

# MANCOVA Report

Model:

cbind(G1, G2, G3) ~ sex + absences

Pillai multivariate test:

source	Df	Pillai	approx F	num Df	den Df	Pr(>F)
sex	1	0.01831667	4.005342	3	644	0.0076817731
absences	1	0.02659570	5.865198	3	644	0.0005922676
Residuals	646	NA	NA	NA	NA	NA

Wilks multivariate test:

source	Df	Wilks	approx F	num Df	den Df	Pr(>F)
sex	1	0.9816833	4.005342	3	644	0.0076817731
absences	1	0.9734043	5.865198	3	644	0.0005922676
Residuals	646	NA	NA	NA	NA	NA

Group summary:

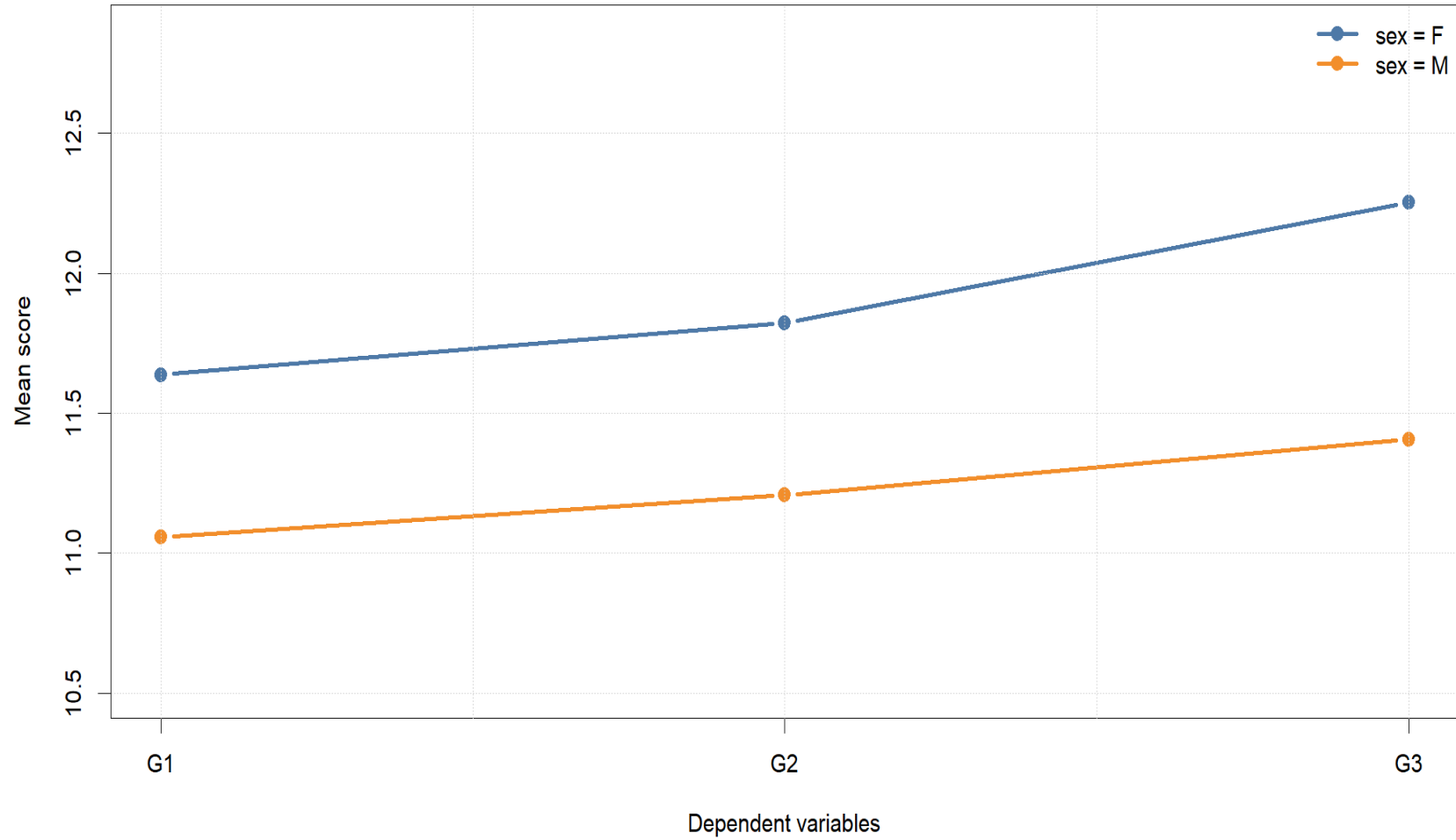
factor	group	outcome	n	mean	median	standard_deviation	minimum	maximum
sex	F	G1	383	11.63708	12	2.794232	0	19
sex	F	G2	383	11.82245	12	2.967506	0	19
sex	F	G3	383	12.25326	12	3.124147	0	19
sex	M	G1	266	11.05639	11	2.640865	4	18
sex	M	G2	266	11.20677	11	2.800019	0	18
sex	M	G3	266	11.40602	11	3.320690	0	19

Univariate ANCOVA follow-up:

outcome	source	df	sum_sq	mean_sq	f_value	p_value
G1	sex	1	52.93179	52.931785	7.232090	0.0073460323
G1	absences	1	102.62329	102.623294	14.021460	0.0001968678
G1	Residuals	646	4728.08437	7.319016	NA	NA
G2	sex	1	59.50538	59.505380	7.173160	0.0075884553
G2	absences	1	82.62281	82.622805	9.959883	0.0016742620
G2	Residuals	646	5358.93191	8.295560	NA	NA
G3	sex	1	112.68277	112.682768	11.033535	0.0009452164
G3	absences	1	53.14563	53.145633	5.203850	0.0228615471
G3	Residuals	646	6597.43816	10.212753	NA	NA

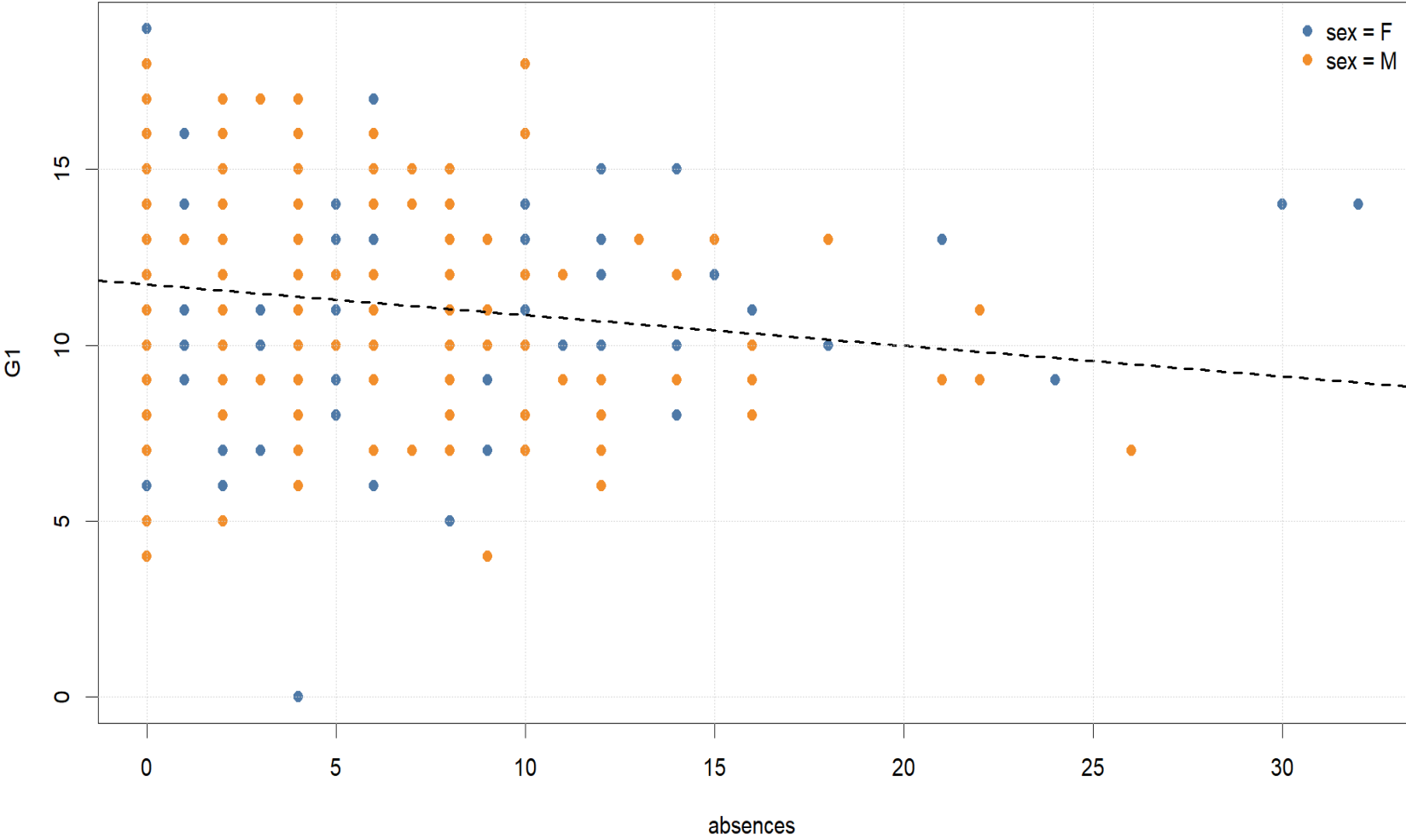
# MANCOVA: Mean Profile Across Dependent Variables

Raw mean profiles for G1, G2, G3 by sex.



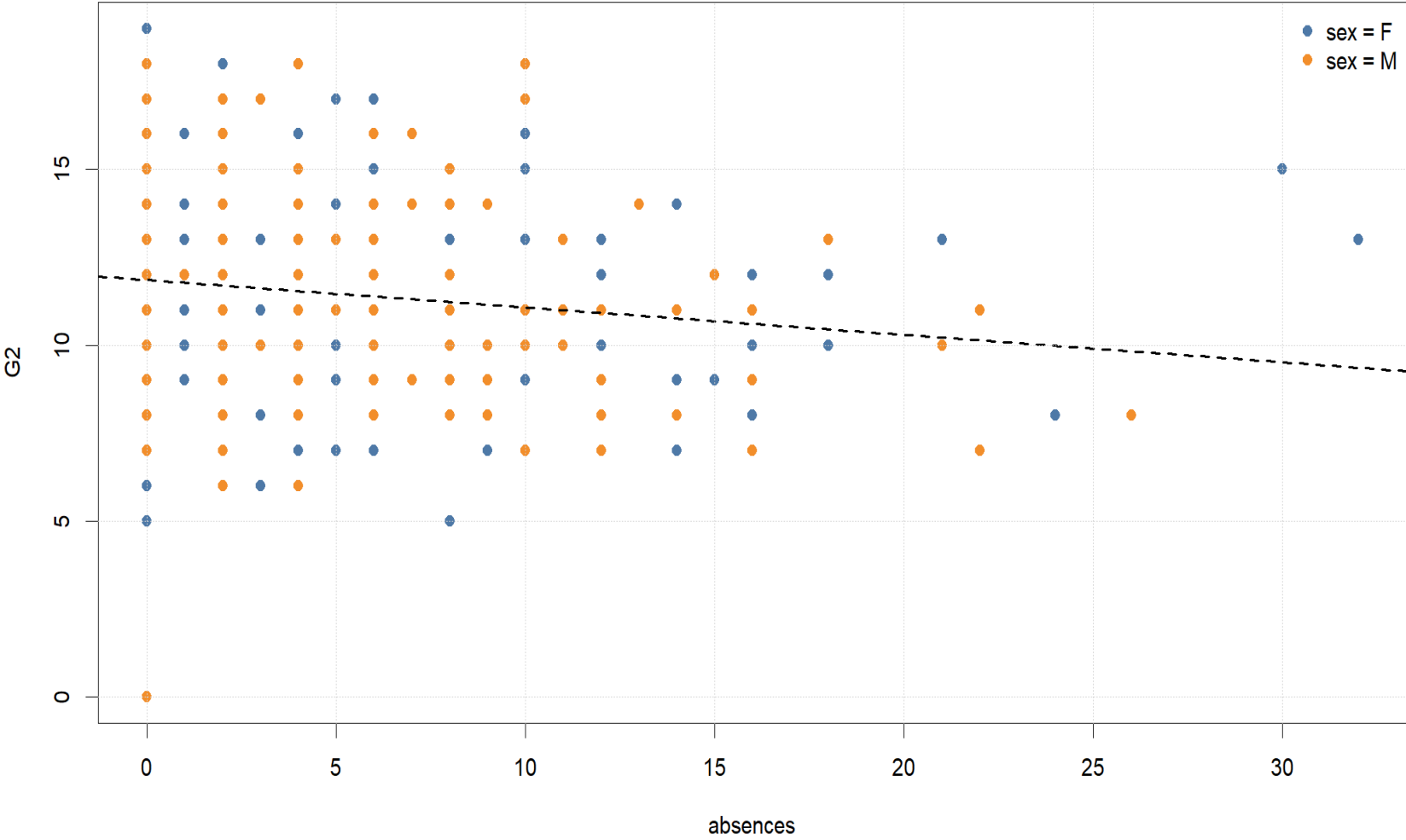
# MANCOVA: G1 by Covariate

Scatter plot shows how G1 relates to absences across sex groups.



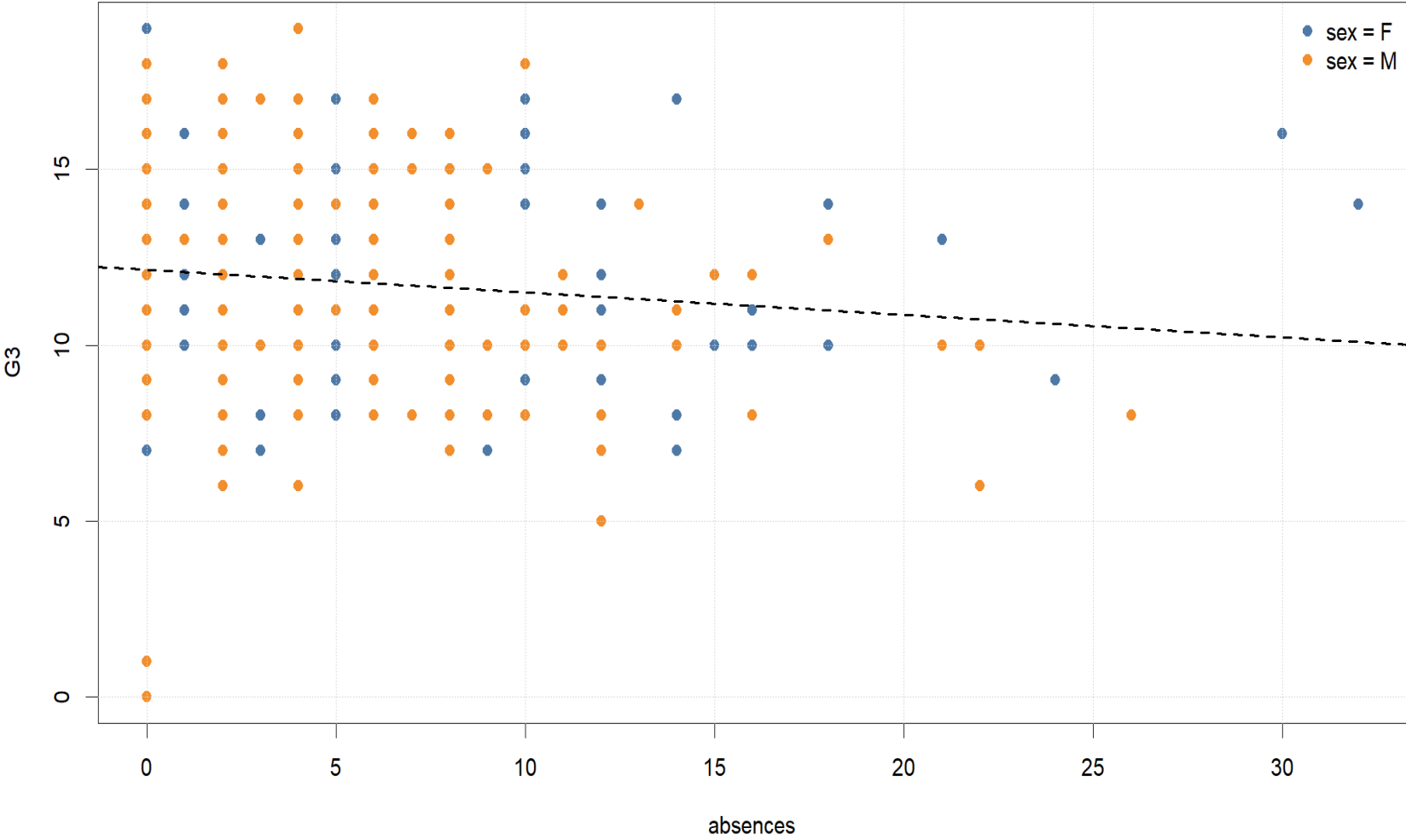
# MANCOVA: G2 by Covariate

Scatter plot shows how G2 relates to absences across sex groups.



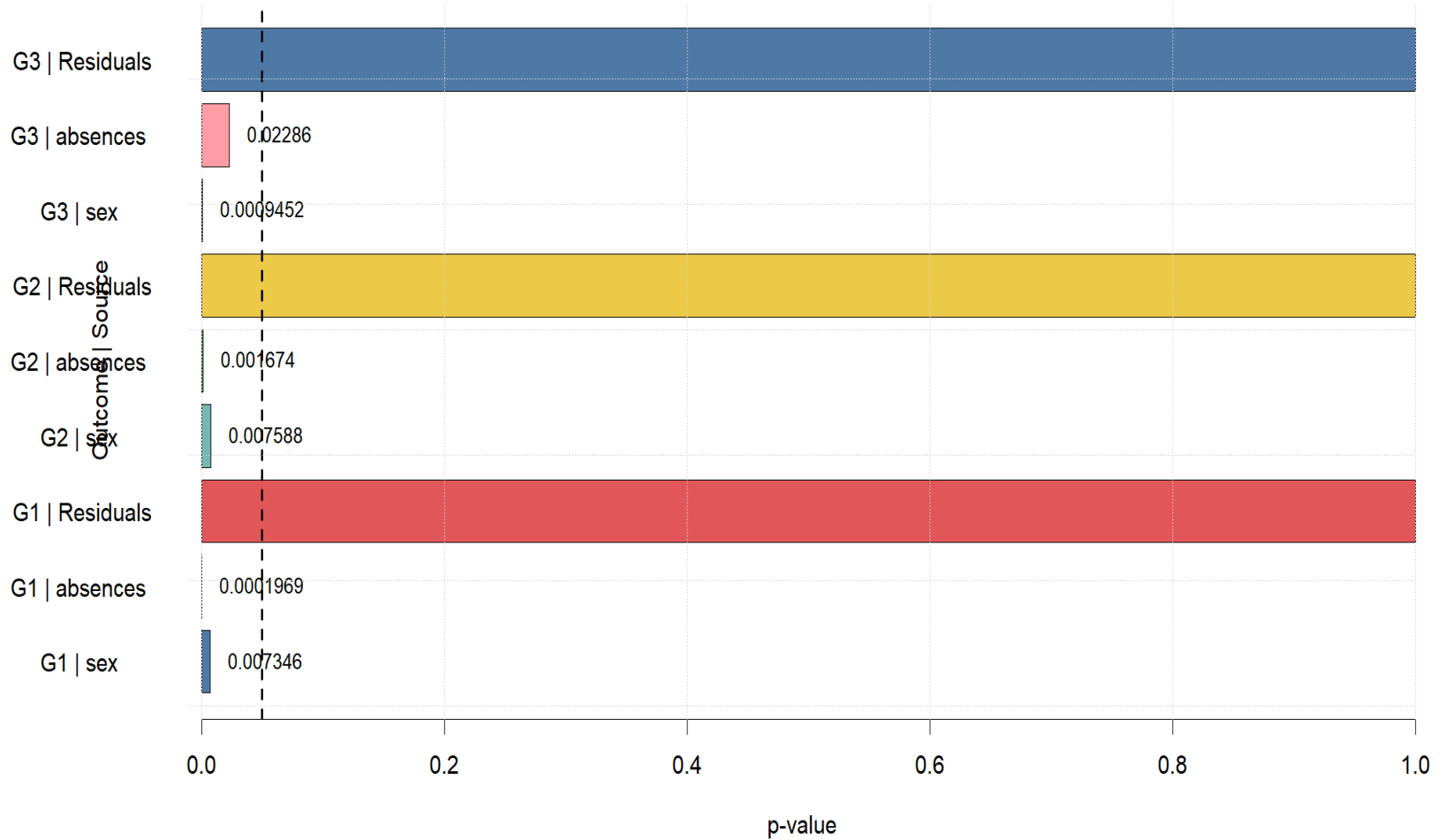
# MANCOVA: G3 by Covariate

Scatter plot shows how G3 relates to absences across sex groups.



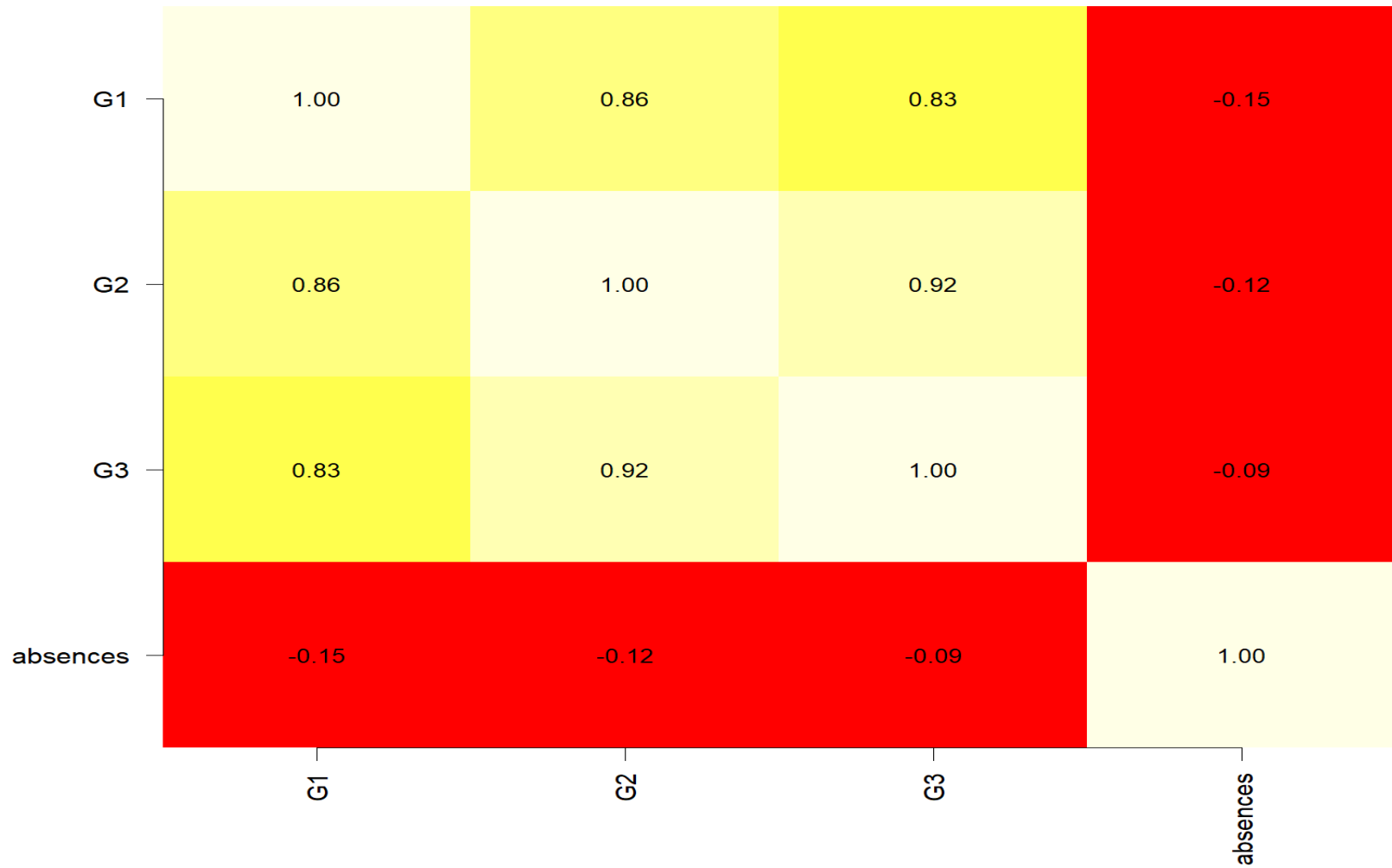
## MANCOVA Follow-up: Univariate ANCOVA p-values

These follow-up tests help identify which dependent variables contribute to the multivariate result.



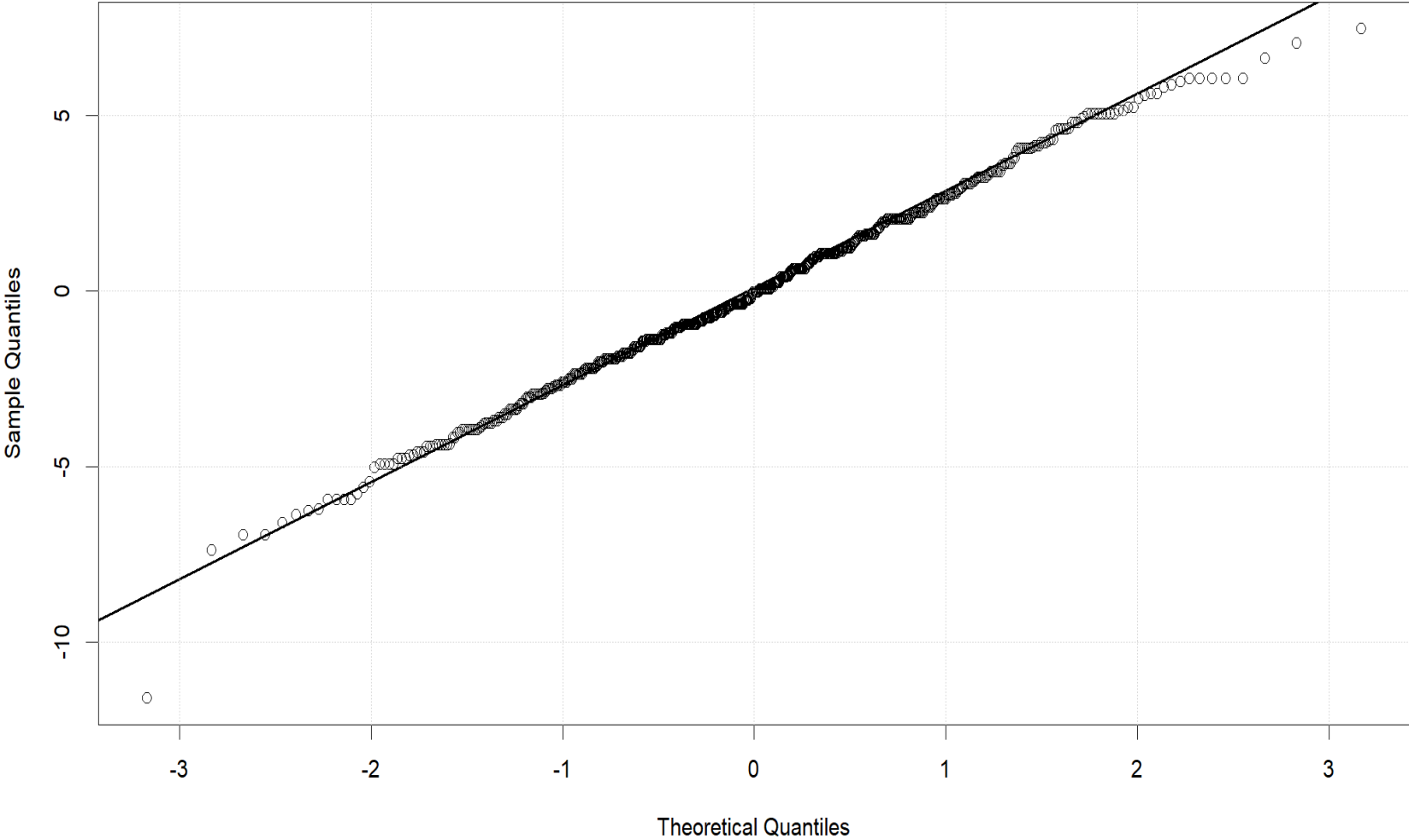
## MANCOVA: Correlation Matrix

Correlations among dependent variables and the covariate help interpret the multivariate model.



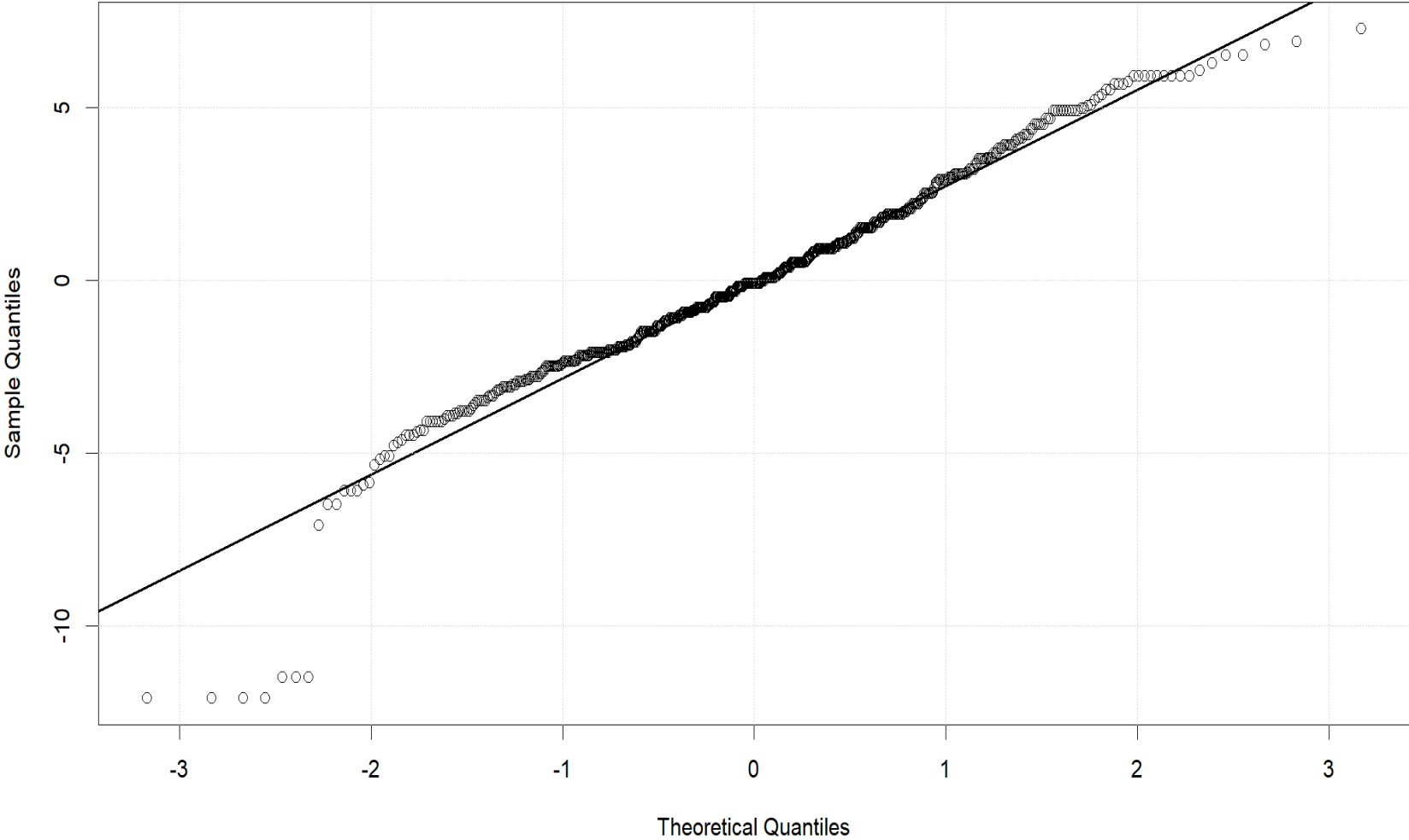
# MANCOVA Residual Q-Q Plot: G1

Points close to the reference line support approximate normality for this follow-up model.



# MANCOVA Residual Q-Q Plot: G2

Points close to the reference line support approximate normality for this follow-up model.



# MANCOVA Residual Q-Q Plot: G3

Points close to the reference line support approximate normality for this follow-up model.

