03/09/2018:

Correlation between sleep and exercise:

= -0.03820675

Articles that indicate no correlation between sleep and exercise:

* (Vail-Smith, Felts, & Becker; 2009) Relationship Between Sleep Quality and Health Risk Behaviors in Undergraduate College Students: “No relationship found between SQI scores and exercise frequency” p. 927 (download this article)

# (Lund, Reider, et al. 2010) Sleep Patterns and Predictors of Disturbed Sleep in a Large Population of College Students: “Students overwhelmingly stated that emotional and academic stress negatively impacted sleep. Multiple regression analyses revealed that tension and stress accounted for 24% of the variance in the PSQI score, whereas exercise, alcohol and caffeine consumption, and consistency of sleep schedule were not significant predictors of sleep quality.” (get article)

# Correlation of sleep hygiene (b) and engagement (total=m, four factors: skills, emot, part, perf):

# Cbm2 = -0.2545405 (with removed item #33)

# Cbm = -0.1862862

# Cbskills2 = -0.3492751 (no #33)

# Cbskills = -0.276371

# Cbemot2= -0.05054062 (no #33)

# Cbemot = -0.02344176

# Cbpart2 = -0.09705841 (no #33)

# Cbpart = -0.06966402

# Cbperf2 = -0.2119415 (no #33)

# Cbperf = -0.1443057

# Correlation of exercise (e) and engagement (total=m, four factors: skills, emot, part, perf):

# Cem2 =

# Cem=

# Ceskills2= 0.07495054 (no 33)

# Ceskills= 0.05038241

# Ceemot2= 0.1863673 (no 33)

# Ceemot= 0.1737065

# Ceperf2= -0.113727 (no 33)

# Ceperf= -0.130671

# Cepart2= 0.04276452 (no 33)

# Cepart = 0.03226499

# ABCs of sleeping: (Allen, Howlett, et al., 2016) ABCs of SLEEPING: A review of the evidence behind pediatric sleep practice recommendations

“The ABCs of SLEEPING mnemonic was developed to serve as an organizing framework for common pediatric sleep recommendations. The mnemonic stands for 1) **a**ge appropriate **b**edtimes and wake-times with **c**onsistency, 2) **s**chedules and routines, 3) **l**ocation, 4) **e**xercise and diet, 5) no **e**lectronics in the bedroom or before bed, 6) **p**ositivity 7) **i**ndependence when falling asleep and 8) **n**eeds of child met during the day, 9) equal **g**reat sleep. This review examines the empirical evidence behind the practices and recommendations captured by the ABCs of SLEEPING mnemonic for children aged 1 to 12. A search was conducted of key electronic databases (PubMed, PsycINFO, CINAHL, & EMBASE) to identify English articles that included the concepts of sleep, insomnia, and/or bedtime. 77 articles were eligible for inclusion and were coded to extract key details and findings regarding the relations between sleep practices identified in the ABCs of SLEEPING mnemonic and sleep outcomes. Findings provided preliminary support for many of the recommendations that are commonly made to families regarding healthy sleep practices. However, more robust investigations are needed to better understand the causal contributions of healthy sleep practices to the onset and maintenance of children's sleep problems.”

# CFA for Engagement Questionnaire:

# > fit <- cfa(HS.model, data=df, std.lv=TRUE)

# > summary(fit, fit.measures=TRUE, standardized = TRUE)

# lavaan (0.5-23.1097) converged normally after 33 iterations

# Used Total

# Number of observations 202 203

# Estimator ML

# Minimum Function Test Statistic 586.560

# Degrees of freedom 224

# P-value (Chi-square) 0.000

# Model test baseline model:

# Minimum Function Test Statistic 2339.574

# Degrees of freedom 253

# P-value 0.000

# User model versus baseline model:

# Comparative Fit Index (CFI) 0.826 \*\*report this (not a great fit)

# Tucker-Lewis Index (TLI) 0.804\*\*report this too

# Loglikelihood and Information Criteria:

# Loglikelihood user model (H0) -5526.844

# Loglikelihood unrestricted model (H1) -5233.564

# Number of free parameters 52

# Akaike (AIC) 11157.688

# Bayesian (BIC) 11329.718

# Sample-size adjusted Bayesian (BIC) 11164.972

# Root Mean Square Error of Approximation:

# RMSEA 0.090\*\*\*report all this (should be below .05 – not a good fit)

# 90 Percent Confidence Interval 0.081 0.098

# P-value RMSEA <= 0.05 0.000

# Standardized Root Mean Square Residual:

# SRMR 0.088 \*\* report (should be above .09)

# Parameter Estimates:

# Information Expected

# Standard Errors Standard

# Latent Variables:\*\*report this as a correlation matrix with just the estimates – double check if these are the factor loadings (report the factor loadings as was done on the referenced article) (and the total factor variance for each of the factors.)

# Estimate Std.Err z-value P(>|z|) Std.lv

# Skills =~

# m143 0.630 0.064 9.843 0.000 0.630

# m144 0.543 0.053 10.233 0.000 0.543

# m145 0.613 0.073 8.378 0.000 0.613

# m146 0.546 0.065 8.431 0.000 0.546

# m147 0.513 0.065 7.855 0.000 0.513

# m148 0.581 0.079 7.328 0.000 0.581

# m149 0.664 0.062 10.688 0.000 0.664

# m150 0.553 0.054 10.272 0.000 0.553

# m151 0.530 0.068 7.805 0.000 0.530

# Emotional =~

# m152 0.868 0.061 14.341 0.000 0.868

# m153 0.814 0.058 14.035 0.000 0.814

# m154 0.730 0.057 12.804 0.000 0.730

# m155 0.652 0.068 9.623 0.000 0.652

# m156 0.523 0.068 7.725 0.000 0.523

# Part.int =~

# m157 0.971 0.069 13.992 0.000 0.971

# m158 1.024 0.066 15.420 0.000 1.024

# m159 0.502 0.060 8.306 0.000 0.502

# m160 0.768 0.071 10.810 0.000 0.768

# m161 0.597 0.075 7.924 0.000 0.597

# m162 0.411 0.066 6.259 0.000 0.411

# Performance =~

# m163 0.615 0.045 13.554 0.000 0.615

# m164 0.687 0.050 13.726 0.000 0.687

# m165 0.658 0.053 12.531 0.000 0.658

# Std.all

# 

# 0.656

# 0.676

# 0.576

# 0.579

# 0.546

# 0.515

# 0.699

# 0.678

# 0.543

# 

# 0.850

# 0.837

# 0.786

# 0.637

# 0.532

# 

# 0.836

# 0.892

# 0.564

# 0.695

# 0.542

# 0.441

# 

# 0.832

# 0.839

# 0.785

# Covariances:

# Estimate Std.Err z-value P(>|z|) Std.lv

# Skills ~~

# Emotional 0.508 0.063 8.012 0.000 0.508

# Part.int 0.268 0.076 3.531 0.000 0.268

# Performance 0.503 0.065 7.761 0.000 0.503

# Emotional ~~

# Part.int 0.358 0.070 5.092 0.000 0.358

# Performance 0.203 0.078 2.616 0.009 0.203

# Part.int ~~

# Performance 0.332 0.073 4.571 0.000 0.332

# Std.all

# 

# 0.508

# 0.268

# 0.503

# 

# 0.358

# 0.203

# 

# 0.332

# Variances:

# Estimate Std.Err z-value P(>|z|) Std.lv

# .m143 0.525 0.059 8.820 0.000 0.525

# .m144 0.350 0.040 8.679 0.000 0.350

# .m145 0.755 0.082 9.242 0.000 0.755

# .m146 0.589 0.064 9.229 0.000 0.589

# .m147 0.618 0.066 9.360 0.000 0.618

# .m148 0.934 0.099 9.465 0.000 0.934

# .m149 0.462 0.054 8.495 0.000 0.462

# .m150 0.360 0.042 8.664 0.000 0.360

# .m151 0.671 0.072 9.370 0.000 0.671

# .m152 0.290 0.044 6.625 0.000 0.290

# .m153 0.282 0.041 6.941 0.000 0.282

# .m154 0.329 0.041 7.932 0.000 0.329

# .m155 0.624 0.068 9.182 0.000 0.624

# .m156 0.695 0.073 9.552 0.000 0.695

# .m157 0.405 0.059 6.914 0.000 0.405

# .m158 0.268 0.052 5.114 0.000 0.268

# .m159 0.542 0.057 9.488 0.000 0.542

# .m160 0.632 0.071 8.896 0.000 0.632

# .m161 0.858 0.090 9.550 0.000 0.858

# .m162 0.699 0.072 9.762 0.000 0.699

# .m163 0.169 0.027 6.290 0.000 0.169

# .m164 0.197 0.033 6.066 0.000 0.197

# .m165 0.270 0.036 7.427 0.000 0.270

# Skills 1.000 1.000

# Emotional 1.000 1.000

# Part.int 1.000 1.000

# Performance 1.000 1.000

# Std.all

# 0.570

# 0.543

# 0.668

# 0.664

# 0.702

# 0.735

# 0.512

# 0.540

# 0.705

# 0.278

# 0.299

# 0.382

# 0.595

# 0.717

# 0.300

# 0.204

# 0.682

# 0.517

# 0.706

# 0.806

# 0.308

# 0.295

# 0.384

# 1.000

# 1.000

# 1.000

# 1.000