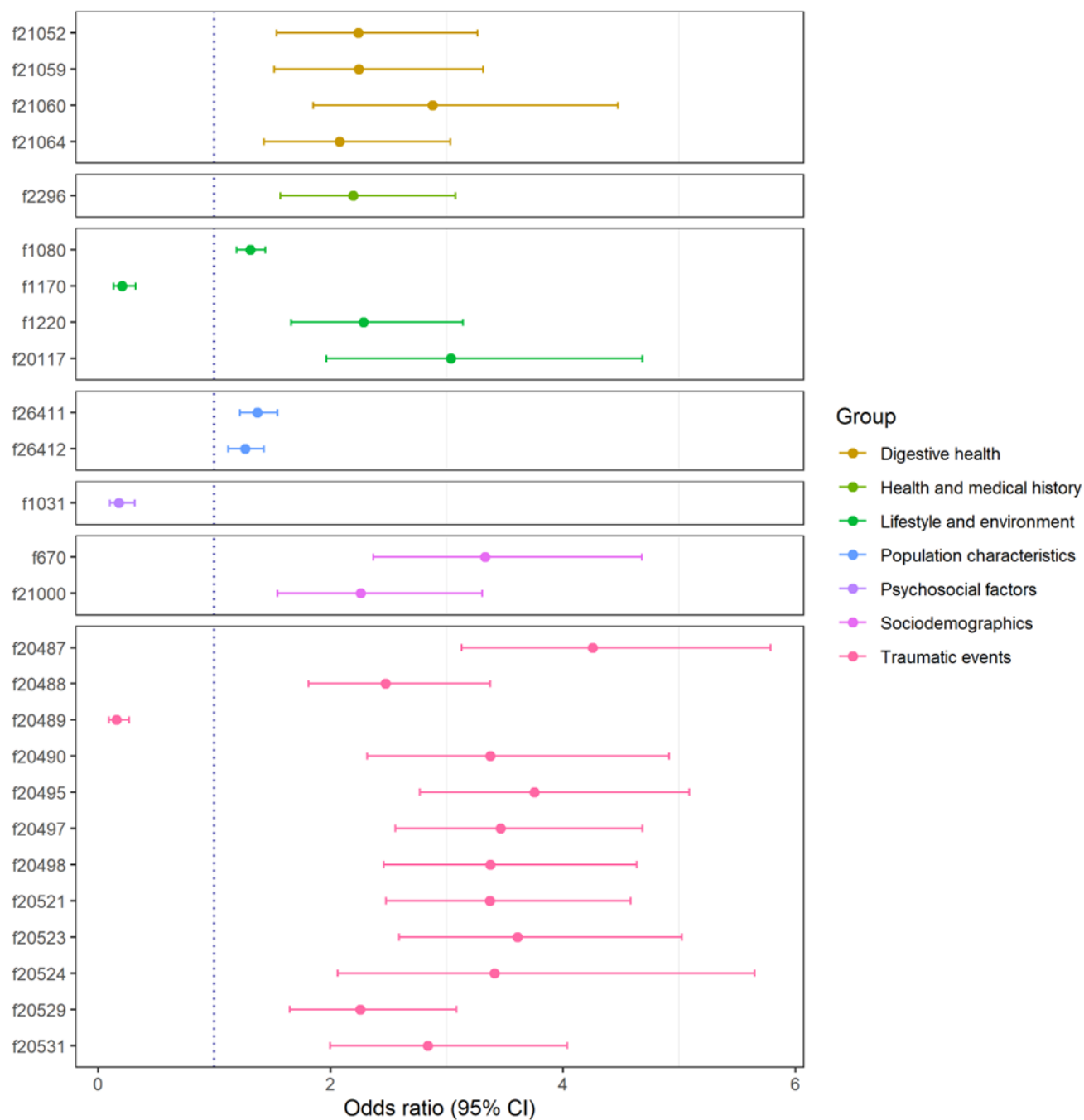
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d. Bipolar manic disorders



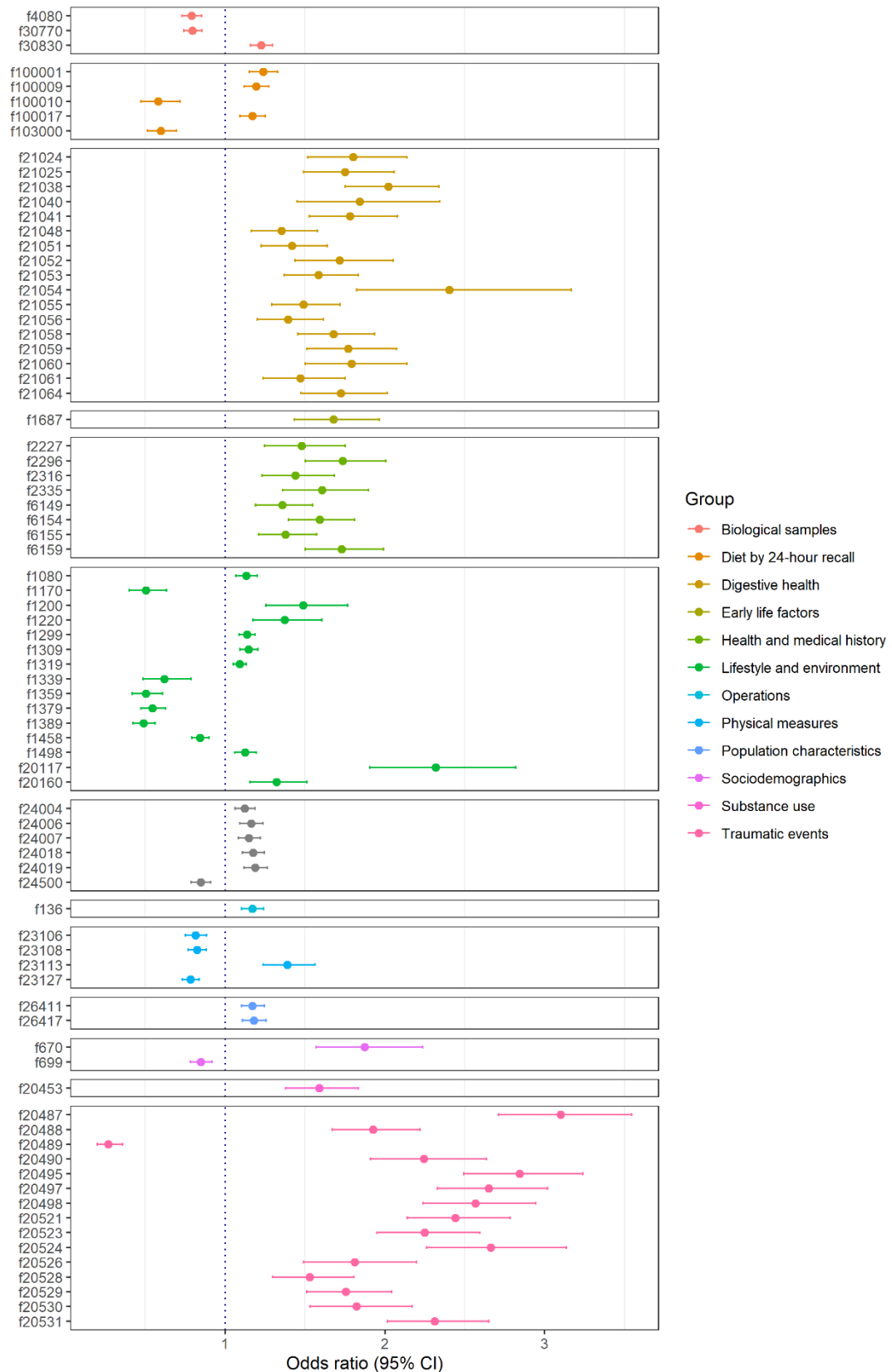
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e. Neurodevelopmental disorders



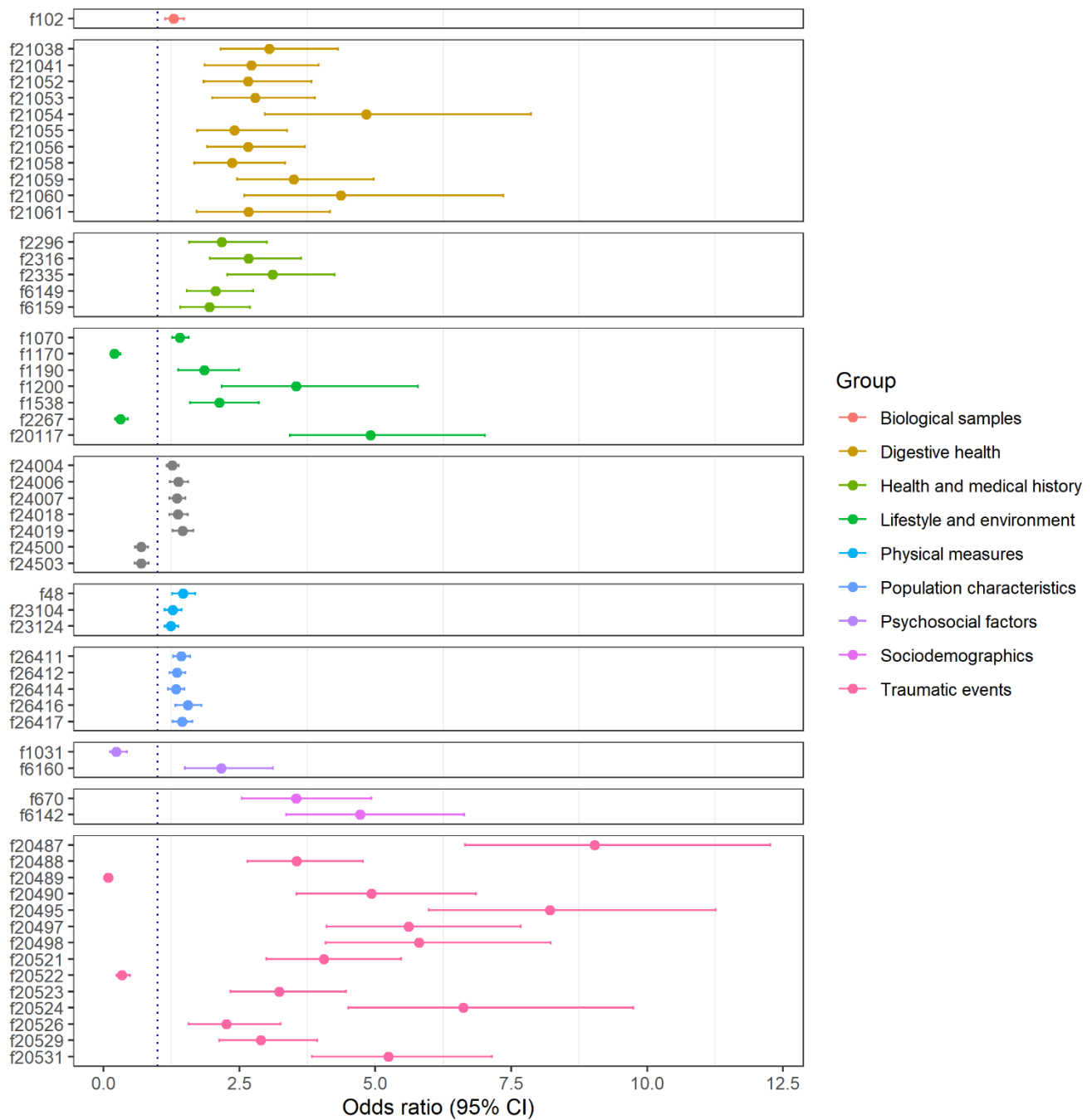
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f. Eating disorders



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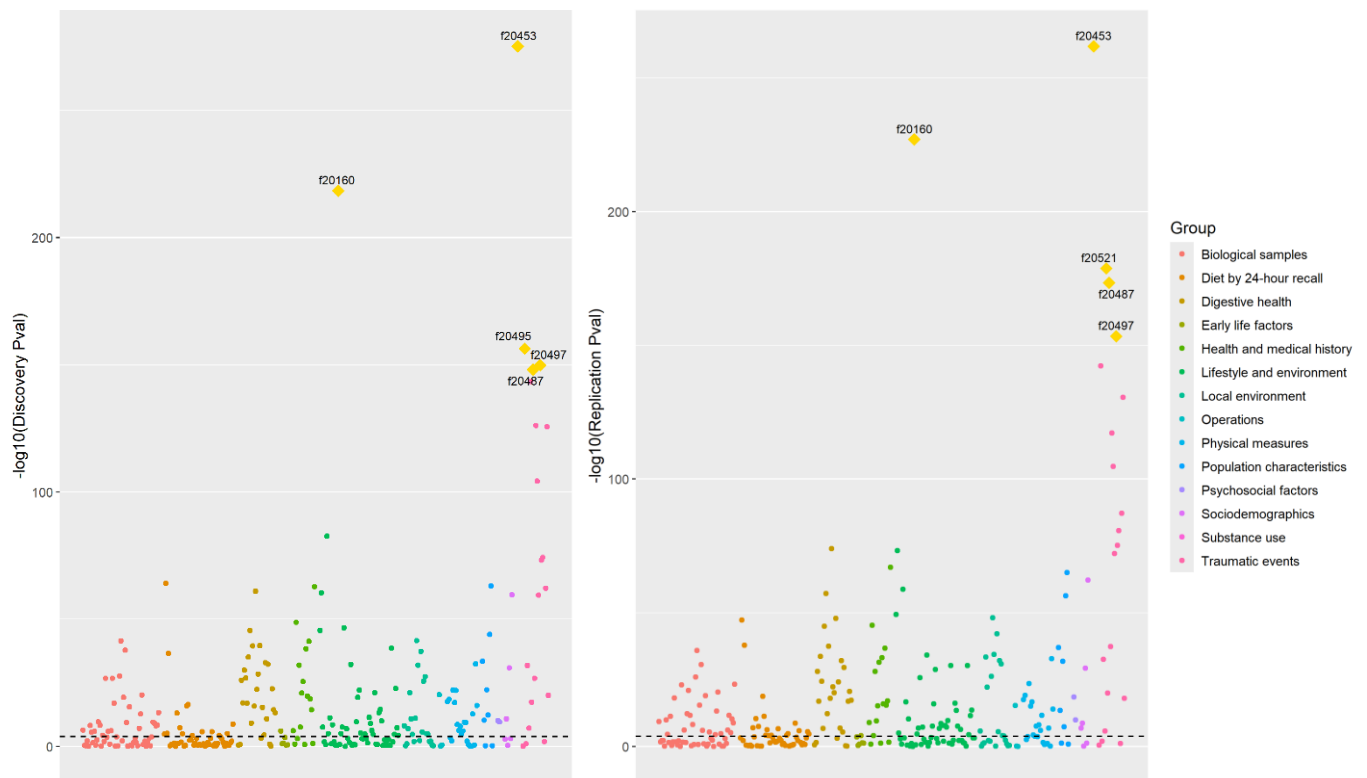
g. Personality disorders



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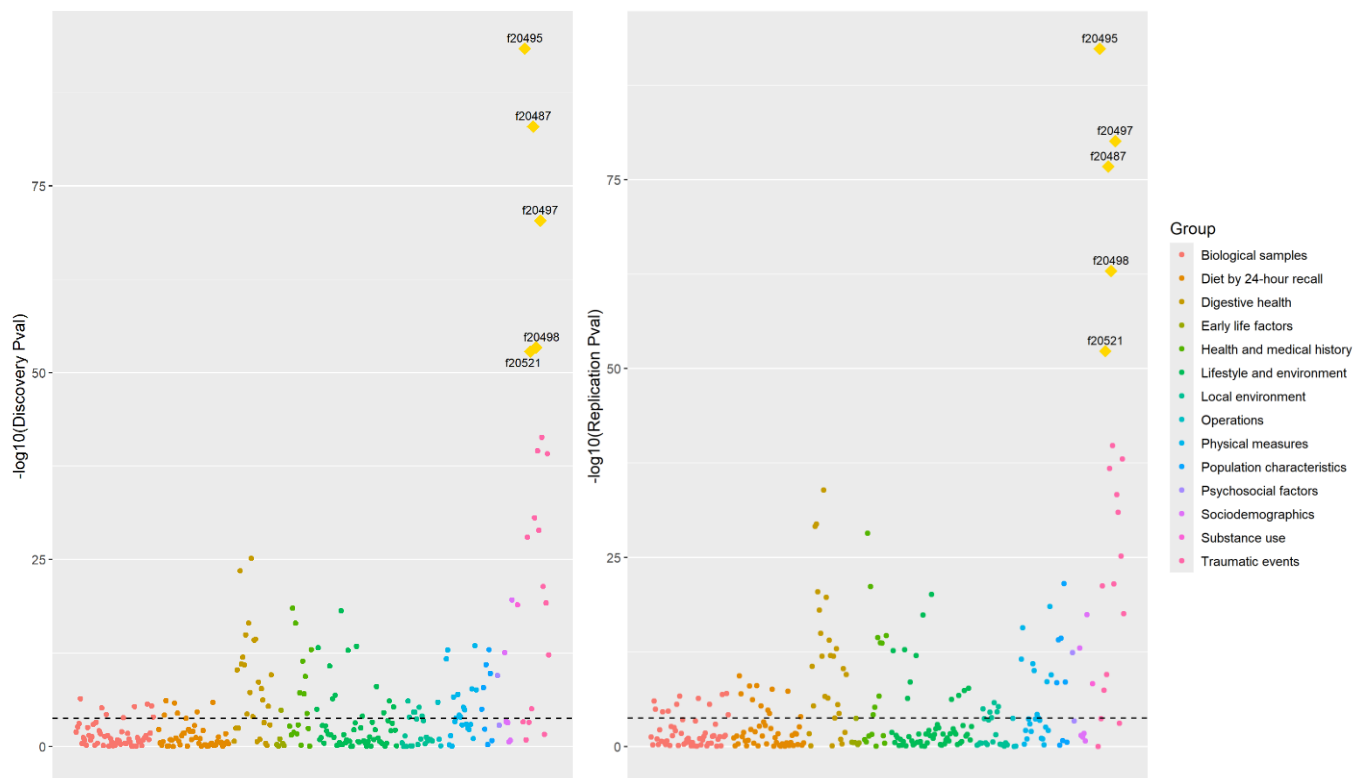
Supplementary Figure 3. Manhattan plots for the exposome-wide association analyses in symptom dimensions using the discovery and replication datasets

a. Ever addicted to any substance or behaviour



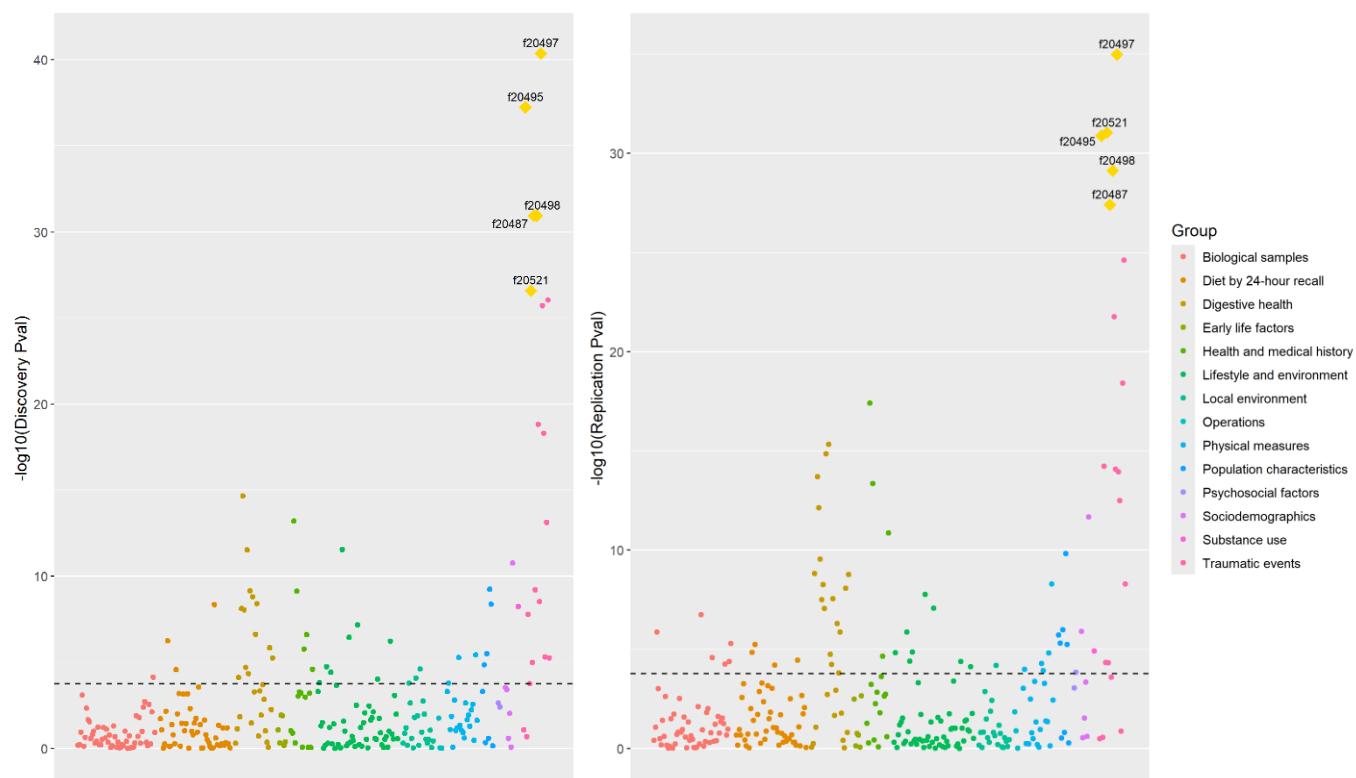
Note: Each dot refers to an individual variable on the x-axis. The log-transformed ($-\log_{10}$) P-values of the ExWAS are plotted on the y-axis. The variables are coded and grouped in UK Biobank categories (see legend for details). Black dotted line indicates the P-value threshold (1.70×10^{-4}) after Bonferroni correction. The field numbers of the top five variables with the smallest P-values correspond to: “childhood and adult traumatic experiences” (f20487, f20495, f20497, f20521), “ever taken cannabis” (f20453), and “ever smoked” (f20160).

b. Ever believed in an unreal conspiracy against self



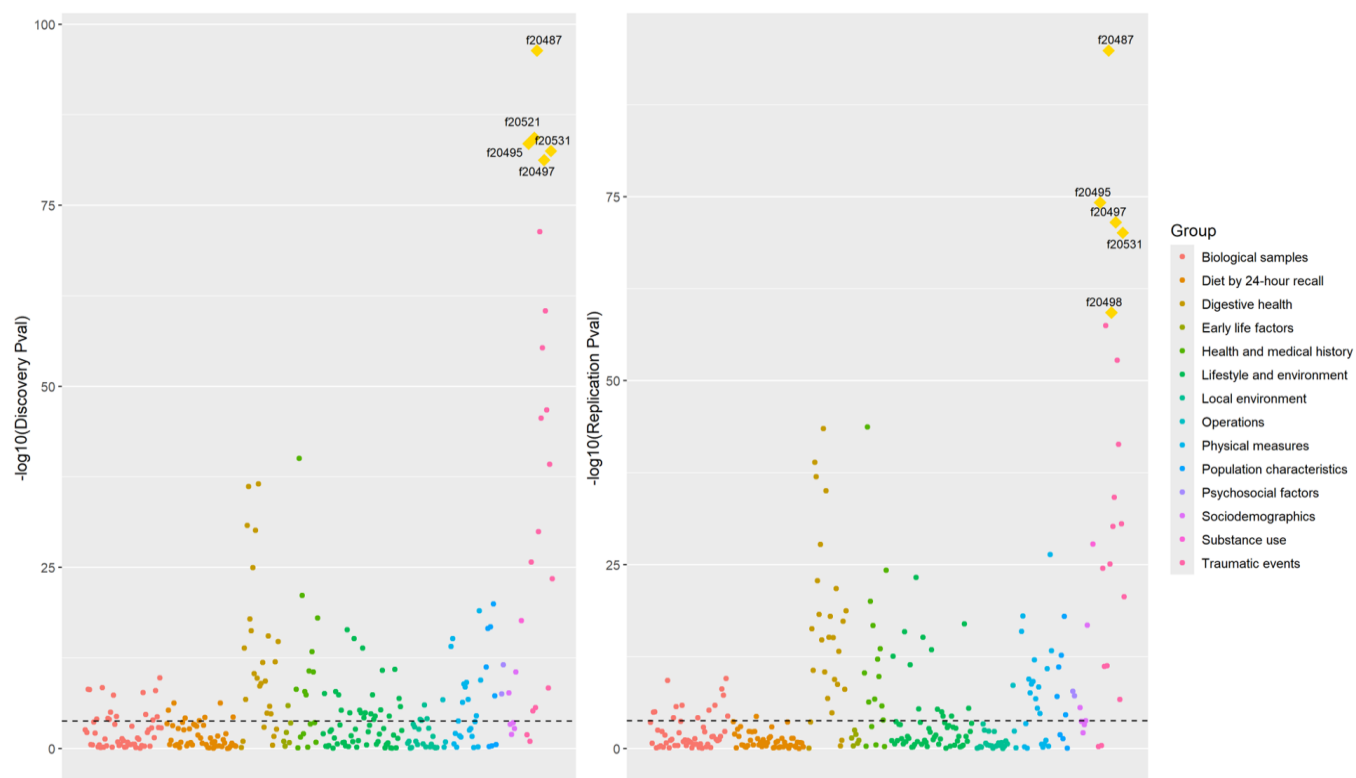
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c. Ever believed in unreal communications or signs



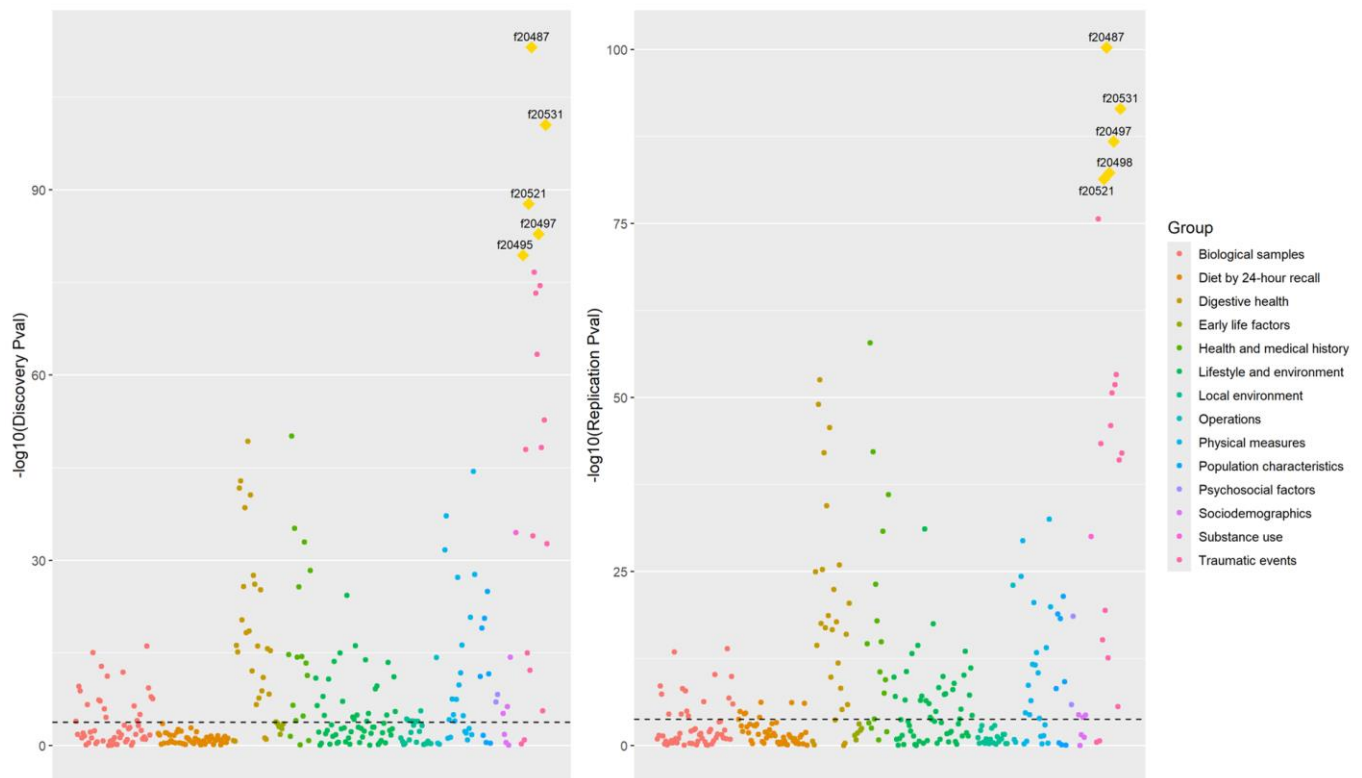
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d. Ever heard an unreal voice



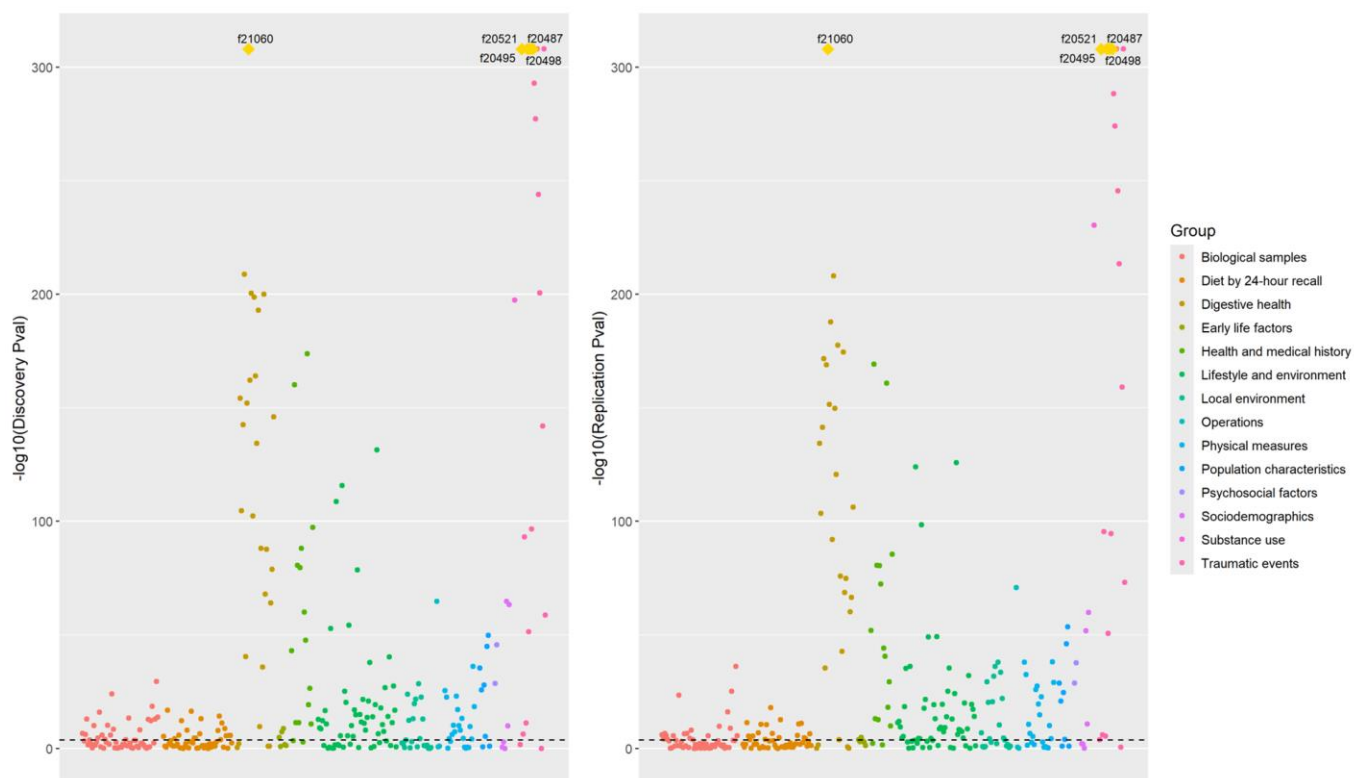
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e. Ever seen an unreal vision



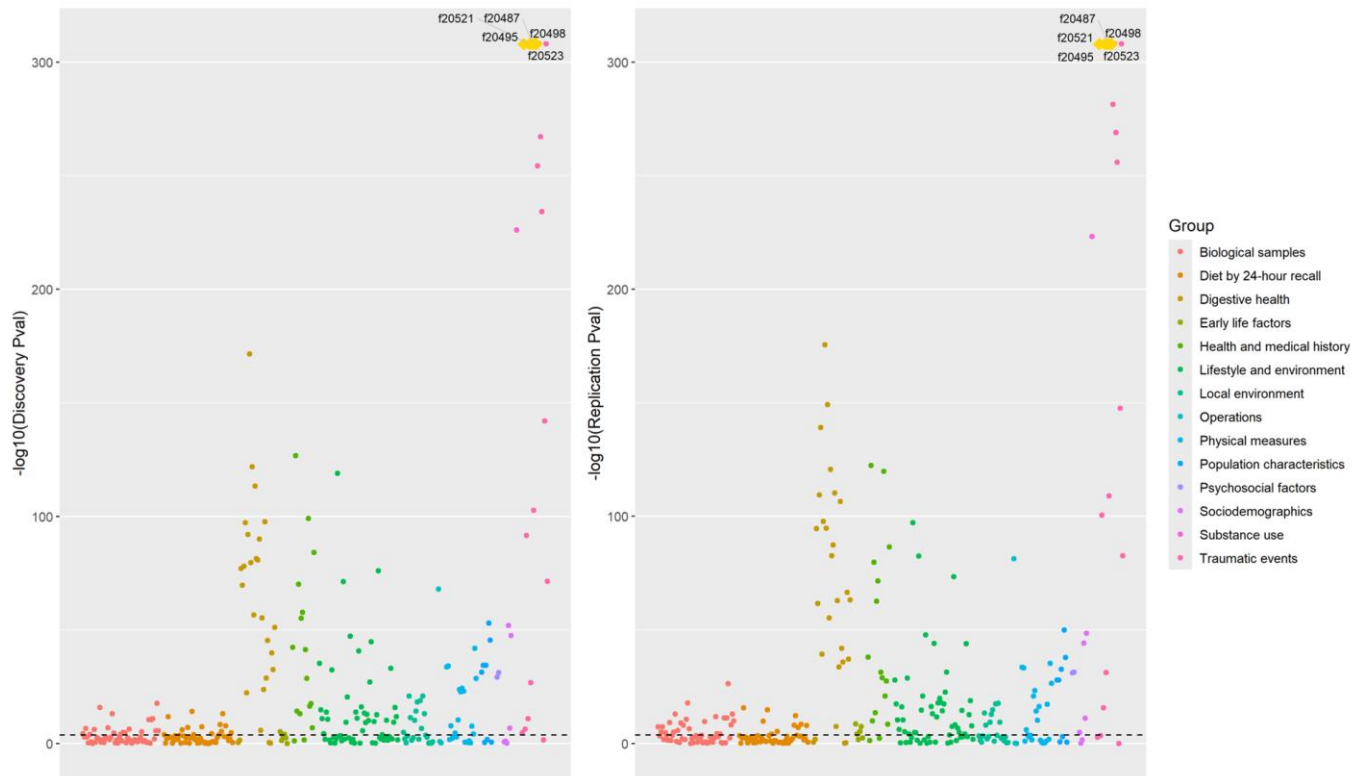
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f. Ever thought that life not worth living



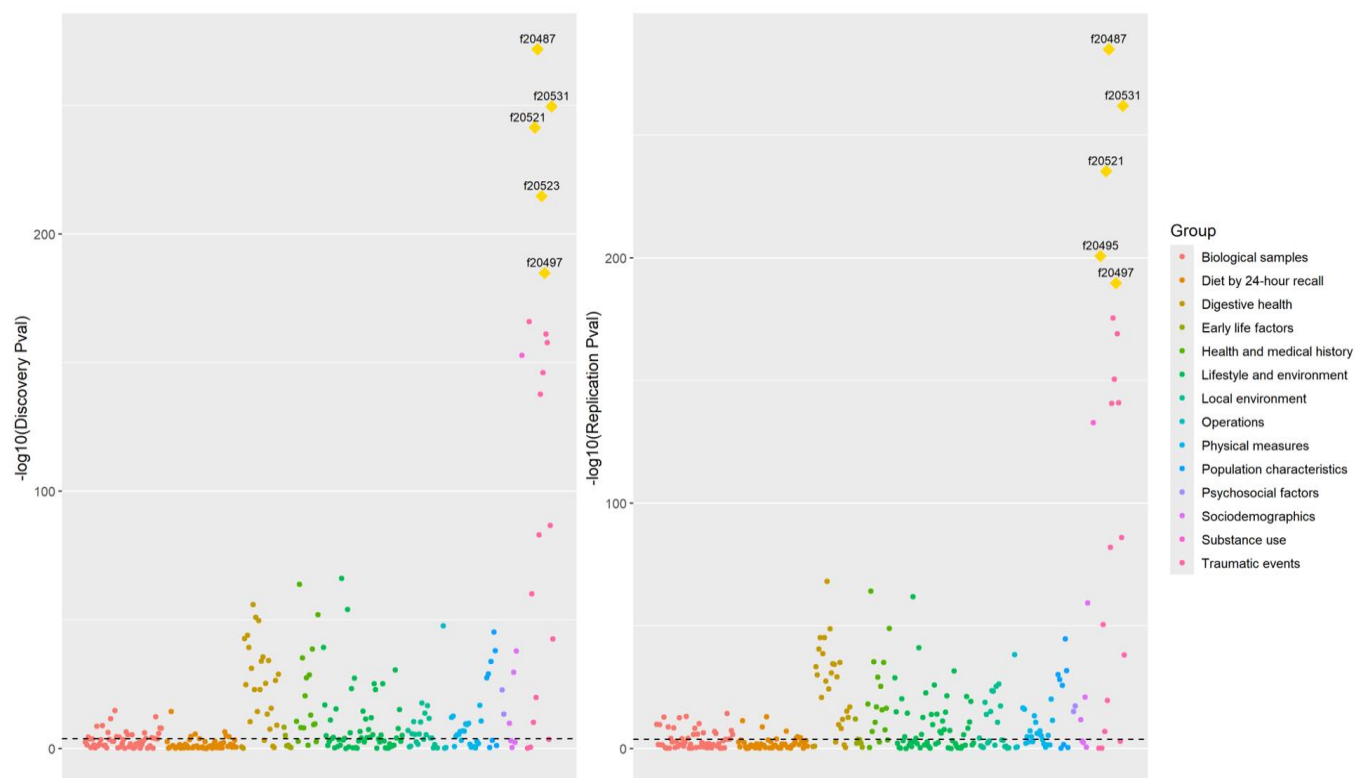
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g. Ever contemplated self-harm



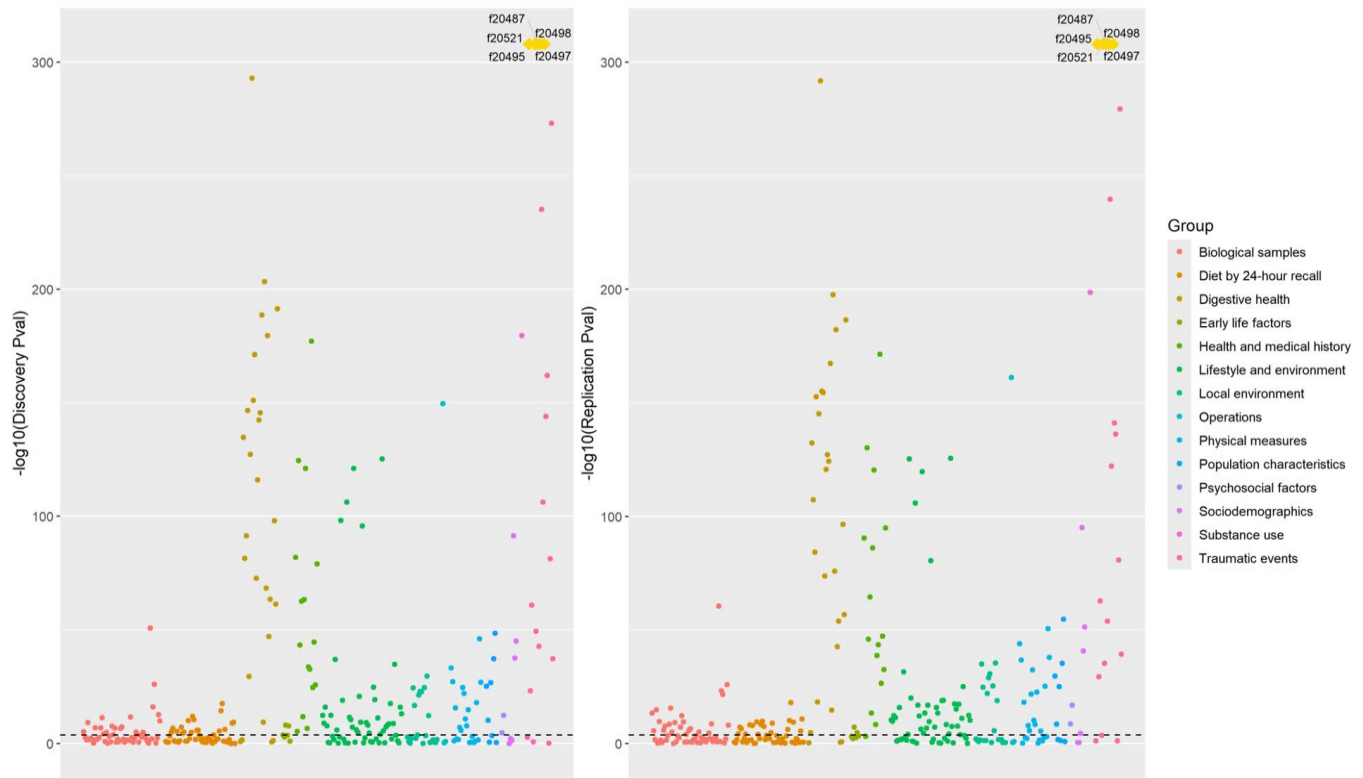
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h. Ever self-harmed



Note: Each dot refers to an individual variable on the x-axis. The log-transformed ($-\log_{10}$) P-values of the ExWAS are plotted on the y-axis. The variables are coded and grouped in UK Biobank categories (see legend for details). Black dotted line indicates the P-value threshold (1.70×10^{-4}) after Bonferroni correction. The field numbers of the top five variables with the smallest P-values correspond to “childhood and adult traumatic experiences” (f20487, f20497, f20521, f20523, f20531).

i. Ever sought or received professional help for mental distress



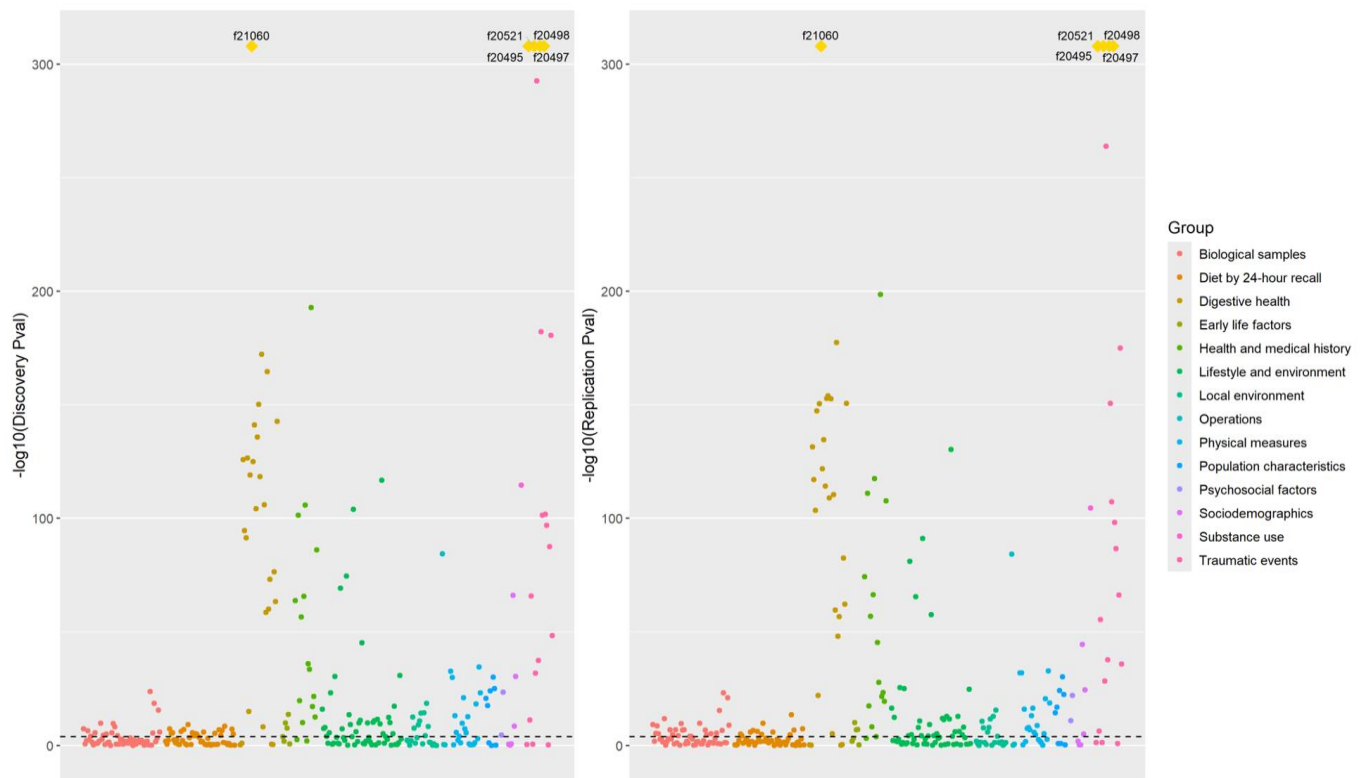
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j. Ever suffered mental distress preventing usual activities



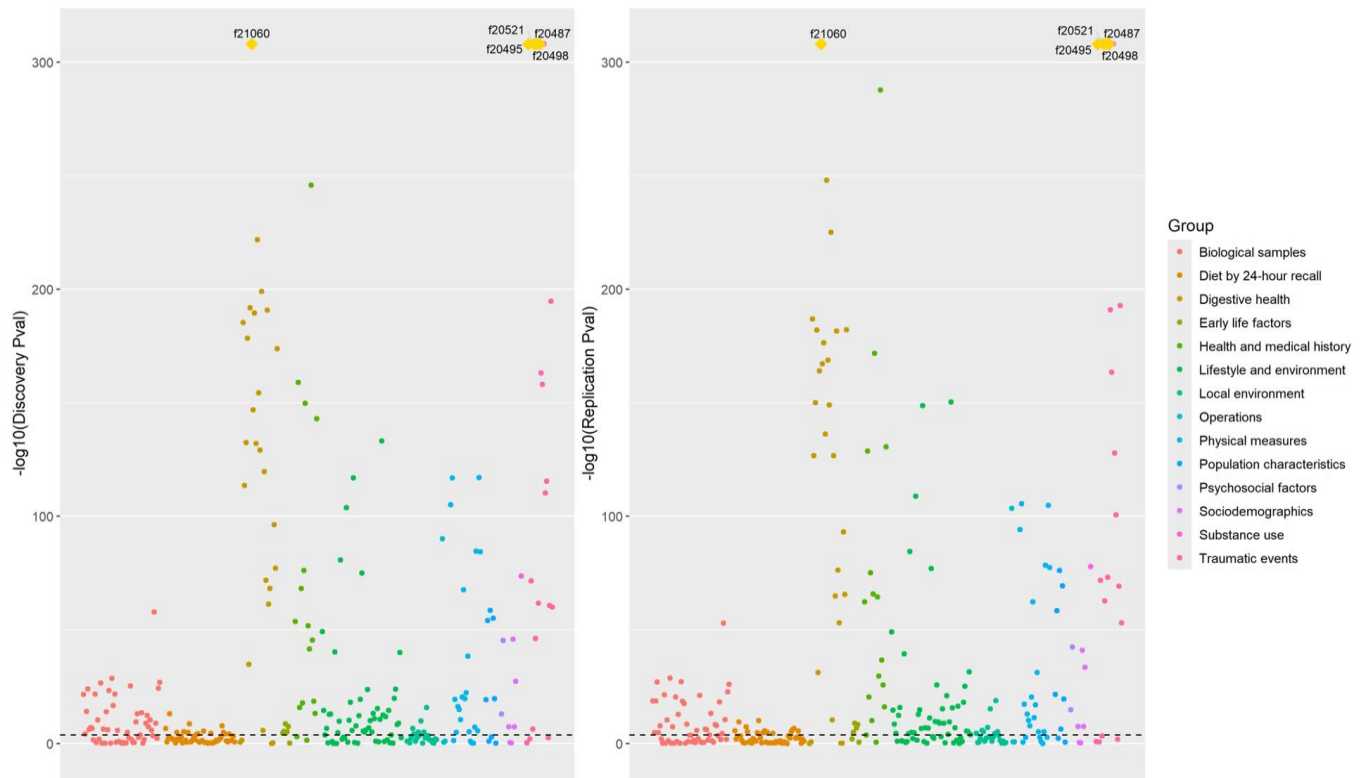
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k. Ever had prolonged feelings of sadness or depression



Note: Each dot refers to an individual variable on the x-axis. The log-transformed ($-\log_{10}$) P-values of the ExWAS are plotted on the y-axis. The variables are coded and grouped in UK Biobank categories (see legend for details). Black dotted line indicates the P-value threshold (1.70×10^{-4}) after Bonferroni correction. The field numbers of the top five variables with the smallest P-values correspond to: “childhood and adult traumatic experiences” (f20495, f20497, f20498, f20521) and “digestive health complaints” (f21060).

I. Ever had prolonged loss of interest in normal activities



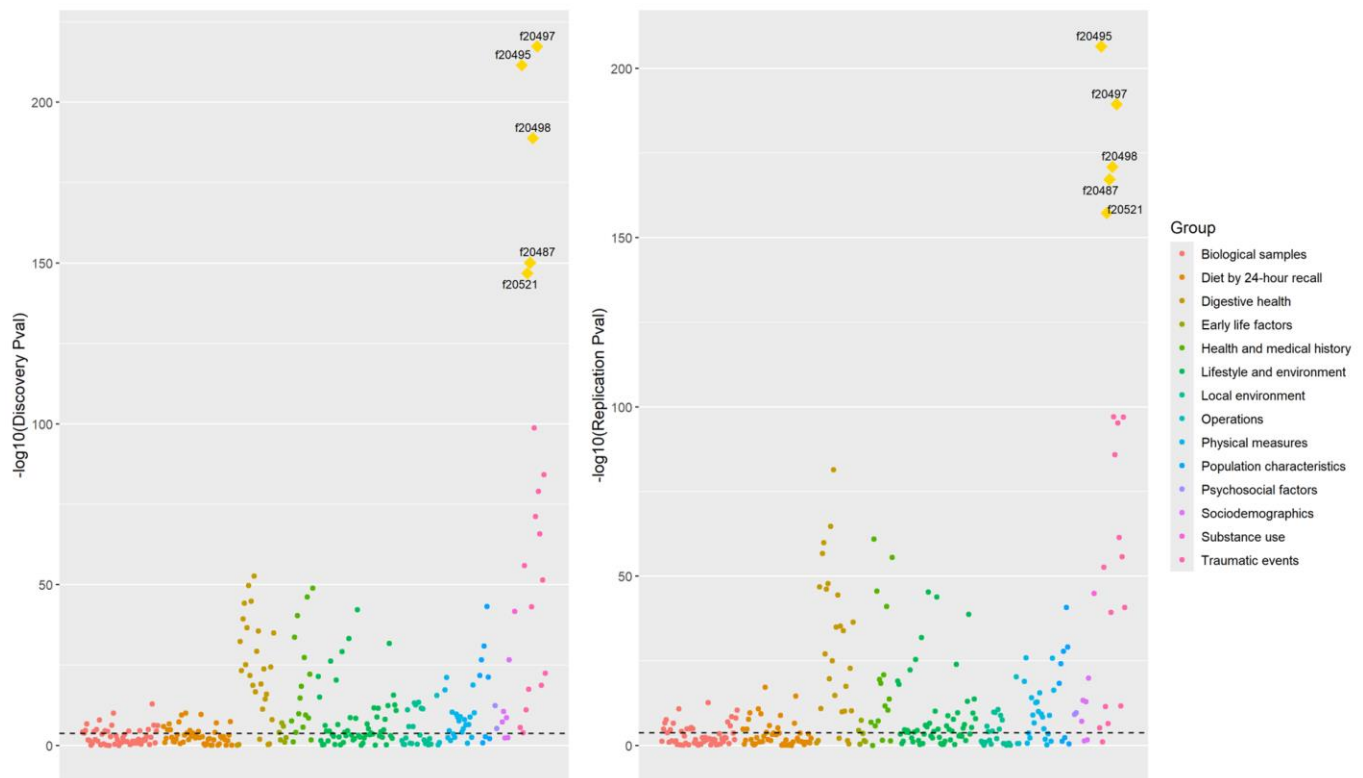
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m. Ever had a period extreme irritability



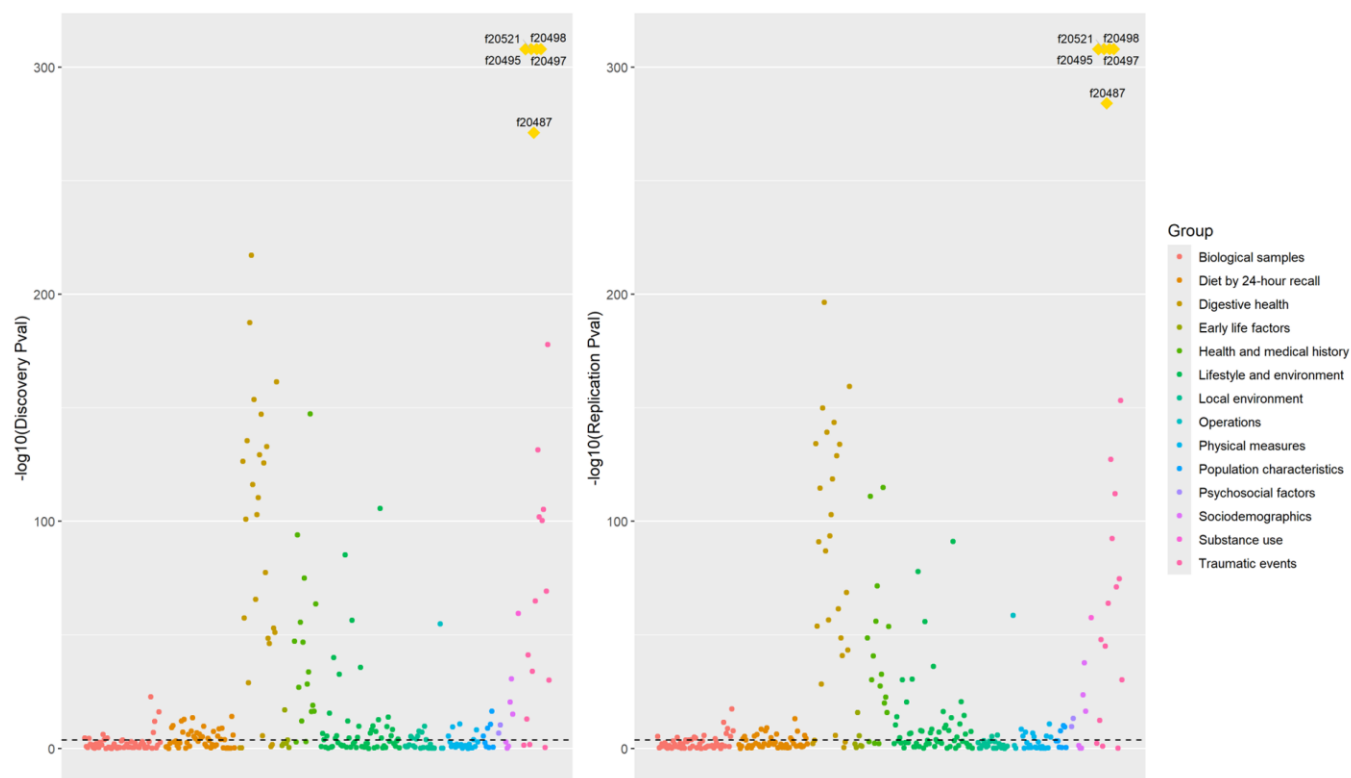
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n. Ever had period of mania/excitability



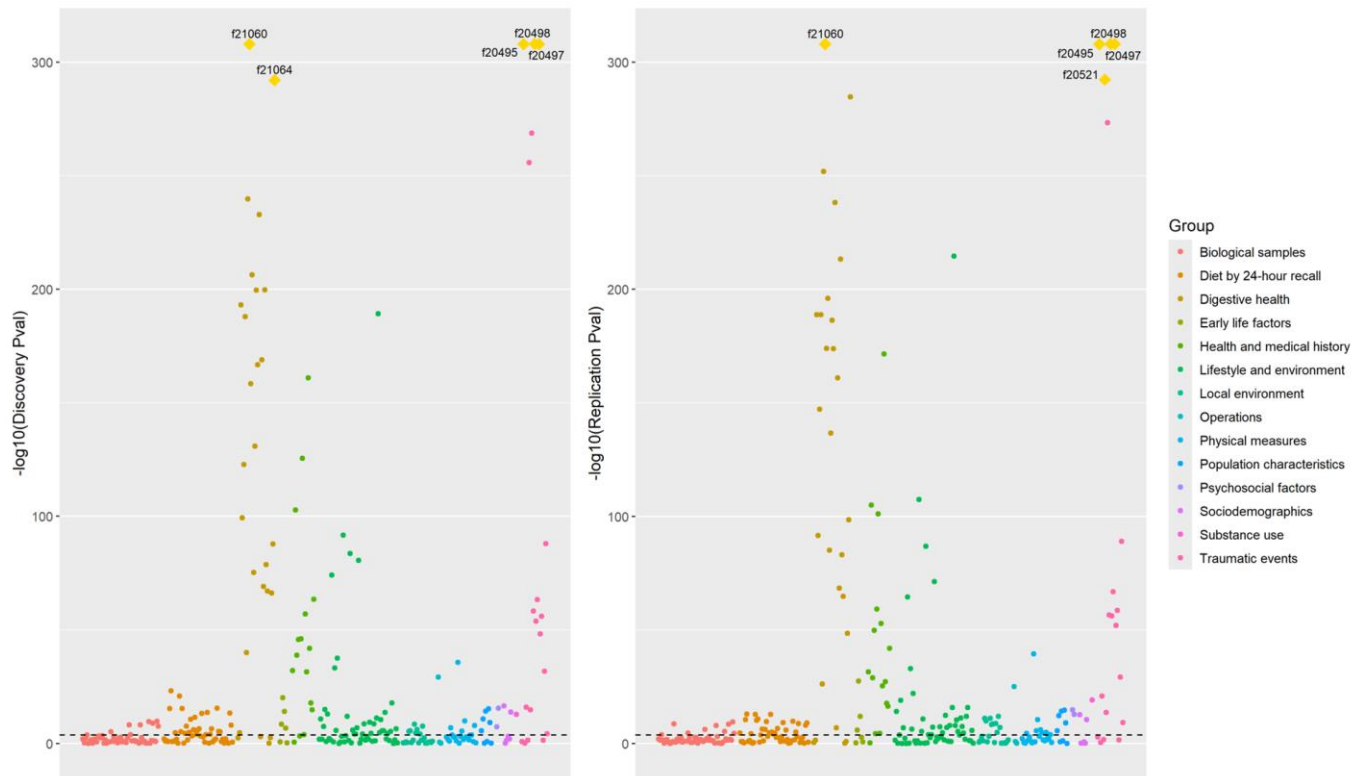
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o. Ever felt worried, tense, or anxious for most of a month or longer



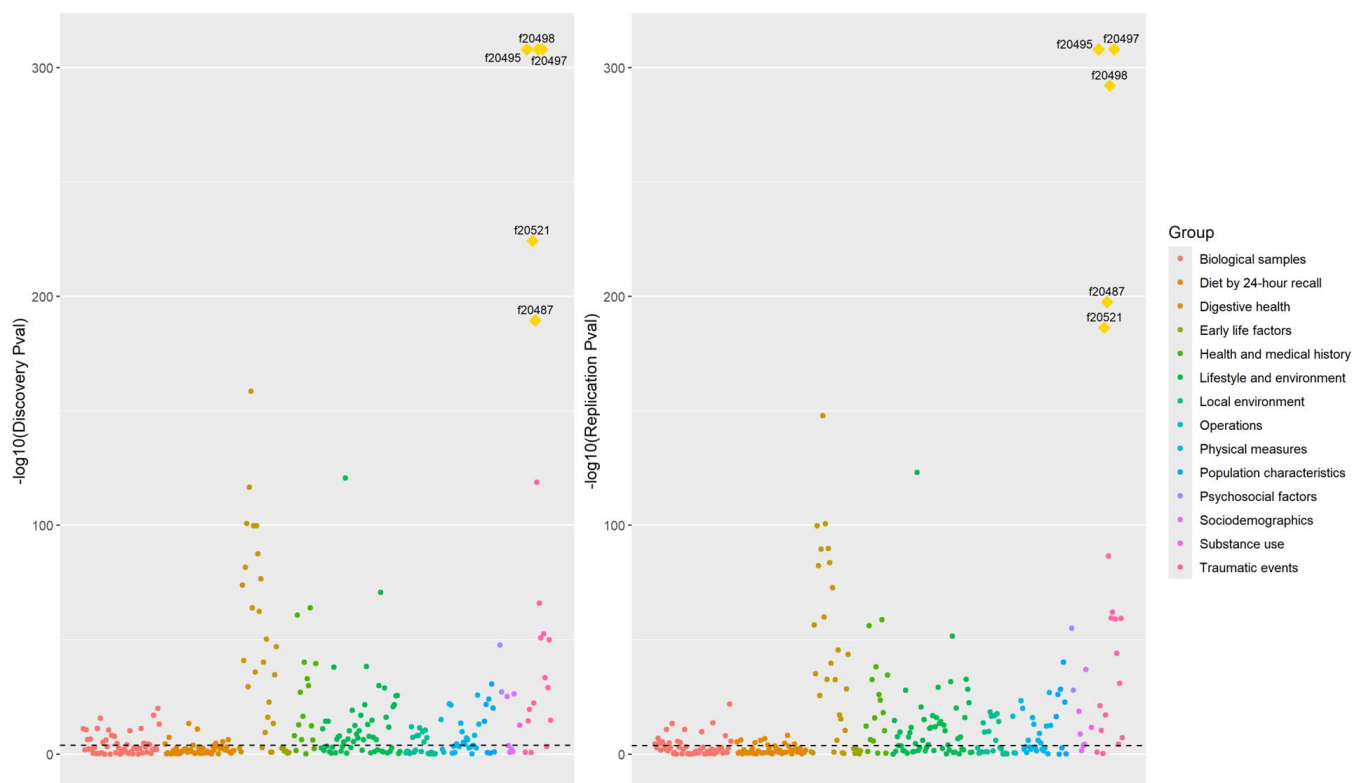
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p. Ever worried more than most people would in similar situation



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q. General happiness



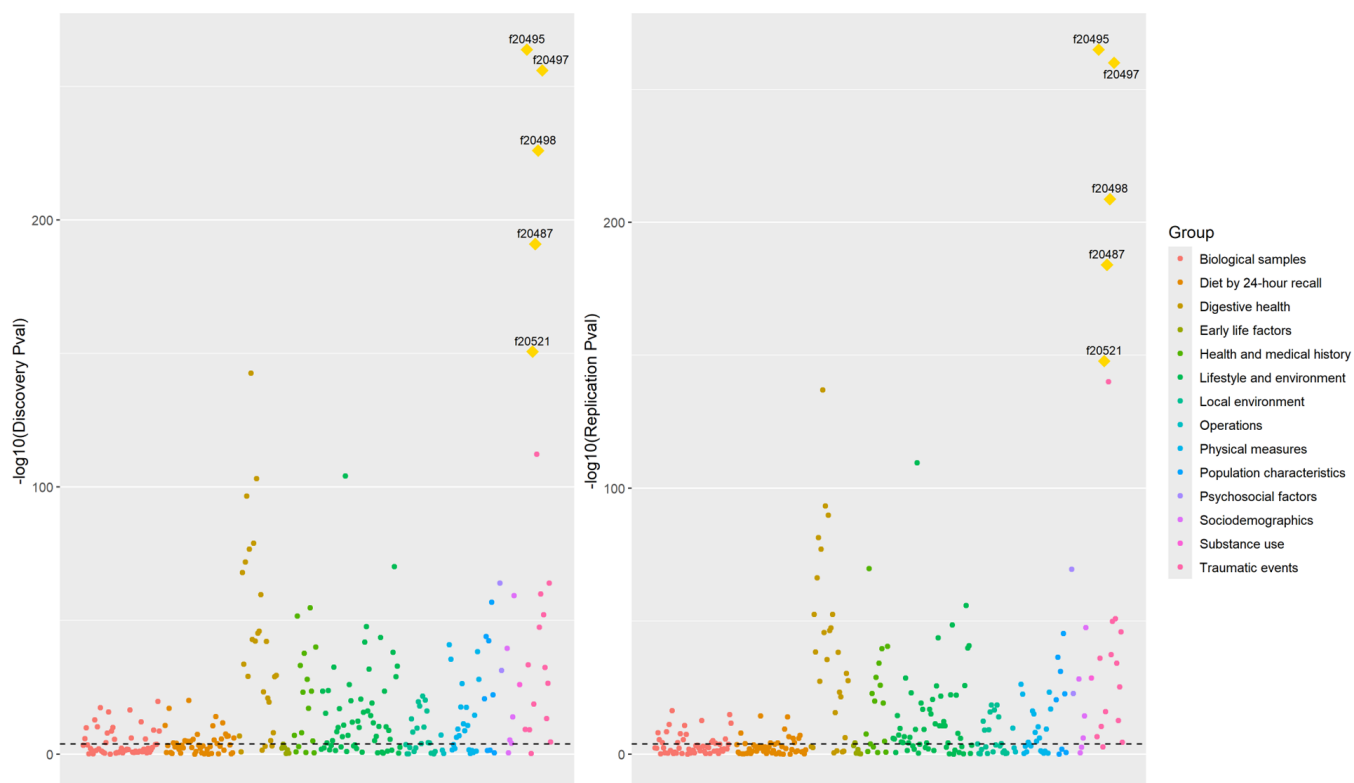
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r. General happiness with own health



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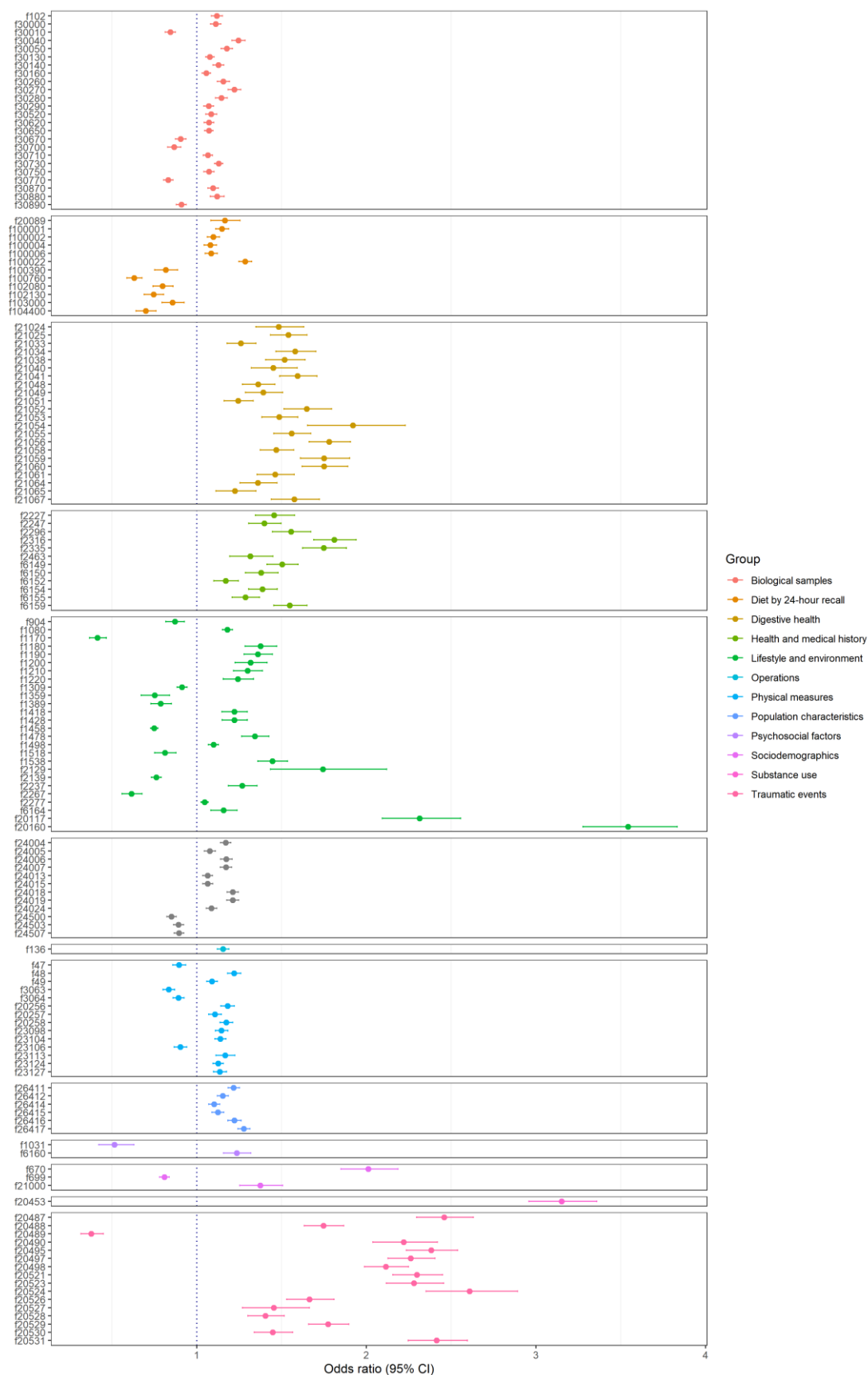
s. Belief that own life is meaningful



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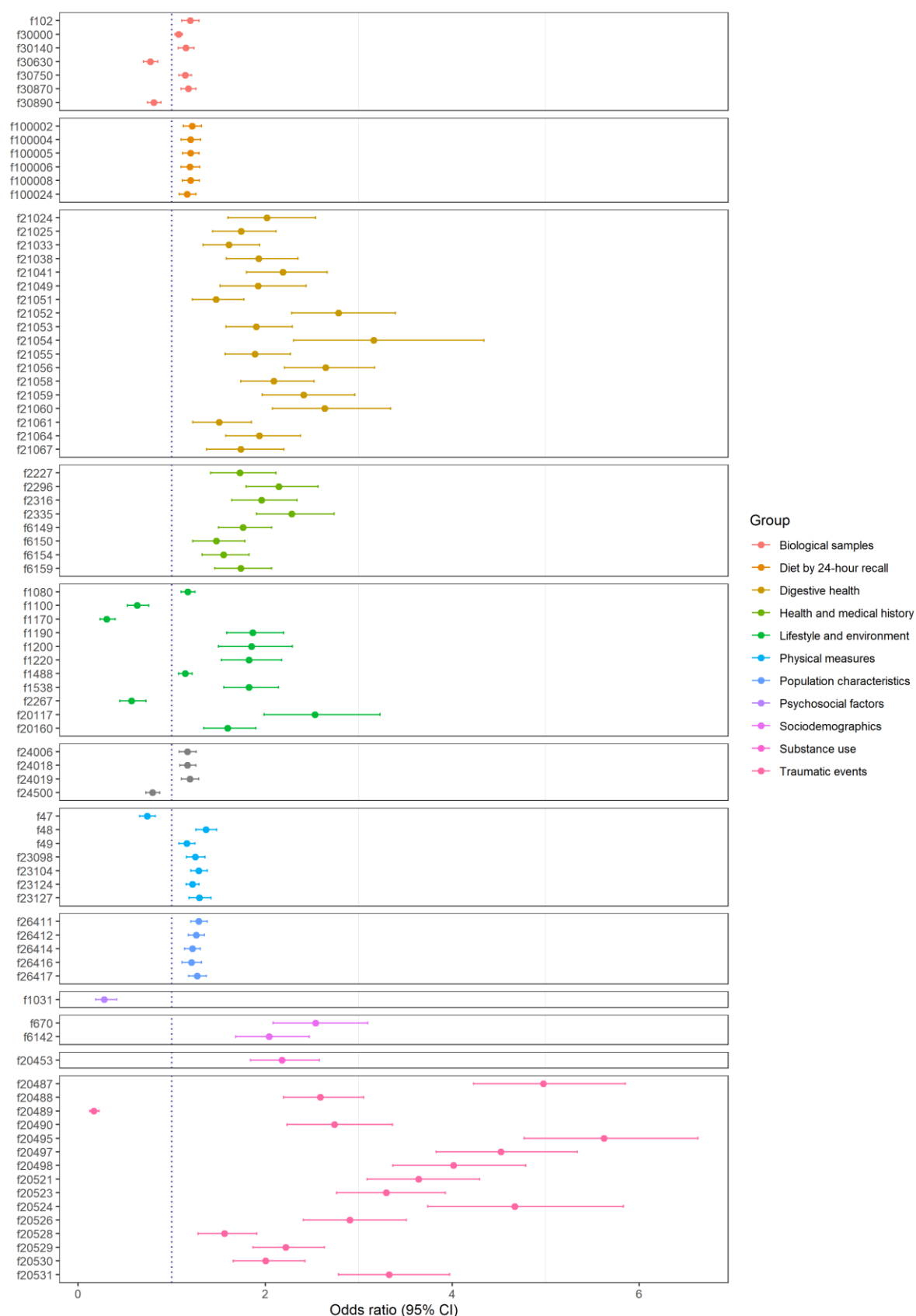
Supplementary Figure 4. Strength of association between symptom dimensions and significant correlates in the exposome-wide association study

a. Ever addicted to any substance or behaviour



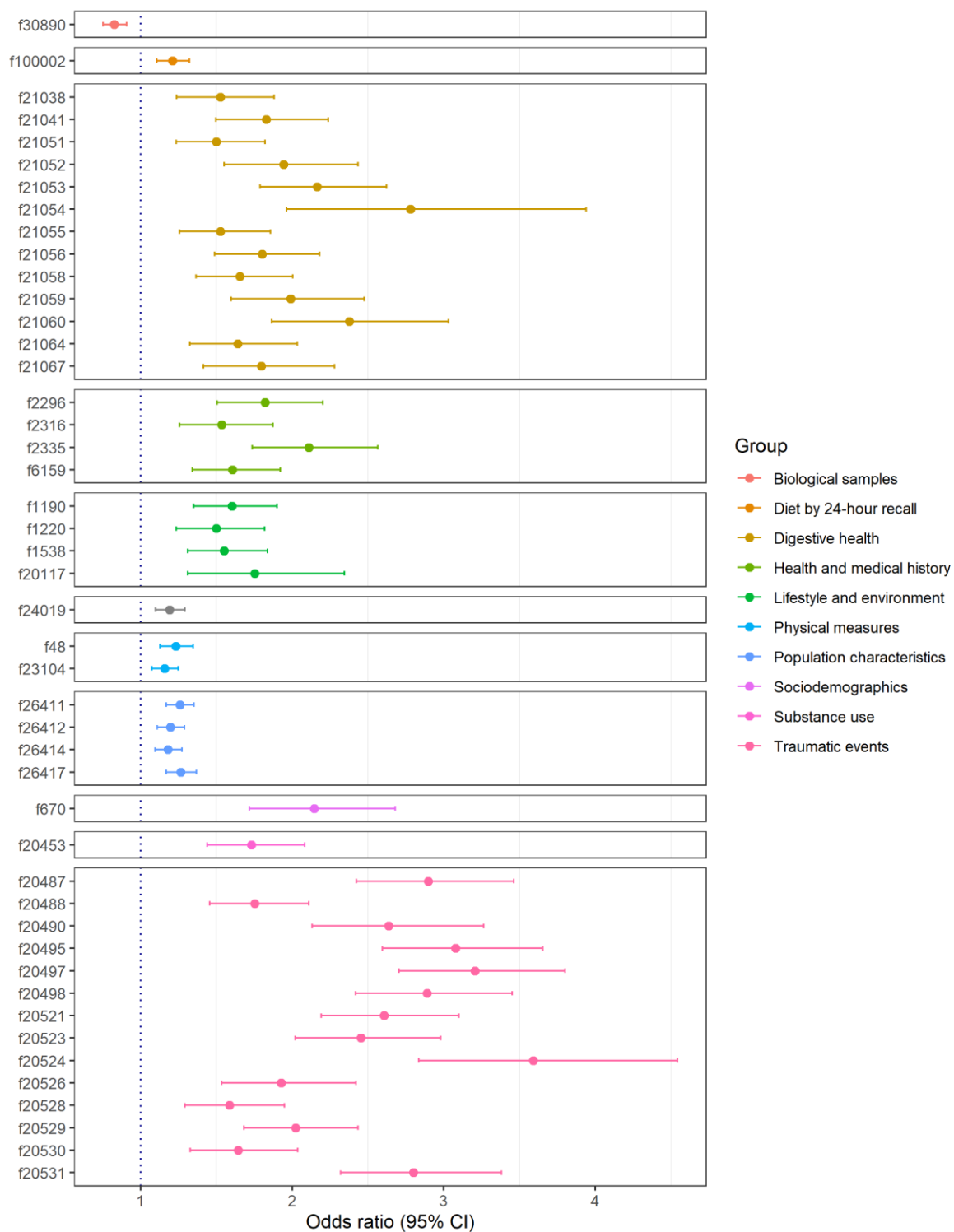
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b. Ever believed in an unreal conspiracy against self



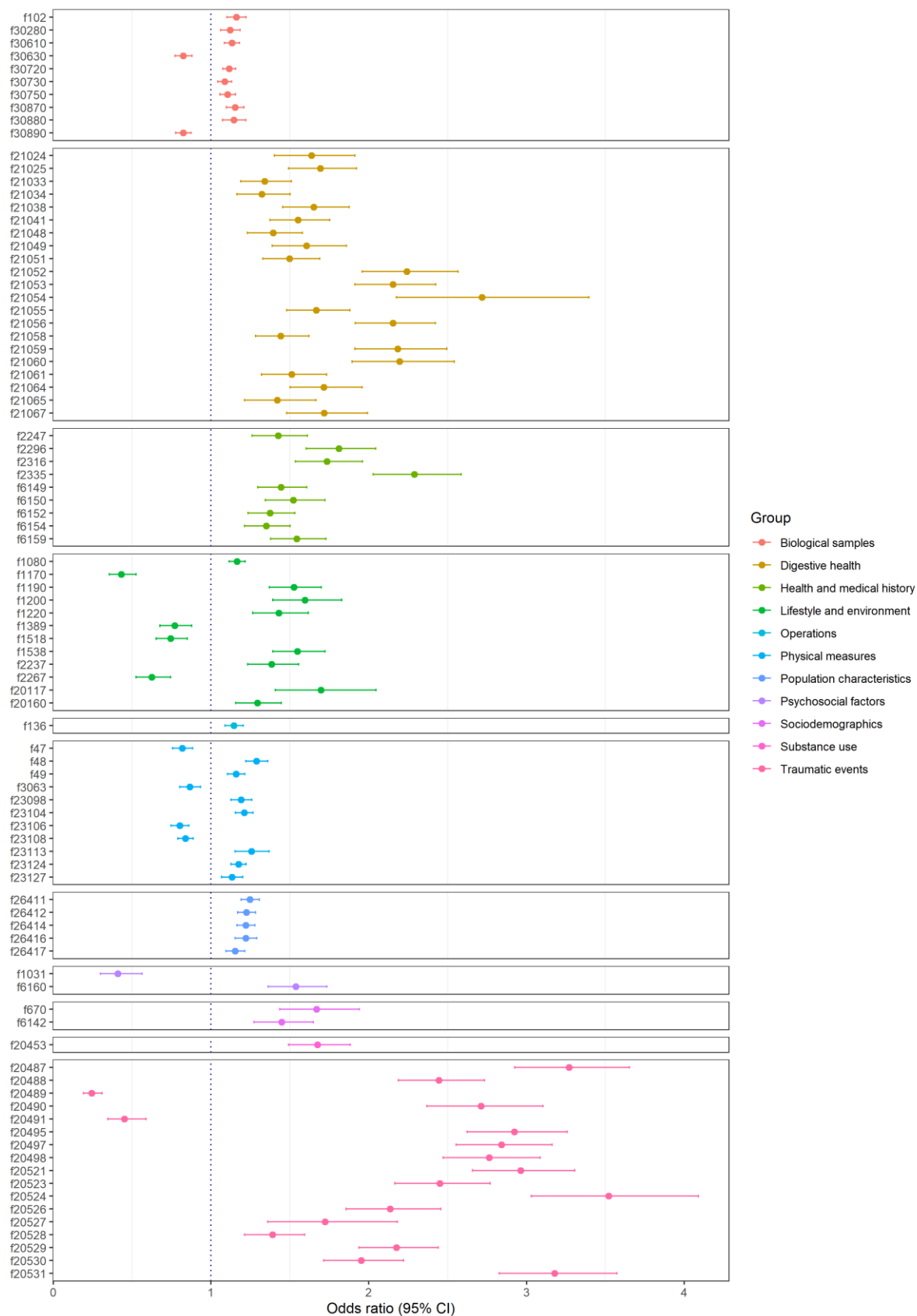
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c. Ever believed in unreal communications or signs



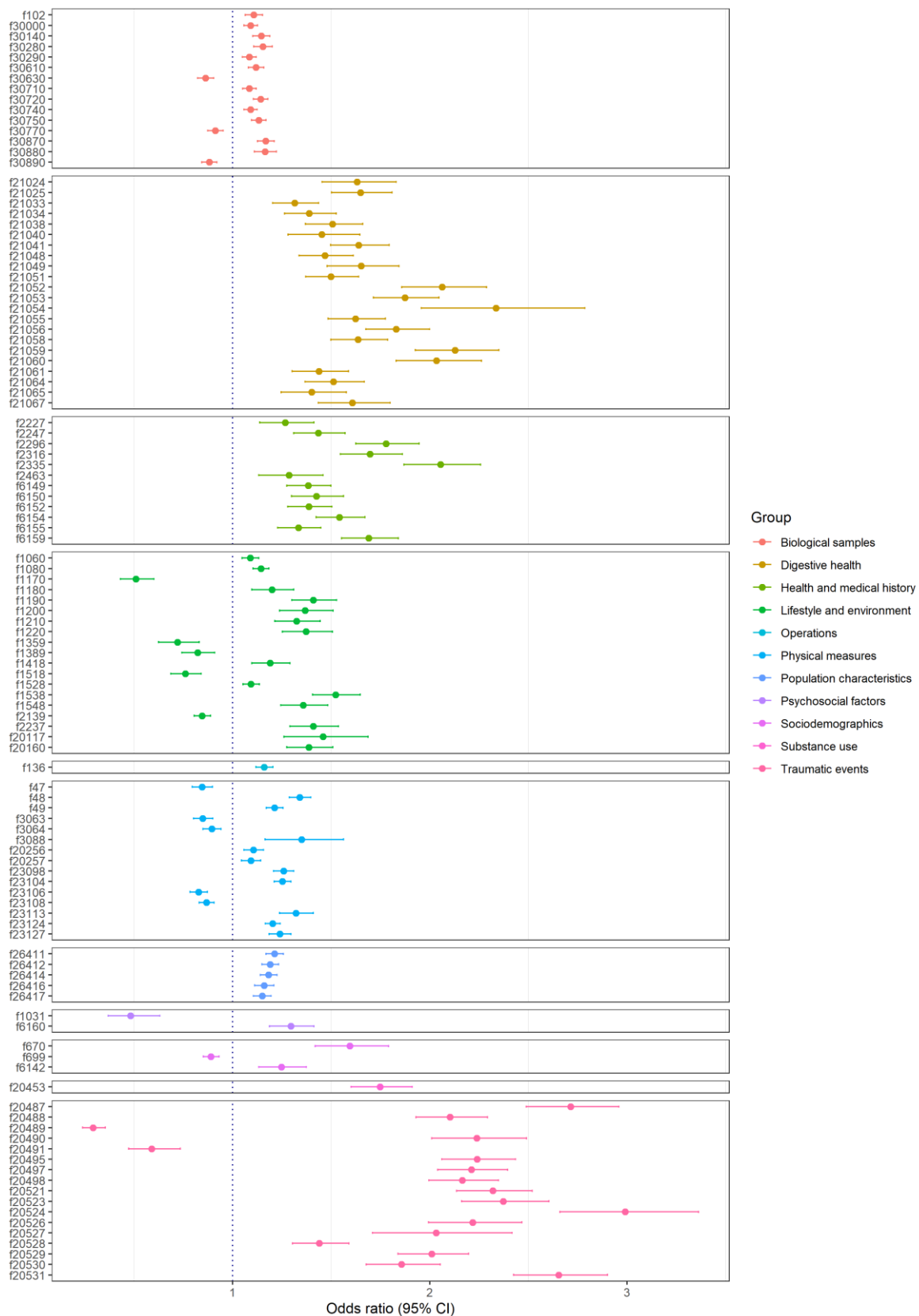
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d. Ever heard an unreal voice



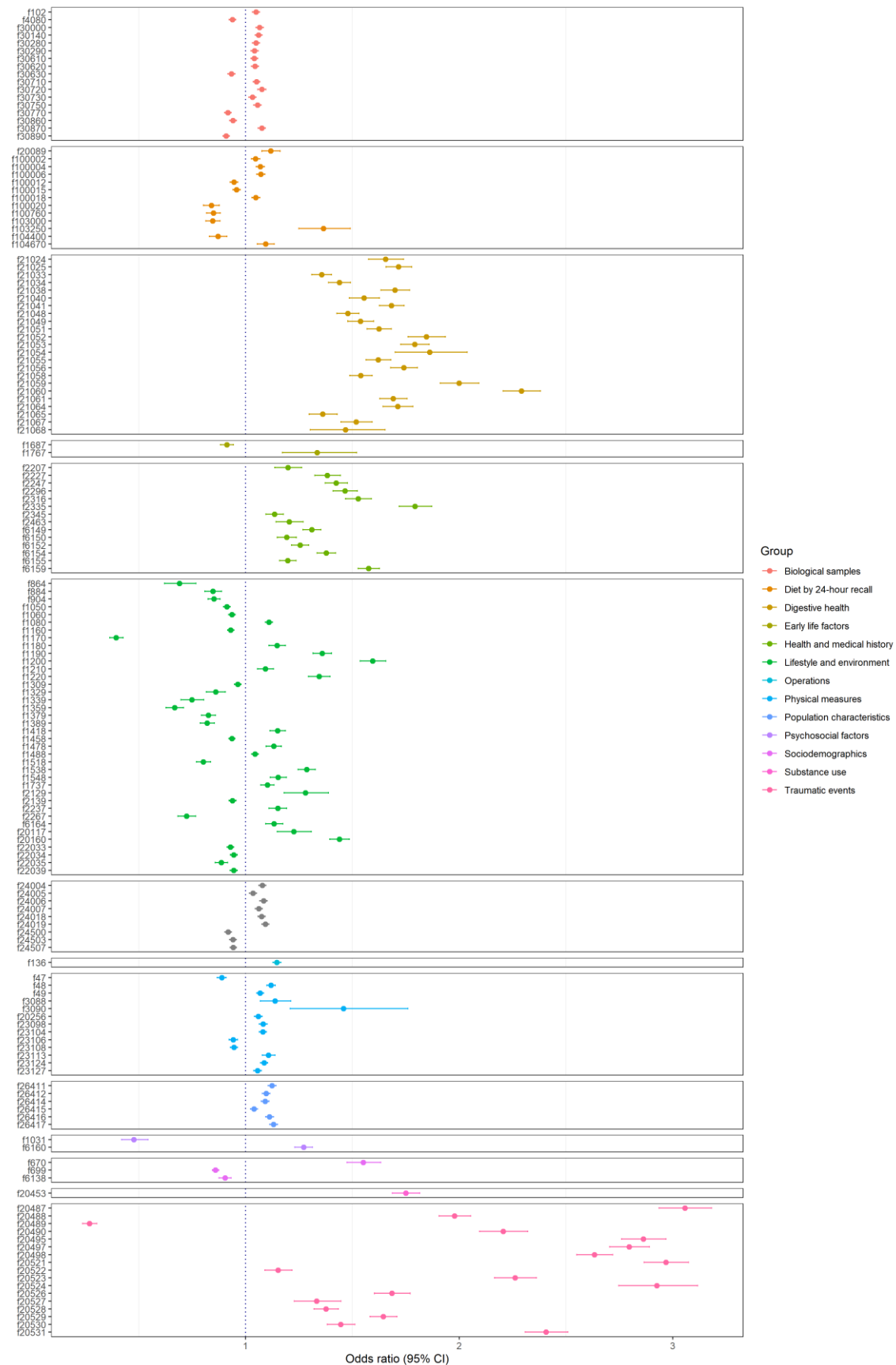
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e. Ever seen an unreal vision



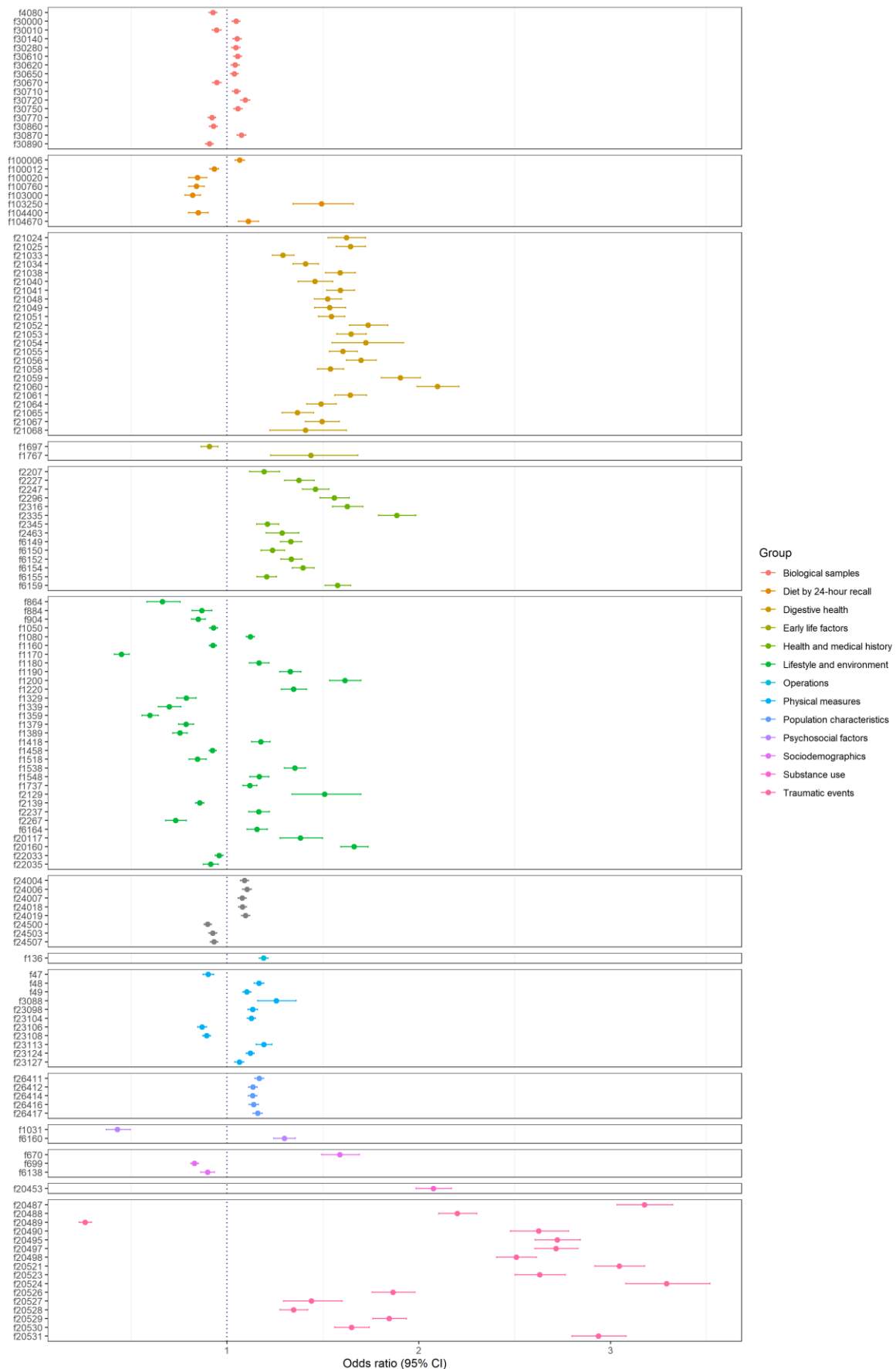
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f. Ever thought that life not worth living



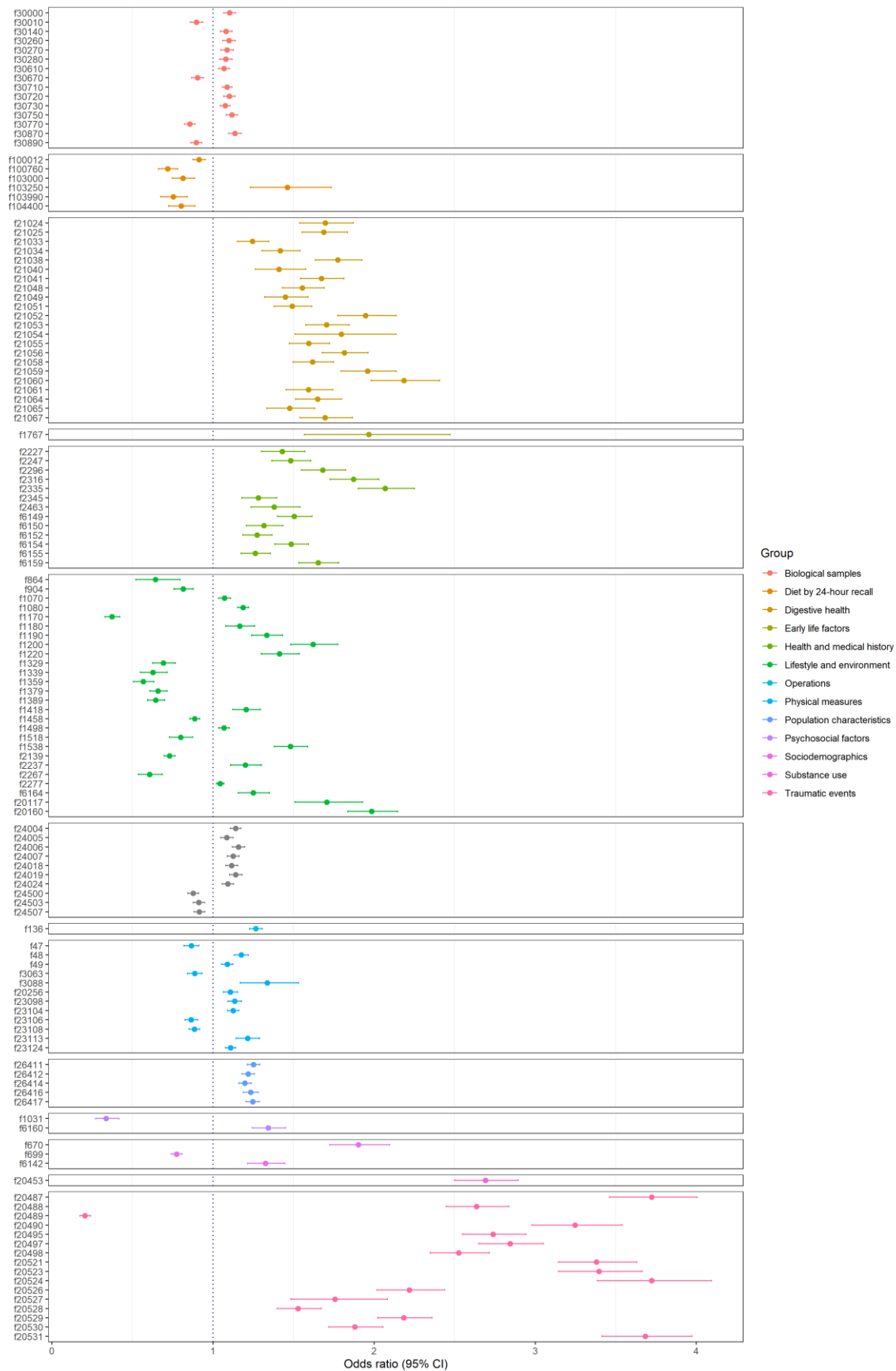
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

g. Ever contemplated self-harm



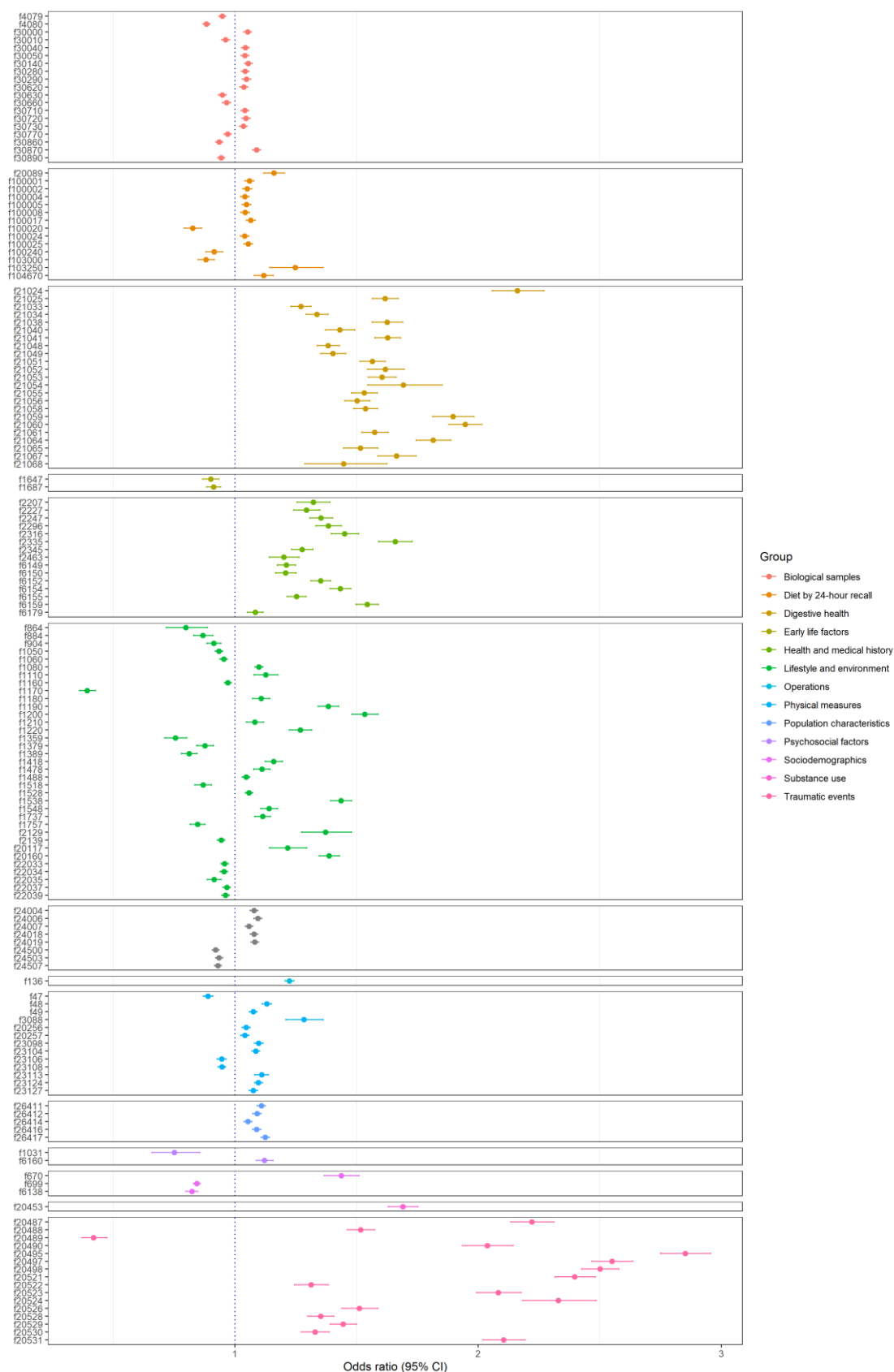
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

h. Ever self-harmed



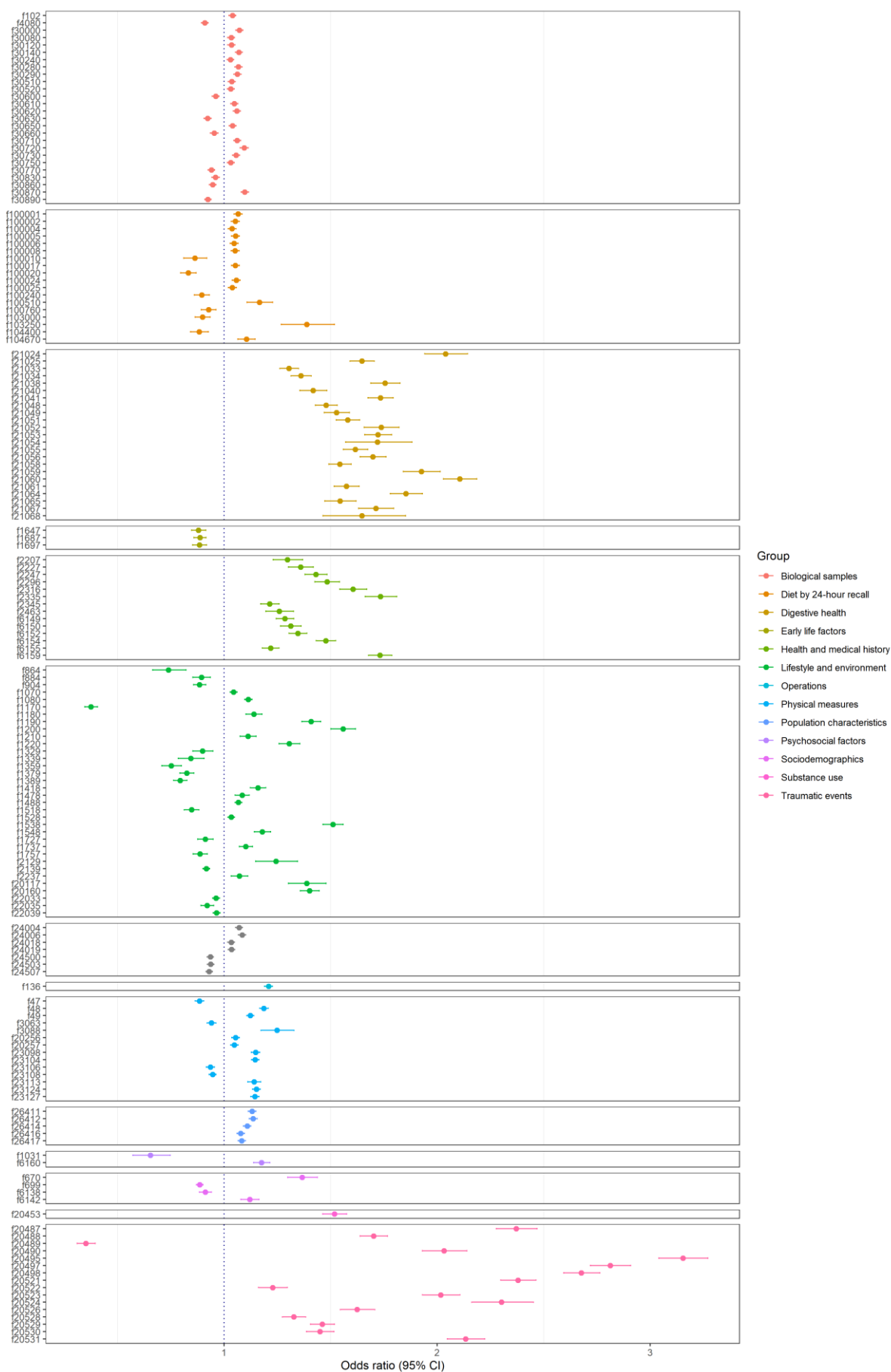
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

i. Ever sought or received professional help for mental distress



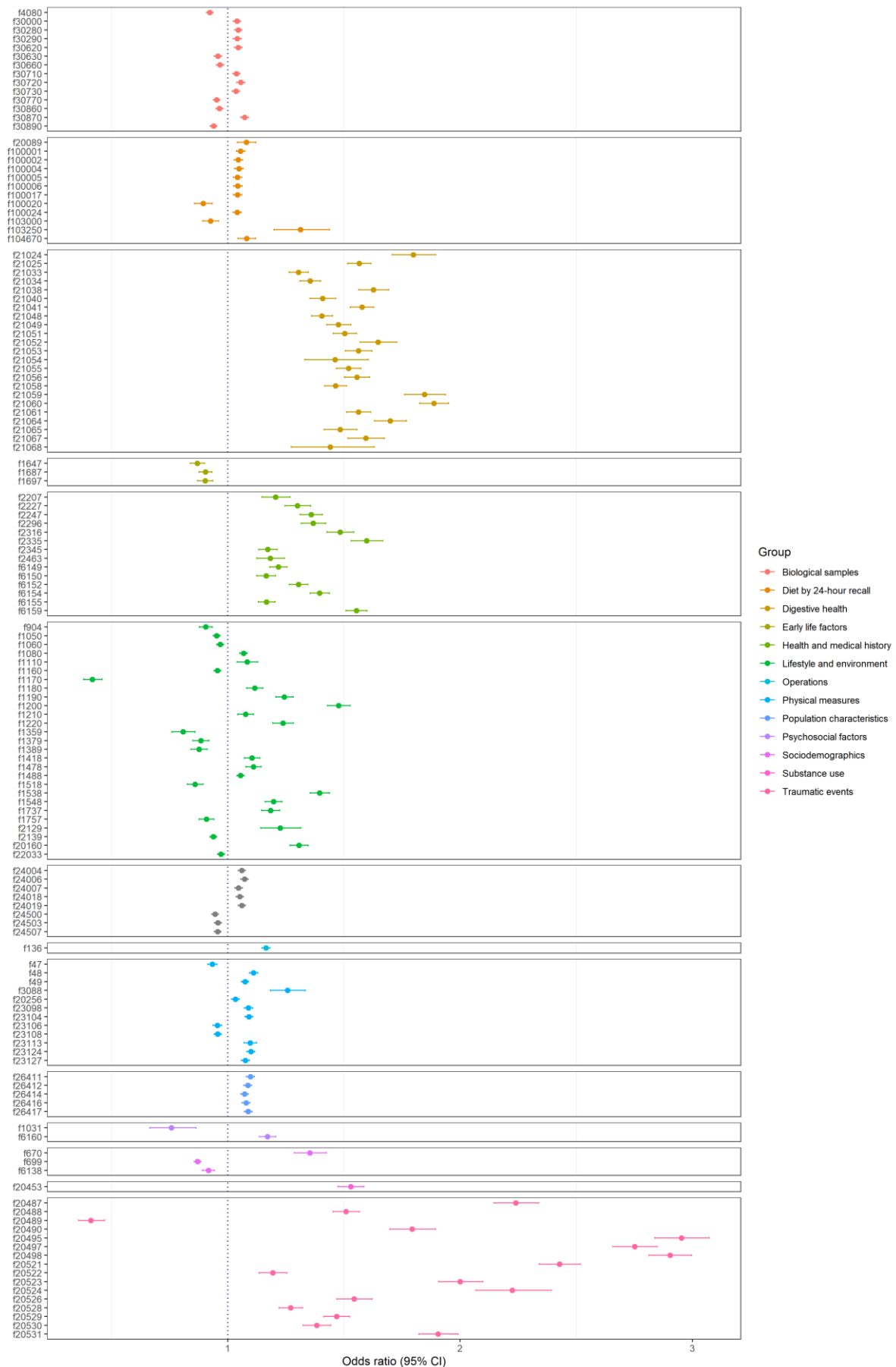
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

j. Ever suffered mental distress preventing usual activities



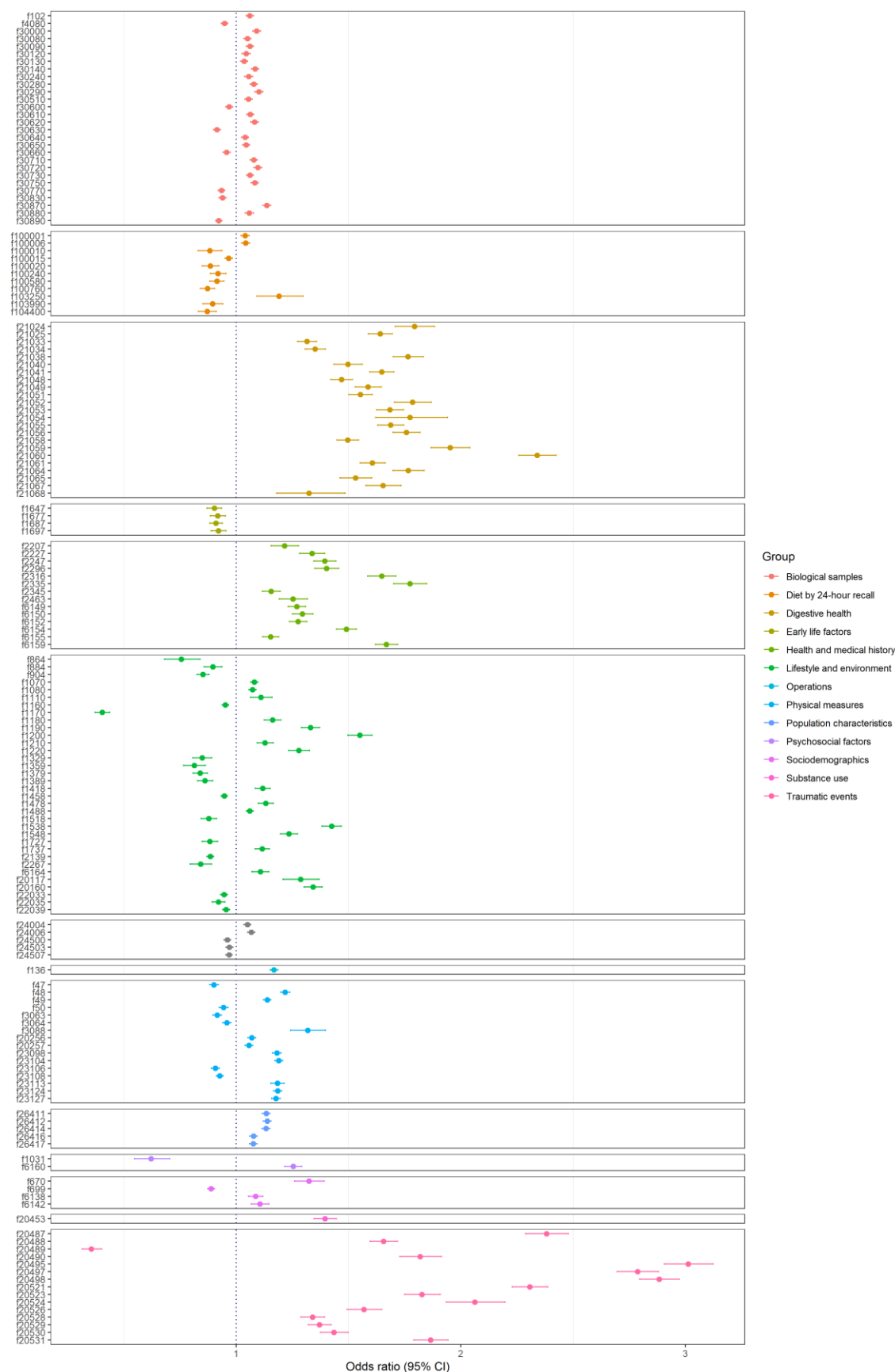
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

k. Ever had prolonged feelings of sadness or depression



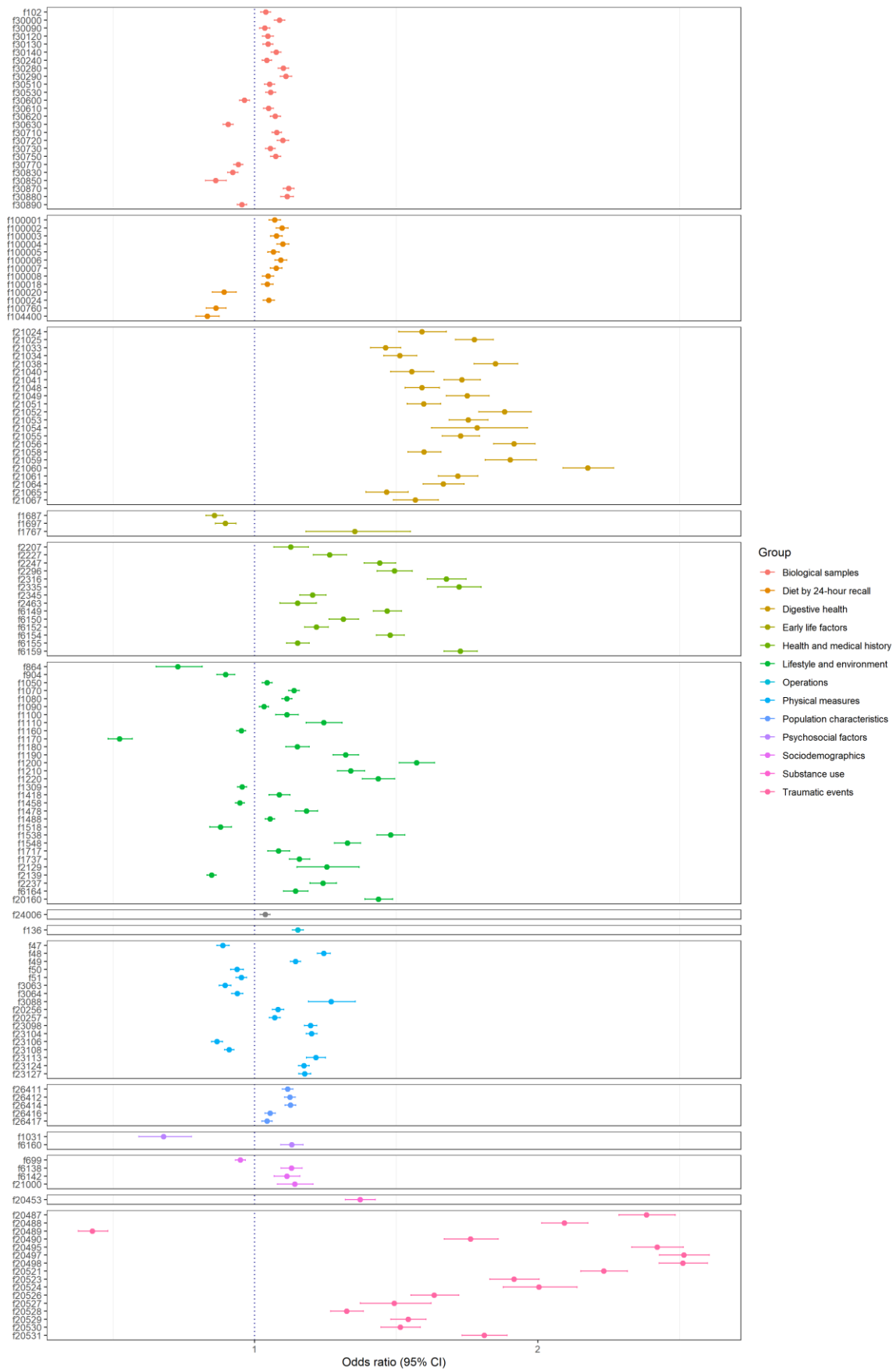
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

I. Ever had prolonged loss of interest in normal activities



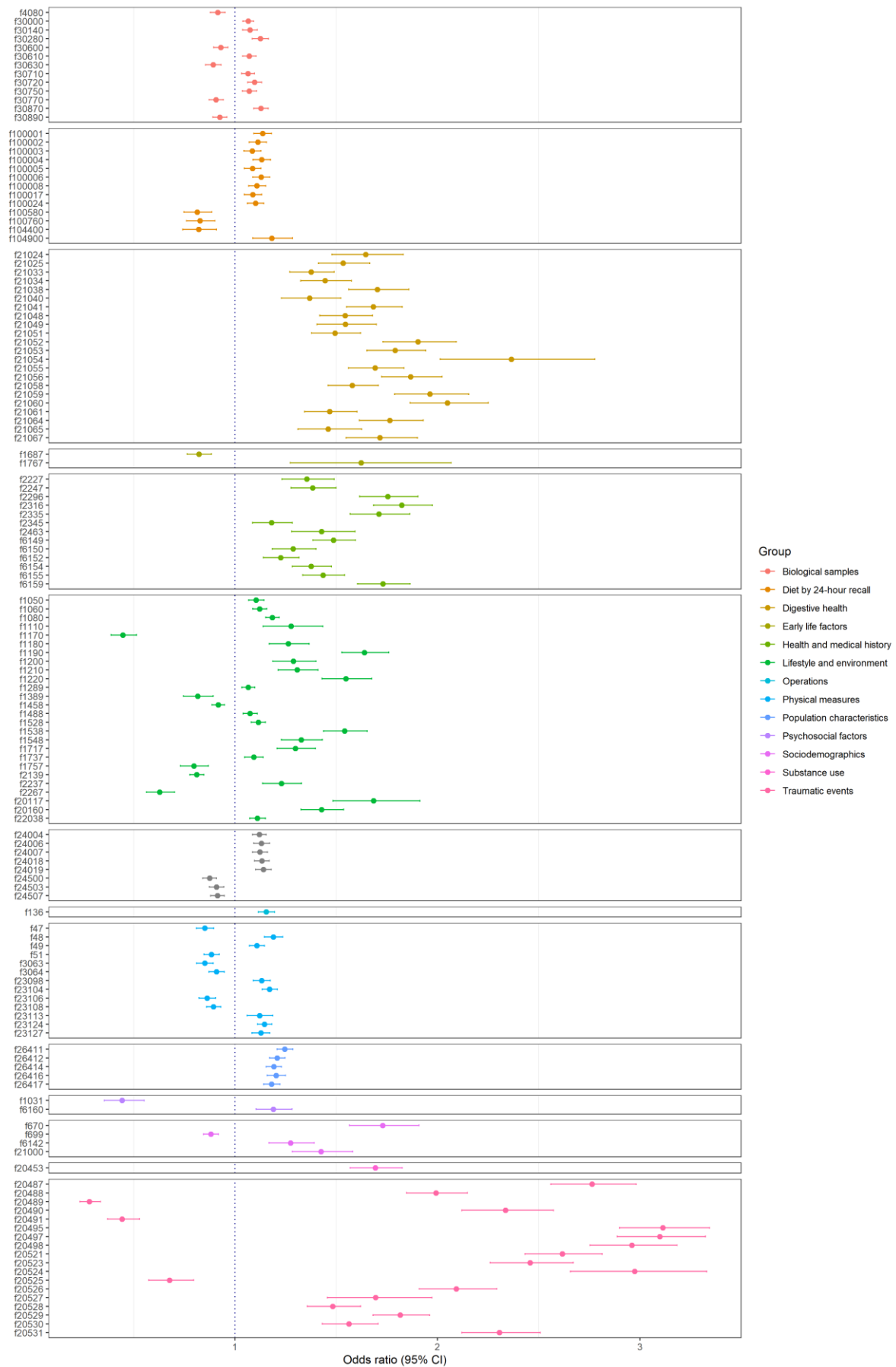
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

m. Ever had a period extreme irritability



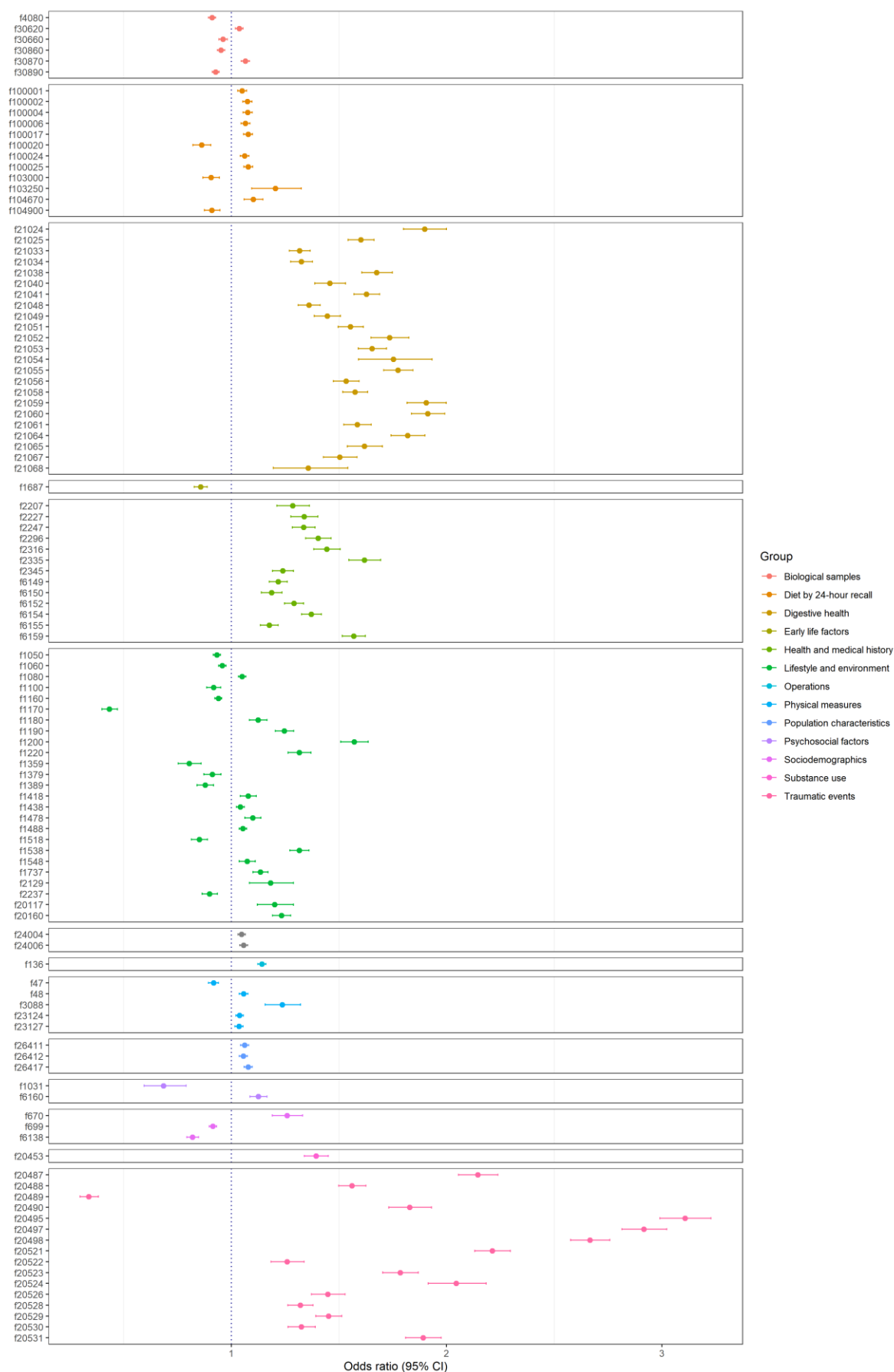
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

n. Ever had period of mania/excitability



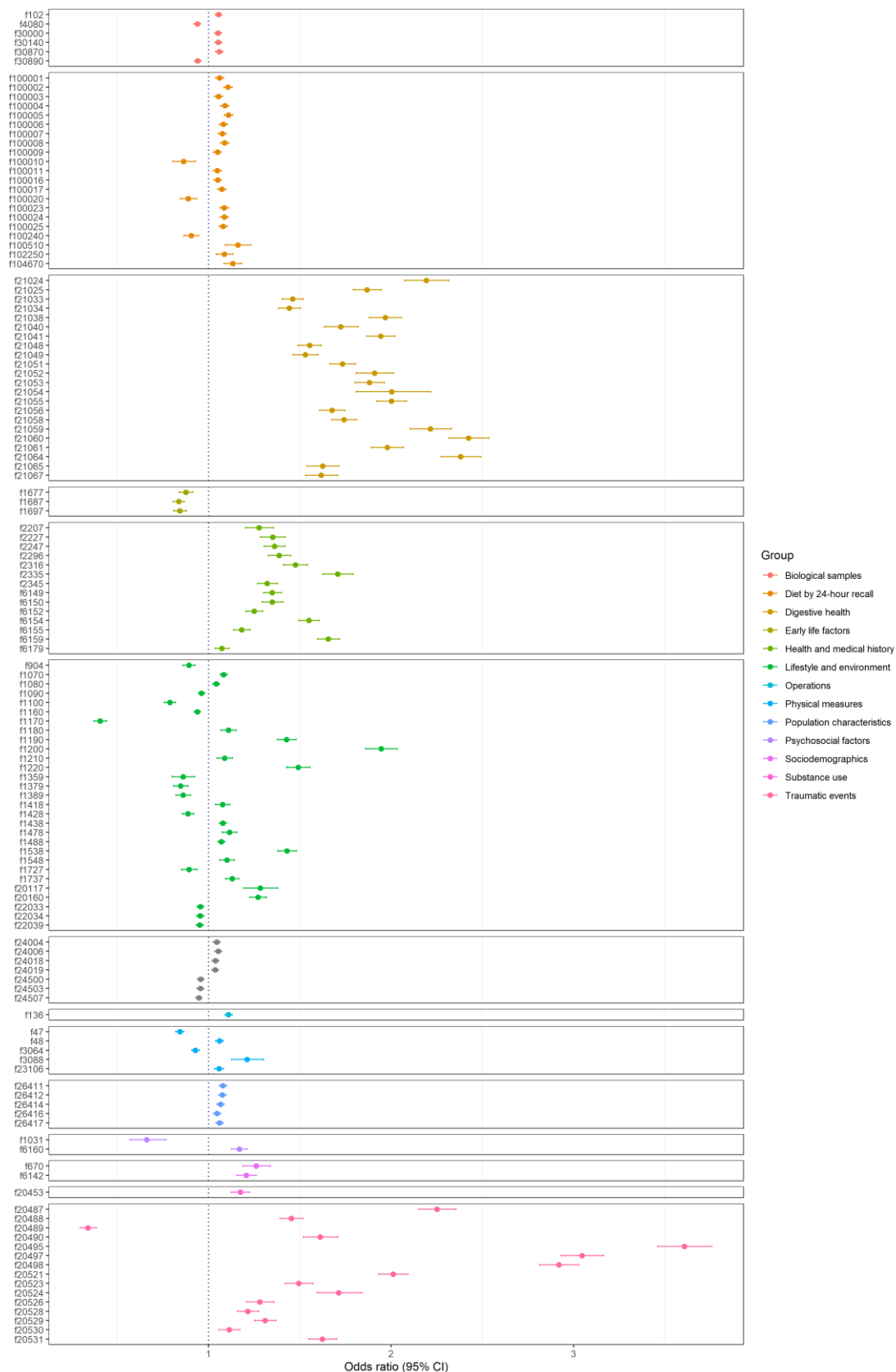
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

o. Ever felt worried, tense, or anxious for most of a month or longer



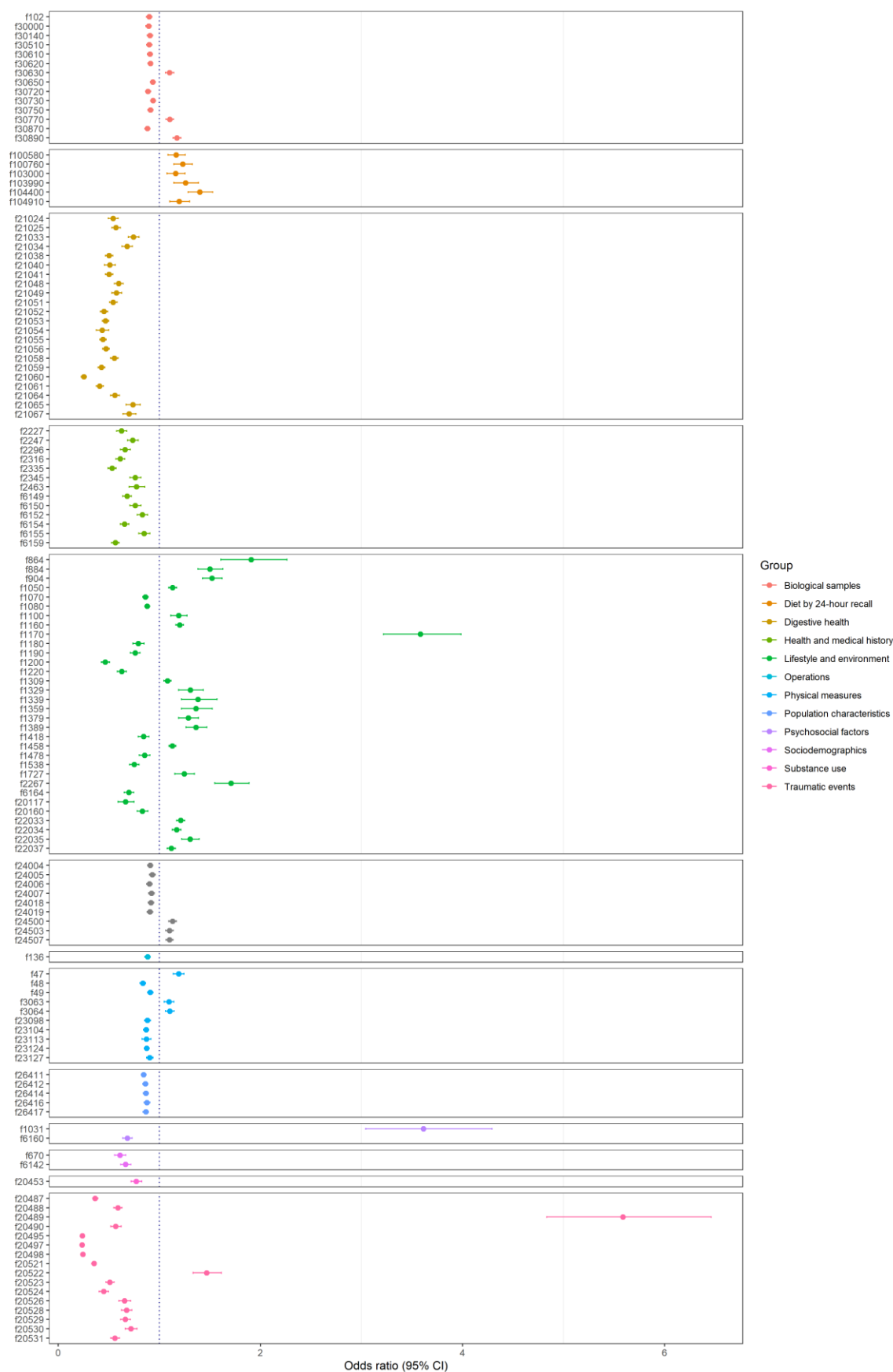
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

p. Ever worried more than most people would in similar situation



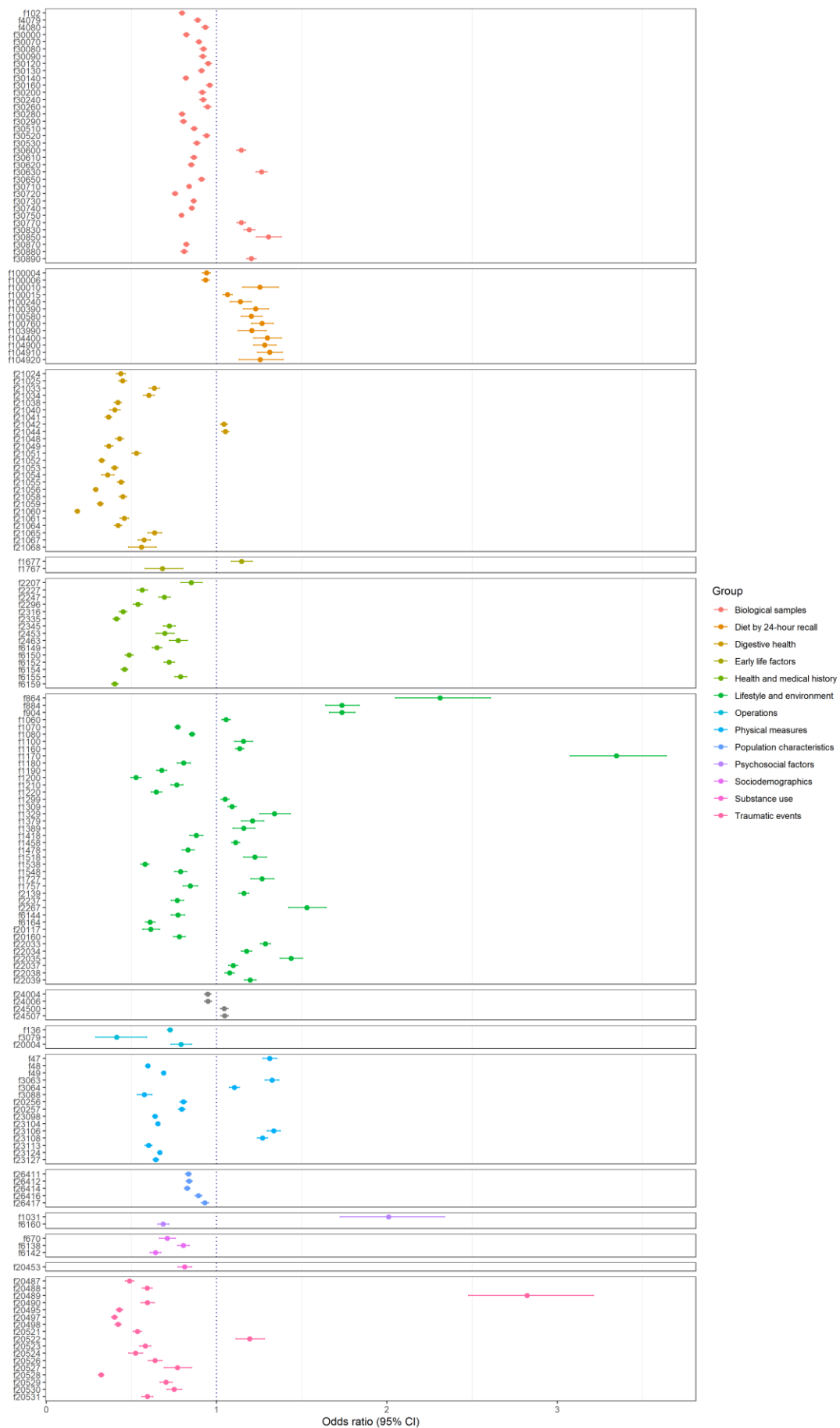
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

q. General happiness



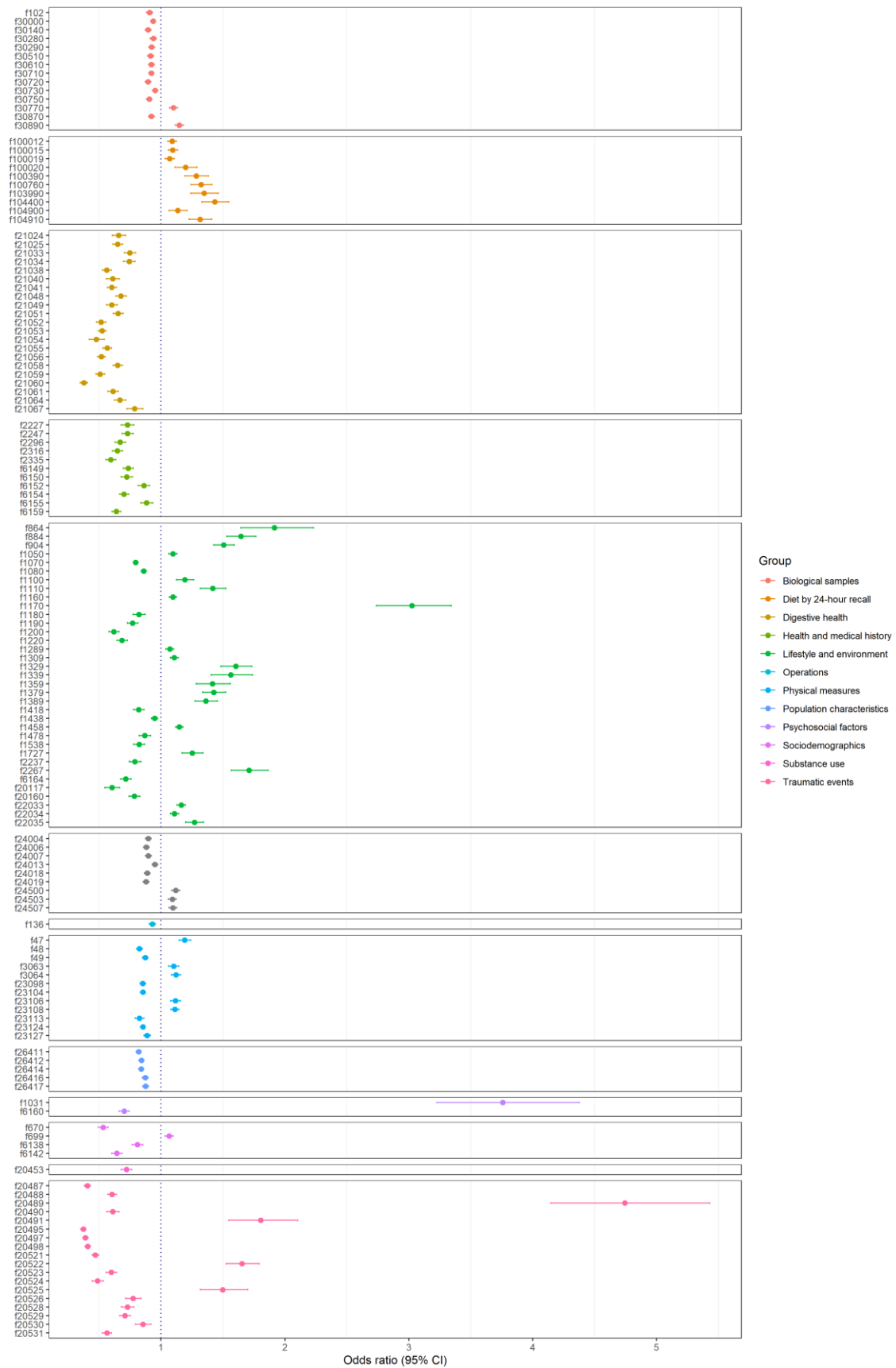
Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

r. General happiness with own health



Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.

s. Belief that own life is meaningful



Note: Odds ratios (ORs) and 95% CIs from the ExWAS of the variables associated in the total sample. Variables are referred to by field numbers (defined in Supplementary Table 7). Dots represents ORs and lines represent the 95% CIs.