Data_Analysis_OSC

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Contents


```
require("knitr")
```

```
## Loading required package: knitr
```

```
knitr::opts_chunk$set(echo = TRUE)
knitr::opts_chunk$set(tidy.opts=list(width.cutoff=50),tidy=TRUE)
```

```
library(data.table)
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.0 --

## v ggplot2 3.3.3     v purrr   0.3.4
## v tibble  3.1.0     v dplyr   1.0.5
## v tidyr   1.1.3     v stringr 1.4.0
## v readr   1.4.0     v forcats 0.5.1

## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::between()   masks data.table::between()
## x dplyr::filter()    masks stats::filter()
## x dplyr::first()     masks data.table::first()
## x dplyr::lag()       masks stats::lag()
## x dplyr::last()      masks data.table::last()
## x purrr::transpose() masks data.table::transpose()
```

```
library(magrittr)
```

```
##
## Attaching package: 'magrittr'

## The following object is masked from 'package:purrr':
##
##     set_names
```

```
## The following object is masked from 'package:tidyr':
##
##     extract
```

```
library(lavaan)
```

```
## This is lavaan 0.6-8
## lavaan is FREE software! Please report any bugs.
```

```
library(car)
```

```
## Loading required package: carData

##
## Attaching package: 'car'

## The following object is masked from 'package:dplyr':
##
##     recode

## The following object is masked from 'package:purrr':
##
##     some
```

```
library(tidySEM)
```

```
## Registered S3 methods overwritten by 'tidySEM':
##   method              from
##   print.mplus.model   MplusAutomation
##   print.mplusObject   MplusAutomation
##   summary.mplus.model MplusAutomation
```

```
library(gridExtra)
```

```
##
## Attaching package: 'gridExtra'

## The following object is masked from 'package:dplyr':
##
##     combine
```

```
library(equatiomatic)
library(psych)
```

```
##
## Attaching package: 'psych'

## The following object is masked from 'package:car':
##
##     logit
```

```
## The following object is masked from 'package:lavaan':
##
##     cor2cov

## The following objects are masked from 'package:ggplot2':
##
##     %+%, alpha
```

```
library(gridExtra)
```

1 Descriptives/ Preliminary Analyses

```
data <- read.csv ("OSC_data.csv")
data1 <- select (data, ID, AGE,GENDER,BIRTH_EXP,PSYC_DIS,COG_DIS, DIS, PLAY_GAME)
View (data1)
summary (data1)
```

```
##        ID              AGE            GENDER           BIRTH_EXP
##  Min.   :  1.00   Min.   : 6.000   Length:354         Length:354
##  1st Qu.: 91.25   1st Qu.: 8.000   Class :character   Class :character
##  Median :184.50   Median :10.000   Mode  :character   Mode  :character
##  Mean   :185.38   Mean   : 9.952
##  3rd Qu.:278.75   3rd Qu.:11.000
##  Max.   :367.00   Max.   :17.000
##    PSYC_DIS           COG_DIS              DIS             PLAY_GAME
##  Length:354         Length:354         Length:354         Length:354
##  Class :character   Class :character   Class :character   Class :character
##  Mode  :character   Mode  :character   Mode  :character   Mode  :character
##
##
##
```

```
describe (data1)
```

```
##            vars   n   mean     sd median trimmed    mad min max range  skew
## ID            1 354 185.38 106.73  184.5  185.63 139.36   1 367   366 -0.02
## AGE           2 354   9.95   2.29   10.0    9.82   1.48   6  17    11  0.52
## GENDER*       3 354   3.40   1.11    3.5    3.38   0.74   1   5     4  0.01
## BIRTH_EXP*    4 354   2.50   0.87    3.0    2.62   0.00   1   3     2 -1.15
## PSYC_DIS*     5 354   1.04   0.20    1.0    1.00   0.00   1   2     1  4.71
## COG_DIS*      6 354   1.17   0.56    1.0    1.00   0.00   1   3     2  2.94
## DIS*          7 354   1.11   0.31    1.0    1.01   0.00   1   2     1  2.48
## PLAY_GAME*    8 354   1.94   0.25    2.0    2.00   0.00   1   2     1 -3.52
##            kurtosis   se
## ID            -1.22 5.67
## AGE            0.02 0.12
## GENDER*       -1.33 0.06
## BIRTH_EXP*    -0.67 0.05
## PSYC_DIS*     20.20 0.01
```

```
## COG_DIS*       6.67 0.03
## DIS*           4.16 0.02
## PLAY_GAME*    10.38 0.01
```

```
d1 <- filter (data1, AGE < 9 )
d2 <- filter (data1, (AGE<12 & AGE>8))
d3 <- filter (data1, AGE>11)
d4 <- filter (data1, GENDER == "male")
d5 <- filter (data1, GENDER == "female")
d6 <- filter (data1, BIRTH_EXP == "V")
d7 <- filter (data1, BIRTH_EXP == "C")
d8 <- filter (data1, PSYC_DIS == "Y")
d9 <- filter (data1, COG_DIS == "Y")
d10 <- filter (data1, DIS == "Y")
d11 <- filter (data1, PLAY_GAME == "Y")


number_group <- c(nrow(d1),nrow(d2),nrow(d3),nrow(d4),nrow(d5),nrow(d6),nrow(d7),
                  nrow(d8),nrow(d9),nrow(d10),nrow(d11))
part_demographics <- data.frame(cbind(nrow(d1),nrow(d2),nrow(d3),nrow(d4),nrow(d5),nrow(d6),nrow(d7),nr
names (part_demographics) <- c("Age_Group1 (6 to 8 yrs)", "Age_Group2 (9 to 11 yrs)", "Age_Group3 (12< y
kable (part_demographics)
```

Age_Group1 (6 to 8 yrs)	Age_Group2 (9 to 11 yrs)	Age_Group3 (12< yrs)	Gender_Female	Gender_Male	Vaginally_born	C-section_born	Psych_Dis	Cog_dis	Gen_Dis	Video_gameplay
102	178	74	107	102	265	88	14	30	39	331

2 Filter

Age groups (3) F M V C PSY COG DIS Game