BRIEF Data Processing

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|  |  |  |  |
| --- | --- | --- | --- |
| Number | Child’s Ethnicity | Maternal Education | Household Income |
| 1 | White, Non-Hispanic | 0-11 Years | < $10,000 |
| 2 | Black, Non-Hispanic | Graduated High School/GED | $10,000-$25,000 |
| 3 | White, Hispanic | Some College or Technical School | $25,000-$50,000 |
| 4 | Black, Hispanic | Graduated Associated/Technical School | $50,000-$75,000 |
| 5 | American Indian/Alaskan Native | Graduated with Bachelor’s Degree | $75,000-$100,000 |
| 6 | Asian/Pacific Islander | Some Graduate School | > $100,000 |
| 7 | Biracial/Multicultural/Other | Completed Graduate (MS,PHD,MD,JD) | N/A |

Household Income Recode: 1 = under $50K, 2 = over $50K

**0 = No | 1 = Yes | -999 = Missing/Unanswered | Blank = N/A**

Age Determined as the date of the first day of actigraphy - birthday

1 - Infant: 0-0:11 2 - Toddler: 1-2:11 3 - Preschool: 3-4:11 4 - Child/School: 5-11:11 5 - Teenager: 12-17:11 6 - Young Adult: 18-25+

# BRIEF Project Inclusion Information

* 2-17.99 Years Old
* Only DS Participants
* Complete BRIEF

NOTE: These BRIEF might have been completed, but their data might not have been entered completely (which is probably the case for a lot of participants in this dataset). Many participants also did not indicate when the BRIEF was completed, so it’s not possible to calculate their age. These participants will be excluded for now.

Get rid of TD participants

library(dplyr)  
DS\_Data <- data %>% filter(Group=="DS")

Biological Information Included: Hearing Problems, Vision Problems, ASD Dx, Prematurity (we don’t have), Sleep Disorder, heart Defect (congenital in our data), DS type (don’t have entered), ADHD, OCD (we don’t have), Tourette’s (we don’t have), Leukemia (we don’t have), Thyroid (endocrine in our dataset), GI concerns (we don’t have), Diabetes (some have, not all), Seizures (some have data on this but not all), head injury

Other info included: sex, demographics, MB-CDI, VABS (we don’t have), SIB-R, KBIT, Leiter (we don’t have), Baley (we don’t have)

We also have PPVT, but it doesn’t look like they’re interested in that data. Since they want language outcomes, I’ll include these anyways.

DS\_Data <- subset(DS\_Data, select=c(Karyotype, Group, Study, Gender, Gender\_Num, Participant\_Number, DOB, BRIEF\_Date, Age\_BRIEF, Age\_Actigraphy, Child\_Ethnicity, Maternal\_Ethnicity, Maternal\_Education, Maternal\_Education\_Years, Household\_Income, Household\_Income\_Recode, Autism\_Diagnosis, ADHD\_Diagnosis, adhd, Sleep\_Apnea\_Diagnosis, visual\_impairment, hearing\_loss, Congenital\_disorders, head\_injury\_trauma, head\_injury\_loc, heart\_defect, leukemia\_blood\_disease, seizure\_convulsion, hypothyroidism, diabetes, endocrine\_issues, KBIT\_Date, KBIT\_Age, Verbal\_Knowledge\_Raw:IQ\_Composite\_SS, briefpre\_inhibit\_tscore, briefpre\_shift\_tscore, briefpre\_ec\_tscore, briefpre\_working\_mem\_tscore, briefpre\_po\_tscore, briefpre\_isci\_tscore, briefpre\_fi\_tscore, briefpre\_emi\_tscore, briefpre\_gec\_tscore, inhibit\_tscore, self\_monitor\_tscore, bri\_tscore, shift\_tscore, ec\_tscore, eri\_tscore, initiate\_tscore, working\_mem\_tscore, po\_tscore, tm\_tscore, org\_of\_mat\_tscore, cri\_tscore, gec\_tscore, AE:SIBR\_Sum\_All, Support\_Score, CDIAge\_WS:UnderstoodWords\_WG, ppvt4\_test\_date:NisongerOverlySensitive))

Note: BRIEF PReschool is labeled, briefpre\_, the BRIEF Parent is not labeled, if just has the category and t-score — easy to change later if necessary.

SIB-R: AW-SMI, Support Score

Age\_At\_Brief is a calculation, so when its loaded into the data it’s loaded as a character which we don’t want. I copied these values and pasted them into Age\_Brief, so they should be coded as numeric. Let’s check:

str(DS\_Data$Age\_BRIEF)

## num [1:255] 7.67 15.87 10.8 6.6 14.84 ...

Only include participants 2-17.99 years old

DS\_BRIEF <- DS\_Data %>% filter(Age\_BRIEF > 1.99)  
DS\_BRIEF <- DS\_Data %>% filter(Age\_BRIEF < 17.99)

144 with DS in this age range who indicated when their BRIEF was completed.

Number of participants with multiple entries in the dataset:

n\_distinct(DS\_BRIEF$Participant\_Number[duplicated(DS\_BRIEF$Participant\_Number)])

## [1] 5

5

Separate into Brief Parent and Brief Preschool

DS\_BRIEF\_Pre <- DS\_BRIEF %>% filter(!is.na(briefpre\_inhibit\_tscore))  
DS\_BRIEF\_Pre <- subset(DS\_BRIEF\_Pre, select = -c(inhibit\_tscore:gec\_tscore))  
  
DS\_BRIEF\_Par <- DS\_BRIEF %>% filter(!is.na(inhibit\_tscore))  
DS\_BRIEF\_Par <- subset(DS\_BRIEF\_Par, select = -c(briefpre\_inhibit\_tscore:briefpre\_gec\_tscore))

n\_distinct(DS\_BRIEF\_Pre$Participant\_Number[duplicated(DS\_BRIEF\_Pre$Participant\_Number)])

## [1] 0

n\_distinct(DS\_BRIEF\_Par$Participant\_Number[duplicated(DS\_BRIEF\_Par$Participant\_Number)])

## [1] 5

Preschool: No repeated participants Parent: 5 repeated participants

n\_distinct(DS\_BRIEF\_Pre$Participant\_Number)

## [1] 49

n\_distinct(DS\_BRIEF\_Par$Participant\_Number)

## [1] 88

Brief Preschool: 49 Brief Parent: 88

Age Ranges:

range(DS\_BRIEF\_Pre$Age\_BRIEF)

## [1] 2.00 2.18

2-2.18

range(DS\_BRIEF\_Par$Age\_BRIEF)

## [1] 6.52 17.95

6.52-17.33

Summary of the Data (Range, max, mins, NAs, etc.) PRESCHOOL:

summary(DS\_BRIEF\_Pre)

## Karyotype Group Study Gender   
## Length:49 Length:49 Length:49 Length:49   
## Class :character Class :character Class :character Class :character   
## Mode :character Mode :character Mode :character Mode :character   
##   
##   
##   
##   
## Gender\_Num Participant\_Number DOB   
## Min. :0.0000 Min. :233.0 Min. :2013-06-15 00:00:00   
## 1st Qu.:0.0000 1st Qu.:283.0 1st Qu.:2014-03-14 00:00:00   
## Median :0.0000 Median :325.0 Median :2014-08-19 00:00:00   
## Mean :0.4082 Mean :321.4 Mean :2014-08-20 01:57:33   
## 3rd Qu.:1.0000 3rd Qu.:348.0 3rd Qu.:2014-12-31 00:00:00   
## Max. :1.0000 Max. :436.0 Max. :2016-05-14 00:00:00   
##   
## BRIEF\_Date Age\_BRIEF Age\_Actigraphy Child\_Ethnicity  
## Min. :2015-07-06 00:00:00 Min. :2.000 Min. :1.020 Min. :1   
## 1st Qu.:2016-03-24 00:00:00 1st Qu.:2.000 1st Qu.:1.970 1st Qu.:1   
## Median :2016-08-24 00:00:00 Median :2.010 Median :1.980 Median :1   
## Mean :2016-08-28 17:08:34 Mean :2.025 Mean :1.933 Mean :1   
## 3rd Qu.:2017-01-22 00:00:00 3rd Qu.:2.040 3rd Qu.:2.010 3rd Qu.:1   
## Max. :2018-05-28 00:00:00 Max. :2.180 Max. :2.290 Max. :1   
## NA's :45   
## Maternal\_Ethnicity Maternal\_Education Maternal\_Education\_Years  
## Min. :1 Min. :5.0 Min. :16.0   
## 1st Qu.:1 1st Qu.:5.0 1st Qu.:16.0   
## Median :1 Median :5.0 Median :16.0   
## Mean :1 Mean :5.5 Mean :16.5   
## 3rd Qu.:1 3rd Qu.:5.5 3rd Qu.:16.5   
## Max. :1 Max. :7.0 Max. :18.0   
## NA's :45 NA's :45 NA's :45   
## Household\_Income Household\_Income\_Recode Autism\_Diagnosis ADHD\_Diagnosis  
## Min. :4.00 Length:49 Min. :0 Min. : NA   
## 1st Qu.:4.75 Class :character 1st Qu.:0 1st Qu.: NA   
## Median :5.50 Mode :character Median :0 Median : NA   
## Mean :5.25 Mean :0 Mean :NaN   
## 3rd Qu.:6.00 3rd Qu.:0 3rd Qu.: NA   
## Max. :6.00 Max. :0 Max. : NA   
## NA's :45 NA's :49   
## adhd Sleep\_Apnea\_Diagnosis visual\_impairment hearing\_loss   
## Min. : NA Min. :0.0000 Min. :0.00000 Min. :0.0000   
## 1st Qu.: NA 1st Qu.:0.0000 1st Qu.:0.00000 1st Qu.:0.0000   
## Median : NA Median :0.0000 Median :0.00000 Median :0.0000   
## Mean :NaN Mean :0.1633 Mean :0.06122 Mean :0.2653   
## 3rd Qu.: NA 3rd Qu.:0.0000 3rd Qu.:0.00000 3rd Qu.:1.0000   
## Max. : NA Max. :1.0000 Max. :1.00000 Max. :1.0000   
## NA's :49   
## Congenital\_disorders head\_injury\_trauma head\_injury\_loc heart\_defect   
## Min. : NA Min. :0.00000 Min. :0 Min. :0.0000   
## 1st Qu.: NA 1st Qu.:0.00000 1st Qu.:0 1st Qu.:0.0000   
## Median : NA Median :0.00000 Median :0 Median :1.0000   
## Mean :NaN Mean :0.02041 Mean :0 Mean :0.5714   
## 3rd Qu.: NA 3rd Qu.:0.00000 3rd Qu.:0 3rd Qu.:1.0000   
## Max. : NA Max. :1.00000 Max. :0 Max. :1.0000   
## NA's :49   
## leukemia\_blood\_disease seizure\_convulsion hypothyroidism diabetes  
## Min. :0 Min. :0.00000 Min. :0.0000 Min. :0   
## 1st Qu.:0 1st Qu.:0.00000 1st Qu.:0.0000 1st Qu.:0   
## Median :0 Median :0.00000 Median :0.0000 Median :0   
## Mean :0 Mean :0.02041 Mean :0.1224 Mean :0   
## 3rd Qu.:0 3rd Qu.:0.00000 3rd Qu.:0.0000 3rd Qu.:0   
## Max. :0 Max. :1.00000 Max. :1.0000 Max. :0   
##   
## endocrine\_issues KBIT\_Date KBIT\_Age Verbal\_Knowledge\_Raw  
## Min. : NA Length:49 Min. : NA Length:49   
## 1st Qu.: NA Class :character 1st Qu.: NA Class :character   
## Median : NA Mode :character Median : NA Mode :character   
## Mean :NaN Mean :NaN   
## 3rd Qu.: NA 3rd Qu.: NA   
## Max. : NA Max. : NA   
## NA's :49 NA's :49   
## Riddles\_Raw Matrices\_Raw Verbal\_SS Nverbal\_SS IQ\_Composite\_SS  
## Min. : NA Min. : NA Length:49 Min. : NA Min. : NA   
## 1st Qu.: NA 1st Qu.: NA Class :character 1st Qu.: NA 1st Qu.: NA   
## Median : NA Median : NA Mode :character Median : NA Median : NA   
## Mean :NaN Mean :NaN Mean :NaN Mean :NaN   
## 3rd Qu.: NA 3rd Qu.: NA 3rd Qu.: NA 3rd Qu.: NA   
## Max. : NA Max. : NA Max. : NA Max. : NA   
## NA's :49 NA's :49 NA's :49 NA's :49   
## briefpre\_inhibit\_tscore briefpre\_shift\_tscore briefpre\_ec\_tscore  
## Min. :34 Min. :37.00 Min. :35.0   
## 1st Qu.:41 1st Qu.:40.00 1st Qu.:36.0   
## Median :46 Median :43.00 Median :39.0   
## Mean :48 Mean :45.78 Mean :42.2   
## 3rd Qu.:56 3rd Qu.:50.00 3rd Qu.:48.0   
## Max. :74 Max. :77.00 Max. :64.0   
##   
## briefpre\_working\_mem\_tscore briefpre\_po\_tscore briefpre\_isci\_tscore  
## Min. :36.00 Min. :32.00 Min. :33.00   
## 1st Qu.:40.00 1st Qu.:38.00 1st Qu.:39.00   
## Median :52.00 Median :48.00 Median :43.00   
## Mean :55.13 Mean :50.94 Mean :45.02   
## 3rd Qu.:65.00 3rd Qu.:60.75 3rd Qu.:51.00   
## Max. :93.00 Max. :94.00 Max. :72.00   
## NA's :2 NA's :1   
## briefpre\_fi\_tscore briefpre\_emi\_tscore briefpre\_gec\_tscore AE   
## Min. :35.00 Min. :33.00 Min. :31.00 Length:49   
## 1st Qu.:37.00 1st Qu.:40.50 1st Qu.:39.00 Class :character   
## Median :41.00 Median :53.00 Median :46.00 Mode :character   
## Mean :43.12 Mean :53.55 Mean :47.94   
## 3rd Qu.:47.00 3rd Qu.:64.00 3rd Qu.:55.50   
## Max. :70.00 Max. :95.00 Max. :82.00   
## NA's :2 NA's :2   
## PR SS GMI IMI   
## Mode:logical Length:49 Length:49 Length:49   
## NA's:49 Class :character Class :character Class :character   
## Mode :character Mode :character Mode :character   
##   
##   
##   
##   
## AMI EMI SIBR\_Sum\_All Support\_Score   
## Length:49 Length:49 Mode:logical Length:49   
## Class :character Class :character NA's:49 Class :character   
## Mode :character Mode :character Mode :character   
##   
##   
##   
##   
## CDIAge\_WS CDIDate\_WS VocabProductionTotal\_WS SentenceLength\_WS  
## Min. :17.00 Length:49 Min. : 0.00 Min. :1.000   
## 1st Qu.:23.00 Class :character 1st Qu.: 4.75 1st Qu.:1.000   
## Median :23.00 Mode :character Median :12.00 Median :1.000   
## Mean :23.23 Mean :17.56 Mean :1.381   
## 3rd Qu.:24.00 3rd Qu.:23.00 3rd Qu.:2.000   
## Max. :27.00 Max. :86.00 Max. :3.300   
## NA's :1 NA's :1 NA's :1   
## SentenceComplexity\_WS MacArthur\_Bates\_WG CDIAge\_WG   
## Min. :10.00 Length:49 Min. :12.00   
## 1st Qu.:30.00 Class :character 1st Qu.:23.00   
## Median :35.00 Mode :character Median :23.00   
## Mean :34.79 Mean :22.96   
## 3rd Qu.:40.00 3rd Qu.:24.00   
## Max. :85.00 Max. :27.00   
## NA's :1 NA's :1   
## CDIDate\_WG PhrasesUnderstood\_WG TotalGestures\_WG  
## Min. :2015-02-24 00:00:00 Min. : 3.00 Min. : 7.00   
## 1st Qu.:2016-02-29 12:00:00 1st Qu.:15.75 1st Qu.:27.00   
## Median :2016-07-28 12:00:00 Median :21.50 Median :35.00   
## Mean :2016-07-28 21:00:00 Mean :20.58 Mean :34.10   
## 3rd Qu.:2017-01-24 06:00:00 3rd Qu.:26.00 3rd Qu.:42.25   
## Max. :2018-04-04 00:00:00 Max. :31.00 Max. :58.00   
## NA's :1 NA's :1 NA's :1   
## UnderstoodWords\_WG ppvt4\_test\_date ppvt4\_age\_year ppvt4\_age\_month  
## Min. : 1.0 Min. :NA Min. : NA Min. : NA   
## 1st Qu.: 63.0 1st Qu.:NA 1st Qu.: NA 1st Qu.: NA   
## Median :109.5 Median :NA Median : NA Median : NA   
## Mean :128.9 Mean :NA Mean :NaN Mean :NaN   
## 3rd Qu.:170.8 3rd Qu.:NA 3rd Qu.: NA 3rd Qu.: NA   
## Max. :357.0 Max. :NA Max. : NA Max. : NA   
## NA's :1 NA's :49 NA's :49 NA's :49   
## ppvt4\_examiner ppvt4\_raw\_score ppvt4\_standard\_score ppvt4\_95ci   
## Length:49 Min. : NA Min. : NA Length:49   
## Class :character 1st Qu.: NA 1st Qu.: NA Class :character   
## Mode :character Median : NA Median : NA Mode :character   
## Mean :NaN Mean :NaN   
## 3rd Qu.: NA 3rd Qu.: NA   
## Max. : NA Max. : NA   
## NA's :49 NA's :49   
## ppvt4\_percentile ppvt4\_nce ppvt4\_stanine ppvt4\_gsv   
## Length:49 Length:49 Min. : NA Min. : NA   
## Class :character Class :character 1st Qu.: NA 1st Qu.: NA   
## Mode :character Mode :character Median : NA Median : NA   
## Mean :NaN Mean :NaN   
## 3rd Qu.: NA 3rd Qu.: NA   
## Max. : NA Max. : NA   
## NA's :49 NA's :49   
## ppvt4\_age\_equivalent ppvt4\_total\_errors ppvt4\_ceiling\_item ppvt4\_total\_errors2  
## Length:49 Min. : NA Min. : NA Min. : NA   
## Class :character 1st Qu.: NA 1st Qu.: NA 1st Qu.: NA   
## Mode :character Median : NA Median : NA Median : NA   
## Mean :NaN Mean :NaN Mean :NaN   
## 3rd Qu.: NA 3rd Qu.: NA 3rd Qu.: NA   
## Max. : NA Max. : NA Max. : NA   
## NA's :49 NA's :49 NA's :49   
## ppvt4\_raw\_score2 Nisongercompliantcalm NisongerAdaptiveSocial  
## Min. : NA Length:49 Length:49   
## 1st Qu.: NA Class :character Class :character   
## Median : NA Mode :character Mode :character   
## Mean :NaN   
## 3rd Qu.: NA   
## Max. : NA   
## NA's :49   
## NisongerConductProblem Nisongerinan NisongerHyperactive  
## Length:49 Length:49 Length:49   
## Class :character Class :character Class :character   
## Mode :character Mode :character Mode :character   
##   
##   
##   
##   
## Nisongerselfimj Nisongerselfisolate NisongerOverlySensitive  
## Length:49 Length:49 Length:49   
## Class :character Class :character Class :character   
## Mode :character Mode :character Mode :character   
##   
##   
##   
##

PARENT:

summary(DS\_BRIEF\_Par)

## Karyotype Group Study Gender   
## Length:93 Length:93 Length:93 Length:93   
## Class :character Class :character Class :character Class :character   
## Mode :character Mode :character Mode :character Mode :character   
##   
##   
##   
##   
## Gender\_Num Participant\_Number DOB   
## Min. :0.0000 Min. : 5.0 Min. :1990-11-05 00:00:00   
## 1st Qu.:0.0000 1st Qu.: 58.0 1st Qu.:1998-05-15 00:00:00   
## Median :0.0000 Median :449.0 Median :2001-10-20 00:00:00   
## Mean :0.4409 Mean :281.1 Mean :2001-08-07 14:58:03   
## 3rd Qu.:1.0000 3rd Qu.:472.0 3rd Qu.:2004-03-06 00:00:00   
## Max. :1.0000 Max. :498.0 Max. :2012-04-28 00:00:00   
##   
## BRIEF\_Date Age\_BRIEF Age\_Actigraphy Child\_Ethnicity  
## Min. :2007-02-22 00:00:00 Min. : 6.52 Min. : 6.49 Min. :1.000   
## 1st Qu.:2010-01-30 00:00:00 1st Qu.: 8.64 1st Qu.: 8.80 1st Qu.:1.000   
## Median :2010-11-19 00:00:00 Median :11.42 Median :12.88 Median :1.000   
## Mean :2013-03-28 04:38:42 Mean :11.65 Mean :12.15 Mean :2.333   
## 3rd Qu.:2018-07-29 00:00:00 3rd Qu.:14.66 3rd Qu.:15.62 3rd Qu.:2.750   
## Max. :2019-11-26 00:00:00 Max. :17.95 Max. :17.21 Max. :6.000   
## NA's :58 NA's :81   
## Maternal\_Ethnicity Maternal\_Education Maternal\_Education\_Years  
## Min. :1.000 Min. :1.000 Min. : 6.00   
## 1st Qu.:1.000 1st Qu.:3.000 1st Qu.:13.00   
## Median :3.000 Median :4.000 Median :15.00   
## Mean :3.507 Mean :4.266 Mean :14.83   
## 3rd Qu.:6.000 3rd Qu.:6.000 3rd Qu.:17.00   
## Max. :8.000 Max. :7.000 Max. :20.00   
## NA's :26 NA's :29 NA's :29   
## Household\_Income Household\_Income\_Recode Autism\_Diagnosis ADHD\_Diagnosis   
## Min. :1.00 Length:93 Min. :0.00000 Min. :0.00000   
## 1st Qu.:3.00 Class :character 1st Qu.:0.00000 1st Qu.:0.00000   
## Median :4.00 Mode :character Median :0.00000 Median :0.00000   
## Mean :4.25 Mean :0.02941 Mean :0.08333   
## 3rd Qu.:6.00 3rd Qu.:0.00000 3rd Qu.:0.00000   
## Max. :6.00 Max. :1.00000 Max. :1.00000   
## NA's :29 NA's :25 NA's :81   
## adhd Sleep\_Apnea\_Diagnosis visual\_impairment hearing\_loss   
## Min. :0.00000 Min. :0.0000 Min. :0.0000 Min. :0.0000   
## 1st Qu.:0.00000 1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.0000   
## Median :0.00000 Median :0.0000 Median :1.0000 Median :0.0000   
## Mean :0.06897 Mean :0.4546 Mean :0.6452 Mean :0.2667   
## 3rd Qu.:0.00000 3rd Qu.:1.0000 3rd Qu.:1.0000 3rd Qu.:0.7500   
## Max. :1.00000 Max. :1.0000 Max. :1.0000 Max. :1.0000   
## NA's :64 NA's :82 NA's :62 NA's :63   
## Congenital\_disorders head\_injury\_trauma head\_injury\_loc heart\_defect   
## Min. :0.0000 Min. :0 Min. : NA Min. :0.0000   
## 1st Qu.:0.0000 1st Qu.:0 1st Qu.: NA 1st Qu.:0.0000   
## Median :0.0000 Median :0 Median : NA Median :0.0000   
## Mean :0.3226 Mean :0 Mean :NaN Mean :0.4062   
## 3rd Qu.:1.0000 3rd Qu.:0 3rd Qu.: NA 3rd Qu.:1.0000   
## Max. :1.0000 Max. :0 Max. : NA Max. :1.0000   
## NA's :62 NA's :62 NA's :93 NA's :61   
## leukemia\_blood\_disease seizure\_convulsion hypothyroidism diabetes   
## Min. :0 Min. :0.000 Min. :0.0000 Min. :0.00000   
## 1st Qu.:0 1st Qu.:0.000 1st Qu.:0.0000 1st Qu.:0.00000   
## Median :0 Median :0.000 Median :0.0000 Median :0.00000   
## Mean :0 Mean :0.125 Mean :0.4516 Mean :0.03226   
## 3rd Qu.:0 3rd Qu.:0.000 3rd Qu.:1.0000 3rd Qu.:0.00000   
## Max. :0 Max. :1.000 Max. :1.0000 Max. :1.00000   
## NA's :61 NA's :61 NA's :62 NA's :62   
## endocrine\_issues KBIT\_Date KBIT\_Age Verbal\_Knowledge\_Raw  
## Min. :0.00000 Length:93 Min. : 7.03 Length:93   
## 1st Qu.:0.00000 Class :character 1st Qu.: 8.70 Class :character   
## Median :0.00000 Mode :character Median :10.87 Mode :character   
## Mean :0.03226 Mean :11.38   
## 3rd Qu.:0.00000 3rd Qu.:13.74   
## Max. :1.00000 Max. :17.95   
## NA's :62 NA's :36   
## Riddles\_Raw Matrices\_Raw Verbal\_SS Nverbal\_SS   
## Min. : 0.000 Min. : 0.00 Length:93 Min. :40.00   
## 1st Qu.: 4.000 1st Qu.: 6.00 Class :character 1st Qu.:40.00   
## Median : 8.000 Median :12.00 Mode :character Median :48.50   
## Mean : 7.693 Mean :10.72 Mean :50.43   
## 3rd Qu.:12.000 3rd Qu.:15.00 3rd Qu.:56.00   
## Max. :21.000 Max. :21.00 Max. :87.00   
## NA's :5 NA's :5 NA's :5   
## IQ\_Composite\_SS inhibit\_tscore self\_monitor\_tscore bri\_tscore   
## Min. : 40.00 Min. :40.00 Min. :36.00 Min. :41.00   
## 1st Qu.: 40.00 1st Qu.:51.00 1st Qu.:54.00 1st Qu.:51.00   
## Median : 42.00 Median :59.00 Median :63.00 Median :59.00   
## Mean : 46.27 Mean :59.32 Mean :61.82 Mean :60.19   
## 3rd Qu.: 49.00 3rd Qu.:68.00 3rd Qu.:69.00 3rd Qu.:68.00   
## Max. :116.00 Max. :88.00 Max. :82.00 Max. :87.00   
## NA's :5   
## shift\_tscore ec\_tscore eri\_tscore initiate\_tscore  
## Min. :36.00 Min. :36.00 Min. :42.00 Min. :35.00   
## 1st Qu.:54.00 1st Qu.:46.00 1st Qu.:48.00 1st Qu.:51.00   
## Median :61.00 Median :53.00 Median :53.00 Median :59.00   
## Mean :63.58 Mean :53.98 Mean :56.58 Mean :59.18   
## 3rd Qu.:72.00 3rd Qu.:62.00 3rd Qu.:62.75 3rd Qu.:66.00   
## Max. :94.00 Max. :78.00 Max. :79.00 Max. :84.00   
## NA's :57   
## working\_mem\_tscore po\_tscore tm\_tscore org\_of\_mat\_tscore  
## Min. :43.00 Min. :37.00 Min. :41.00 Min. :33.00   
## 1st Qu.:55.00 1st Qu.:54.50 1st Qu.:54.00 1st Qu.:46.75   
## Median :63.00 Median :61.00 Median :59.00 Median :55.00   
## Mean :63.56 Mean :60.13 Mean :60.29 Mean :53.62   
## 3rd Qu.:71.00 3rd Qu.:66.50 3rd Qu.:69.00 3rd Qu.:60.00   
## Max. :85.00 Max. :88.00 Max. :74.00 Max. :71.00   
## NA's :6 NA's :58 NA's :1   
## cri\_tscore gec\_tscore AE PR   
## Min. :41.00 Min. :42.00 Length:93 Mode:logical   
## 1st Qu.:53.00 1st Qu.:53.00 Class :character NA's:93   
## Median :60.00 Median :63.00 Mode :character   
## Mean :59.66 Mean :61.95   
## 3rd Qu.:65.00 3rd Qu.:69.00   
## Max. :80.00 Max. :87.00   
## NA's :58 NA's :6   
## SS GMI IMI AMI   
## Length:93 Length:93 Length:93 Length:93   
## Class :character Class :character Class :character Class :character   
## Mode :character Mode :character Mode :character Mode :character   
##   
##   
##   
##   
## EMI SIBR\_Sum\_All Support\_Score CDIAge\_WS   
## Length:93 Mode:logical Length:93 Min. : NA   
## Class :character NA's:93 Class :character 1st Qu.: NA   
## Mode :character Mode :character Median : NA   
## Mean :NaN   
## 3rd Qu.: NA   
## Max. : NA   
## NA's :93   
## CDIDate\_WS VocabProductionTotal\_WS SentenceLength\_WS  
## Length:93 Min. : NA Min. : NA   
## Class :character 1st Qu.: NA 1st Qu.: NA   
## Mode :character Median : NA Median : NA   
## Mean :NaN Mean :NaN   
## 3rd Qu.: NA 3rd Qu.: NA   
## Max. : NA Max. : NA   
## NA's :93 NA's :93   
## SentenceComplexity\_WS MacArthur\_Bates\_WG CDIAge\_WG CDIDate\_WG  
## Min. : NA Length:93 Min. : NA Min. :NA   
## 1st Qu.: NA Class :character 1st Qu.: NA 1st Qu.:NA   
## Median : NA Mode :character Median : NA Median :NA   
## Mean :NaN Mean :NaN Mean :NA   
## 3rd Qu.: NA 3rd Qu.: NA 3rd Qu.:NA   
## Max. : NA Max. : NA Max. :NA   
## NA's :93 NA's :93 NA's :93   
## PhrasesUnderstood\_WG TotalGestures\_WG UnderstoodWords\_WG  
## Min. : NA Min. : NA Min. : NA   
## 1st Qu.: NA 1st Qu.: NA 1st Qu.: NA   
## Median : NA Median : NA Median : NA   
## Mean :NaN Mean :NaN Mean :NaN   
## 3rd Qu.: NA 3rd Qu.: NA 3rd Qu.: NA   
## Max. : NA Max. : NA Max. : NA   
## NA's :93 NA's :93 NA's :93   
## ppvt4\_test\_date ppvt4\_age\_year ppvt4\_age\_month  
## Min. :2017-11-26 00:00:00 Min. : 6.00 Min. : 0.00   
## 1st Qu.:2018-04-03 12:00:00 1st Qu.: 8.00 1st Qu.: 3.00   
## Median :2019-01-11 12:00:00 Median :11.50 Median : 6.00   
## Mean :2018-11-18 12:48:00 Mean :11.67 Mean : 5.90   
## 3rd Qu.:2019-03-24 06:00:00 3rd Qu.:15.75 3rd Qu.: 8.75   
## Max. :2020-01-02 00:00:00 Max. :17.00 Max. :11.00   
## NA's :63 NA's :63 NA's :63   
## ppvt4\_examiner ppvt4\_raw\_score ppvt4\_standard\_score ppvt4\_95ci   
## Length:93 Min. : 3.00 Min. :20.00 Length:93   
## Class :character 1st Qu.: 47.25 1st Qu.:31.50 Class :character   
## Mode :character Median : 66.50 Median :49.00 Mode :character   
## Mean : 71.50 Mean :45.93   
## 3rd Qu.:104.50 3rd Qu.:59.75   
## Max. :127.00 Max. :76.00   
## NA's :63 NA's :63   
## ppvt4\_percentile ppvt4\_nce ppvt4\_stanine ppvt4\_gsv   
## Length:93 Length:93 Min. :1.000 Min. : 40.0   
## Class :character Class :character 1st Qu.:1.000 1st Qu.:102.0   
## Mode :character Mode :character Median :1.000 Median :118.0   
## Mean :1.067 Mean :118.7   
## 3rd Qu.:1.000 3rd Qu.:144.8   
## Max. :2.000 Max. :160.0   
## NA's :63 NA's :63   
## ppvt4\_age\_equivalent ppvt4\_total\_errors ppvt4\_ceiling\_item ppvt4\_total\_errors2  
## Length:93 Min. : 9.00 Min. : 12.0 Min. : 9.00   
## Class :character 1st Qu.:20.00 1st Qu.: 72.0 1st Qu.:20.00   
## Mode :character Median :26.00 Median : 96.0 Median :26.00   
## Mean :26.90 Mean : 98.4 Mean :26.90   
## 3rd Qu.:30.75 3rd Qu.:132.0 3rd Qu.:30.75   
## Max. :60.00 Max. :156.0 Max. :60.00   
## NA's :63 NA's :63 NA's :63   
## ppvt4\_raw\_score2 Nisongercompliantcalm NisongerAdaptiveSocial  
## Min. : 3.00 Length:93 Length:93   
## 1st Qu.: 47.25 Class :character Class :character   
## Median : 66.50 Mode :character Mode :character   
## Mean : 71.50   
## 3rd Qu.:104.50   
## Max. :127.00   
## NA's :63   
## NisongerConductProblem Nisongerinan NisongerHyperactive  
## Length:93 Length:93 Length:93   
## Class :character Class :character Class :character   
## Mode :character Mode :character Mode :character   
##   
##   
##   
##   
## Nisongerselfimj Nisongerselfisolate NisongerOverlySensitive  
## Length:93 Length:93 Length:93   
## Class :character Class :character Class :character   
## Mode :character Mode :character Mode :character   
##   
##   
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