Online Resource 2
Mediation and Moderation Analysis Scripts

Supplementary information for: Rhythmic Skills and Reading Performance in Brazilian Primary School Children: Evidence from a Low-SES Context

Description. Stata code for the mediation models of parental involvement and the moderation models of musical extracurricular activities.

Script for mediation and moderation analyses

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* Mediation:
* SES -> parental involvement -> reading outcomes

* Moderation:
* SES × musical extracurricular activities -> rhythmic skills

* VARIABLE DEFINITIONS
* pca_nse           = composite socioeconomic status score
* f2_habparent_tot  = parental involvement at Phase 2
* f3_scse_brut      = reading comprehension at Phase 3
* f3_tclpp_tot      = word- and pseudoword reading performance at Phase 3
* ano               = school grade
* aec_mus           = participation in musical extracurricular activities
* f3_reprit_fz_mean = Fisher-z-transformed rhythm reproduction score at Phase 3
* f3_prit           = rhythm perception score at Phase 3

* 1. MEDIATION MODEL
* SES -> PARENTAL INVOLVEMENT -> READING COMPREHENSION

sem ///
    (f2_habparent_tot <- pca_nse) ///
    (f3_scse_brut <- pca_nse f2_habparent_tot ano)


* Standardized coefficients used in the mediation diagram

sem ///
    (f2_habparent_tot <- pca_nse) ///
    (f3_scse_brut <- pca_nse f2_habparent_tot ano), ///
    standardized

* Display coefficient names used in subsequent calculations
sem, coeflegend

* Bootstrap estimation of the indirect effect
capture program drop bootind
program bootind, rclass

    sem ///
        (f2_habparent_tot <- pca_nse) ///
        (f3_scse_brut <- pca_nse f2_habparent_tot ano)

    nlcom ///
        _b[f2_habparent_tot:pca_nse] * ///
        _b[f3_scse_brut:f2_habparent_tot]

    return scalar ind = el(r(b),1,1)

end
set seed 12345
bootstrap r(ind), ///
    reps(10000) nodots: bootind
estat boot, percentile bc


* 2. MEDIATION MODEL
* SES -> PARENTAL INVOLVEMENT ->
* WORD- AND PSEUDOWORD READING PERFORMANCE

sem ///
    (f2_habparent_tot <- pca_nse) ///
    (f3_tclpp_tot <- pca_nse f2_habparent_tot ano)
```

```
* Standardized coefficients used in the mediation diagram

sem ///
    (f2_habparent_tot <- pca_nse) ///
    (f3_tclpp_tot <- pca_nse f2_habparent_tot ano), ///
    standardized

* Estimate of the indirect effect

nlcom ///
    _b[f2_habparent_tot:pca_nse] * ///
    _b[f3_tclpp_tot:f2_habparent_tot]

* Bootstrap estimation of the indirect effect
capture program drop bootind2
program bootind2, rclass
    sem ///
        (f2_habparent_tot <- pca_nse) ///
        (f3_tclpp_tot <- pca_nse f2_habparent_tot ano)

    nlcom ///
        _b[f2_habparent_tot:pca_nse] * ///
        _b[f3_tclpp_tot:f2_habparent_tot]
    return scalar ind2 = el(r(b),1,1)
end
bootstrap r(ind2), ///
    reps(10000) nodots: bootind2
estat boot, percentile bc

* 3. MODERATION MODEL
* SES × MUSICAL EXTRACURRICULAR ACTIVITIES -> RHYTHM REPRODUCTION

reg f3_reprit_fz_mean ///
    c.pca_nse##c.aec_mus

* 4. MODERATION MODEL
* SES × MUSICAL EXTRACURRICULAR ACTIVITIES -> RHYTHM PERCEPTION

reg f3_prit ///
    c.pca_nse##c.aec_mus
```