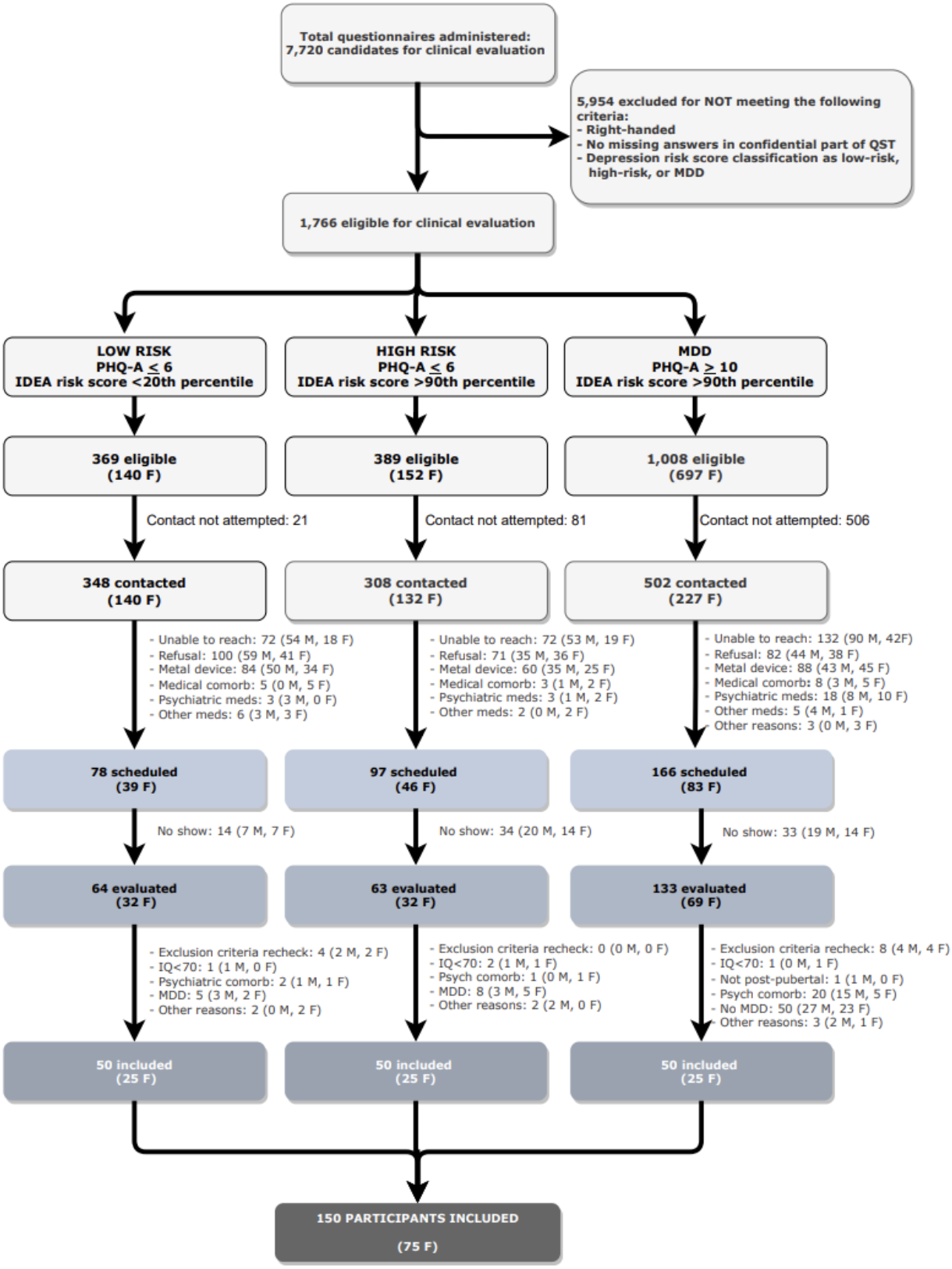
http://doi.org/10.47626/1516-4446-2023-3037
A magnetic resonance imaging-based morphometric and structural covariance network study of Brazilian adolescents stratified by depression risk – Rohrsetzer R et al.

Figure S1 Flowchart of clinical, laboratory, and imaging exclusion/inclusion steps



QST = questionnaire; comorb = comorbidity; meds = medications; psych = psychiatric; F = female; M = male; MDD = major depressive disorder; PHQ-A = Patient Health Questionnaire – Adolescent version.

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Table S1 Closeness and betweenness centrality measures for all nodes in the structural covariance network estimated for each risk group

	Low risk (n=50)		High risk (n=50)		MDD (n=50)	
	Closeness†	**Betweenness‡**	**Closeness**	**Betweenness**	**Closeness**	**Betweenness**
Cortical volumes						
Bankssts	0.331	0.000	0.392	0.007	0.333	0.000
Caudal anterior cingulate	0.227	0.000	0.242	0.000	0.278	0.000
Caudal middle frontal	0.408	0.050	0.320	0.050	0.348	0.000
Cuneus	0.310	0.024	0.157	0.000	0.342	0.097
Entorhinal	0.267	0.000	0.212	0.000	0.260	0.050
Fusiform	0.440	0.005	0.333	0.050	0.364	0.002
Inferior parietal	0.460	0.079	0.345	0.000	0.342	0.000
Inferior temporal	0.400	0.097	0.280	0.000	0.388	0.006
Isthmus cingulate	0.455	0.055	0.241	0.000	0.333	0.000
Lateral occipital	0.430	0.142	0.315	0.050	0.392	0.011
Lateral orbitofrontal	0.476	0.072	0.367	0.052	0.465	0.157
Lingual	0.310	0.024	0.223	0.097	0.207	0.000
Medial orbitofrontal	0.465	0.113	0.381	0.015	0.360	0.004
Middle temporal	0.345	0.000	0.455	0.355	0.494	0.309
Parahippocampal	0.282	0.000	0.267	0.050	0.207	0.000
Paracentral	0.377	0.000	0.354	0.001	0.310	0.000
Pars opercularis	0.280	0.000	0.214	0.000	0.301	0.000
Pars obitalis	0.325	0.000	0.270	0.000	0.320	0.000
Pars triangularis	0.385	0.050	0.270	0.050	0.301	0.000
Pericalcarine	0.240	0.000	0.185	0.050	0.260	0.050
Postcentral	0.404	0.030	0.449	0.197	0.385	0.014
Posterior cingulate	0.377	0.000	0.317	0.050	0.299	0.000
Precentral	0.455	0.067	0.455	0.201	0.417	0.032
Precuneus	0.506	0.113	0.320	0.000	0.444	0.109
Rostral anterior cingulate	0.292	0.050	0.244	0.000	0.381	0.058
Rostral middle frontal	0.444	0.029	0.385	0.007	0.488	0.203
Superior frontal	0.597	0.533	0.385	0.089	0.444	0.156
Superior parietal	0.342	0.000	0.408	0.050	0.421	0.013
Superior temporal	0.488	0.159	0.444	0.129	0.488	0.221
Supramarginal	0.385	0.007	0.320	0.000	0.465	0.070
Frontal pole	0.377	0.000	0.252	0.000	0.310	0.000
Temporal pole	0.292	0.000	0.219	0.000	0.342	0.097
Transverse temporal	0.331	0.000	0.310	0.000	0.257	0.000

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Subcortical volumes						
Amygdala	0.412	0.006	0.277	0.188	0.338	0.050
Caudate	0.261	0.000	0.263	0.000	0.333	0.000
Hippocampus	0.388	0.050	0.354	0.309	0.255	0.000
Insula	0.385	0.041	0.360	0.127	0.421	0.154
Pallidum	0.267	0.000	0.331	0.031	0.336	0.097
Putamen	0.351	0.051	0.288	0.006	0.256	0.050
Thalamus	0.360	0.100	0.444	0.239	0.444	0.086

MDD = major depressive disorder.
† Closeness centrality indicates how close a node is to all other nodes in the network. It is calculated as the average of the shortest path length from the node to every other node in the network.[1]
‡ Betweenness centrality is the frequency with which a node falls between pairs of other nodes on their shortest interconnecting path and reflects the potential of a node to control communication.[2]

References

1. RStudio Team. RStudio: Integrated Development Environment for R. [Internet] 2022 [cited 2022 Apr 20]. http://www.rstudio.com/
2. Watanabe K, Kakeda S, Katsuki A, Ueda I, Ikenouchi A, Yoshimura R, et al. Whole-brain structural covariance network abnormality in first-episode and drug-naïve major depressive disorder. Psychiatry Res Neuroimaging. 2020;300:111083.

Figure S2 Cluster-wise uncorrected maps for two-by-two comparisons between groups at low risk (LR), at high risk (HR), and with current depression (MDD) in cortical thickness (CT), cortical volume (CV), and surface area (SA). These results did not reach statistical significance when multiple comparisons were controlled for all ($p > 0.001$).

