

Latent–Score Mediation SEM

Test: Latent–Score Mediation SEM

Design: Measurement–informed engagement, behavior, and academic scores linked in a mediation structure.

Variables: G1, G2, G3, famrel, freetime, goout, studytime, health, Dalc, Walc, failures

Null hypothesis: Engagement has neither direct nor indirect association with academic achievement.

Formula: Behavior=a Engagement+u; Academic=b Behavior+c' Engagement+e; indirect=a*b.

Source rows: 649

Calculated metrics:

engagement_to_behavior: 0.168570092004564

behavior_to_academic: 0.492506504285639

direct_effect: 0.160101307639255

indirect_effect: 0.0830218667402762

total_effect: 0.243123174379532

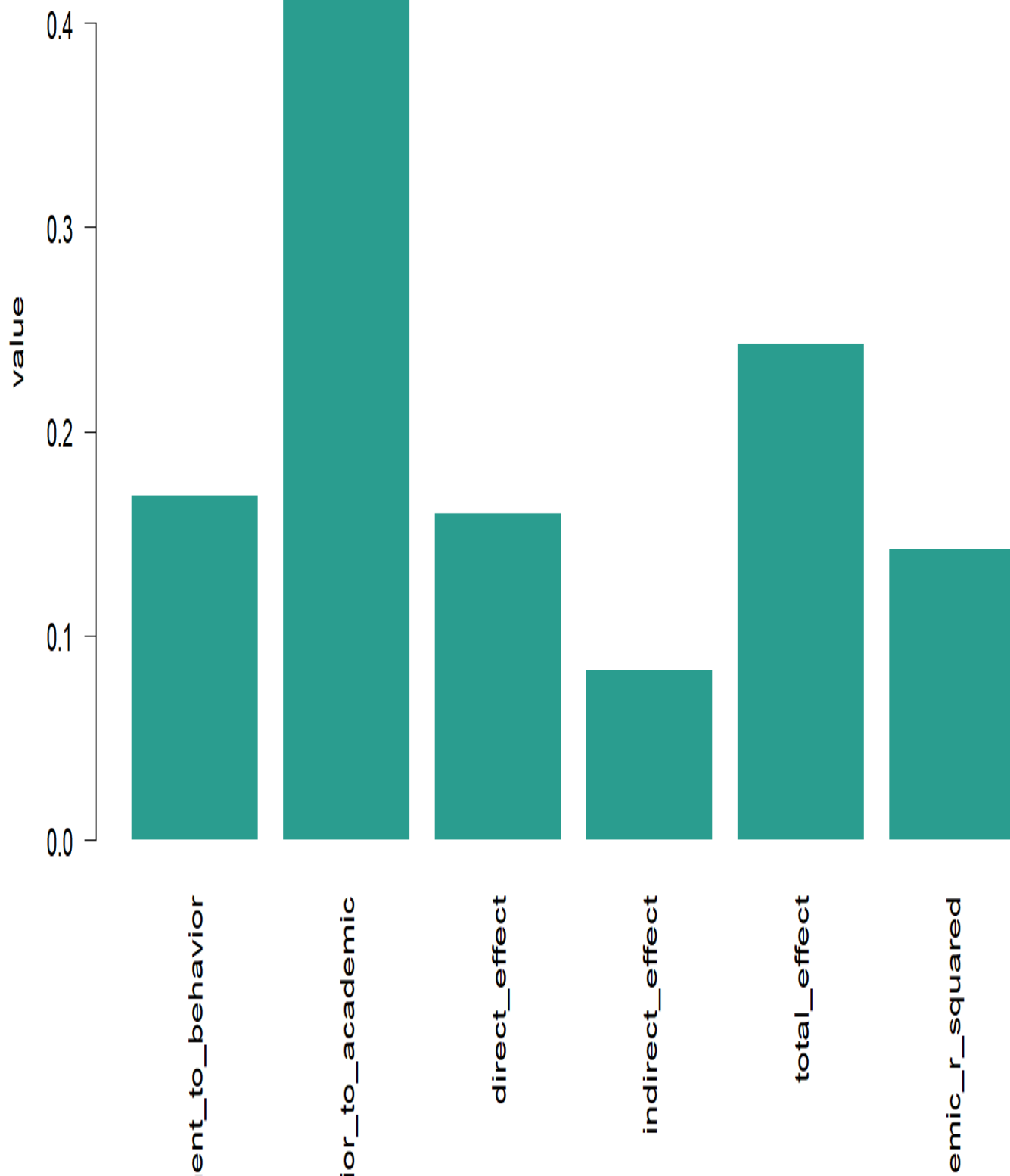
academic_r_squared: 0.142207934417712

Interpretation:

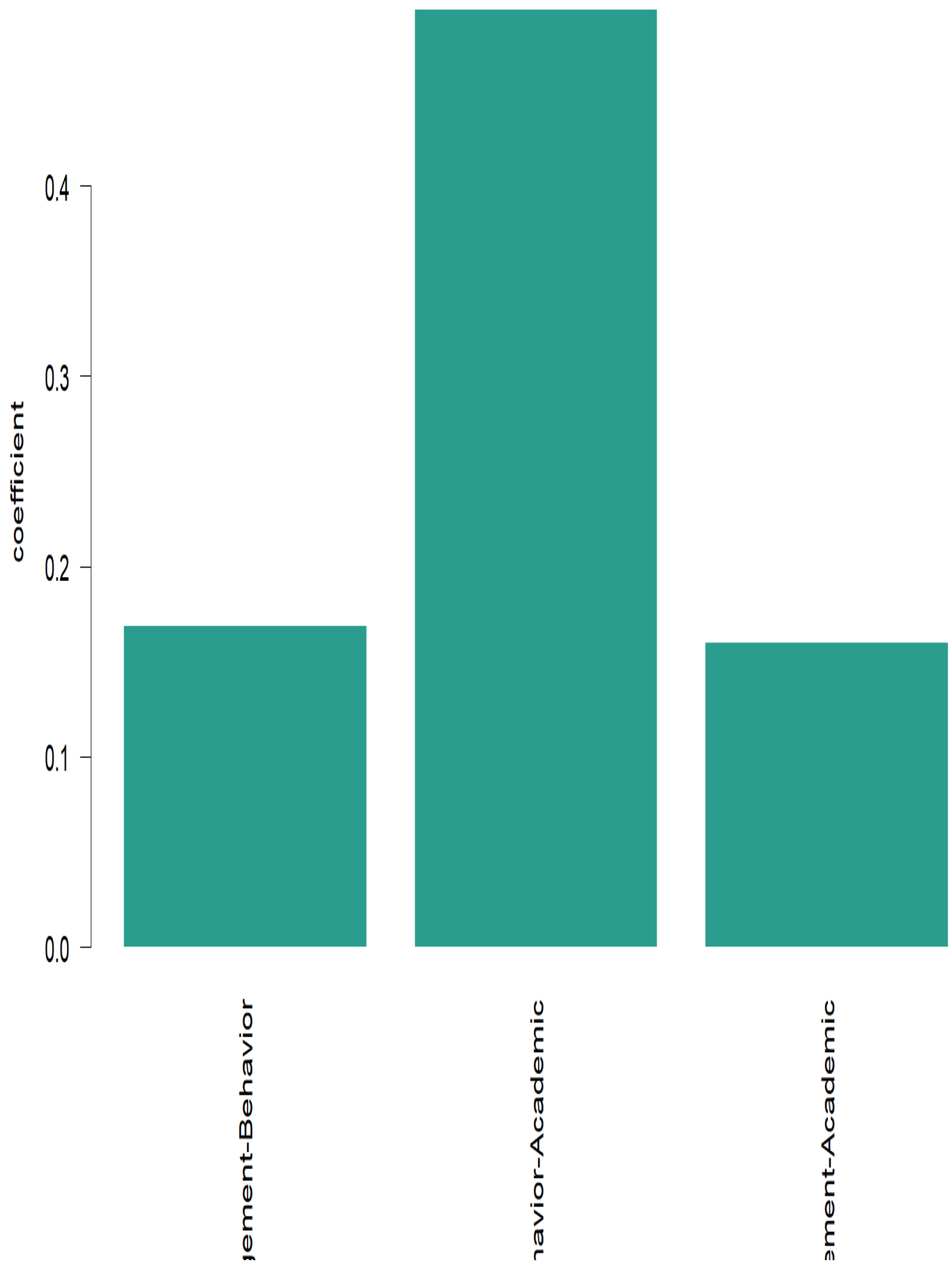
SEM separates direct and indirect effects.

Indirect 0.0830218667402762

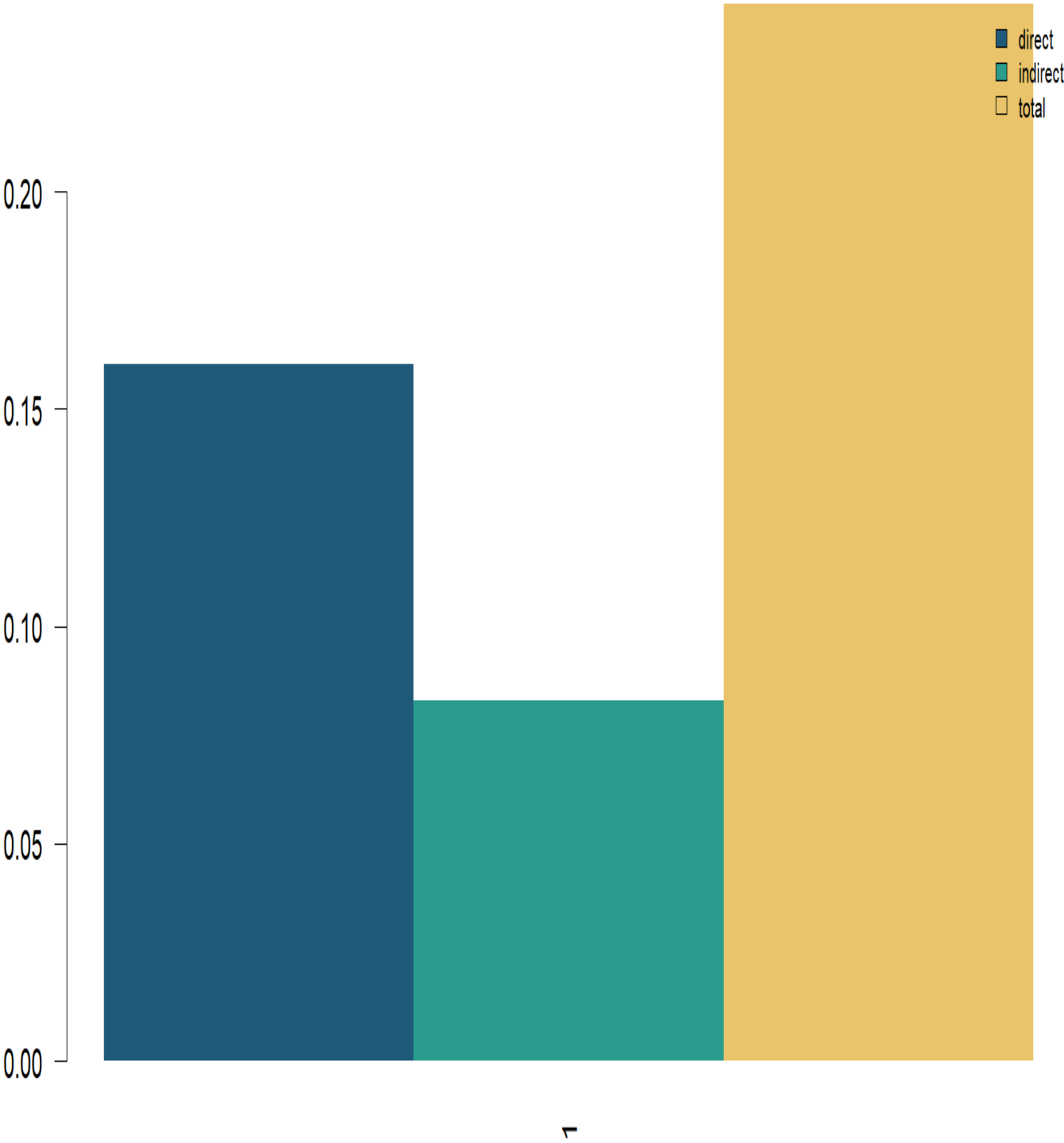
Latent-Score Mediation SEM - primary metrics



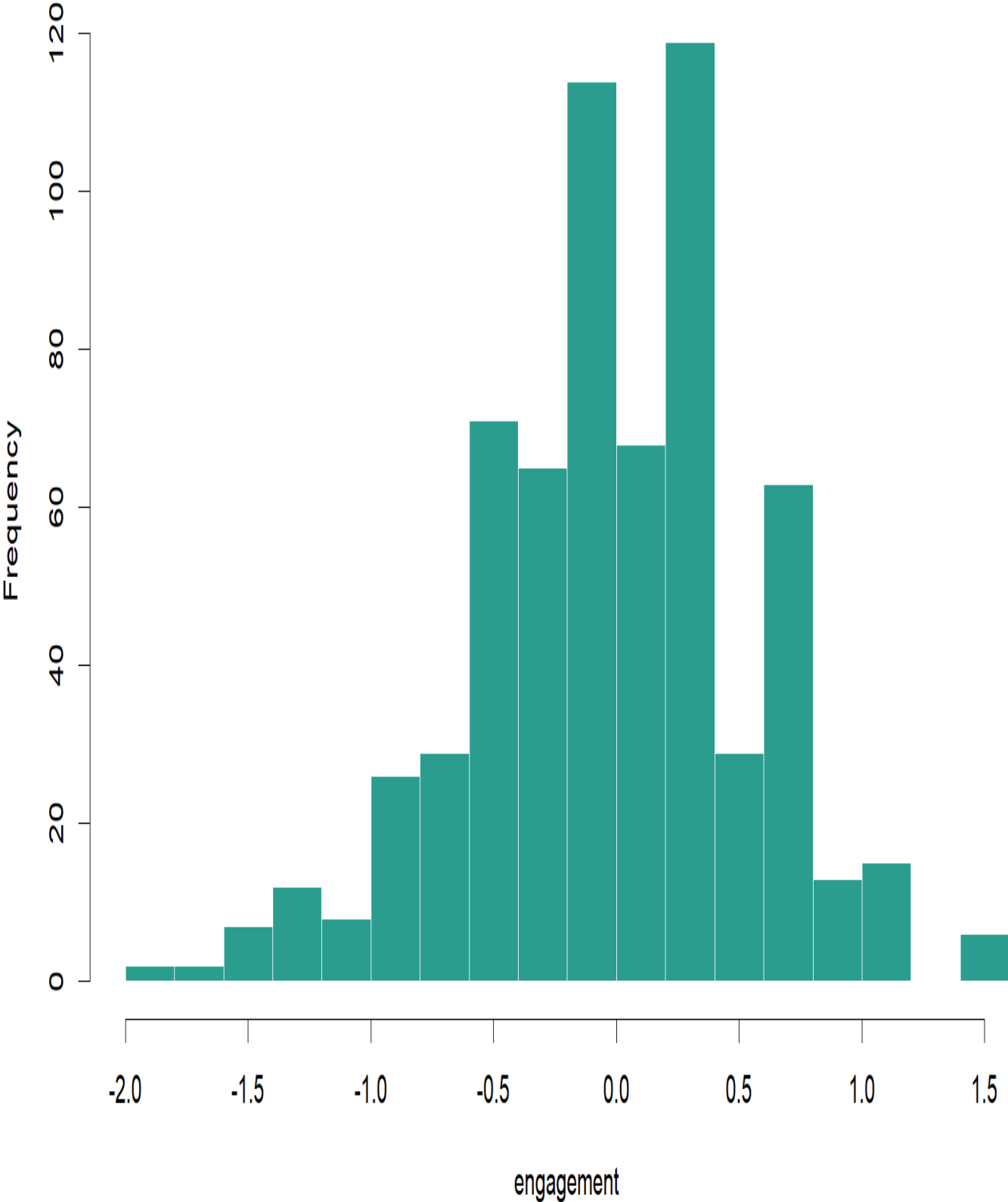
Latent-Score Mediation SEM - sem mediation paths



Latent-Score Mediation SEM - sem effect decomposition



Latent-Score Mediation SEM - sem construct scores



Latent-Score Mediation SEM verified results

