adv.stats.mod8.R

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#1  
high\_stress<- c(10,9,8,9,10,8)  
mod\_stress<- c(8,10,6,7,8,8)  
low\_stess<- c(4,6,6,4,2,2)  
combined\_groups<- data.frame(cbind(high\_stress,mod\_stress, low\_stess))  
combined\_groups

## high\_stress mod\_stress low\_stess  
## 1 10 8 4  
## 2 9 10 6  
## 3 8 6 6  
## 4 9 7 4  
## 5 10 8 2  
## 6 8 8 2

summary(combined\_groups)

## high\_stress mod\_stress low\_stess   
## Min. : 8.00 Min. : 6.000 Min. :2.0   
## 1st Qu.: 8.25 1st Qu.: 7.250 1st Qu.:2.5   
## Median : 9.00 Median : 8.000 Median :4.0   
## Mean : 9.00 Mean : 7.833 Mean :4.0   
## 3rd Qu.: 9.75 3rd Qu.: 8.000 3rd Qu.:5.5   
## Max. :10.00 Max. :10.000 Max. :6.0

stack\_groups= stack(combined\_groups)  
stack\_groups

## values ind  
## 1 10 high\_stress  
## 2 9 high\_stress  
## 3 8 high\_stress  
## 4 9 high\_stress  
## 5 10 high\_stress  
## 6 8 high\_stress  
## 7 8 mod\_stress  
## 8 10 mod\_stress  
## 9 6 mod\_stress  
## 10 7 mod\_stress  
## 11 8 mod\_stress  
## 12 8 mod\_stress  
## 13 4 low\_stess  
## 14 6 low\_stess  
## 15 6 low\_stess  
## 16 4 low\_stess  
## 17 2 low\_stess  
## 18 2 low\_stess

anova\_results= aov(values~ind, data = stack\_groups)  
summary(anova\_results)

## Df Sum Sq Mean Sq F value Pr(>F)   
## ind 2 82.11 41.06 21.36 4.08e-05 \*\*\*  
## Residuals 15 28.83 1.92   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#2  
library("ISwR")  
data("zelazo")  
zelazo\_df<- as.data.frame(matrix(unlist(zelazo), nrow = 6))

## Warning in matrix(unlist(zelazo), nrow = 6): data length [23] is not a sub-  
## multiple or multiple of the number of rows [6]

colnames(zelazo\_df)<- c("active", "passive", "none", "ctr.8w")  
zelazo\_stack<- stack(zelazo\_df)  
zelazo\_stack[[24,1]]=NA  
anova\_zelazo<- aov(values~ind,data = zelazo\_stack)  
summary(anova\_zelazo)

## Df Sum Sq Mean Sq F value Pr(>F)  
## ind 3 14.78 4.926 2.142 0.129  
## Residuals 19 43.69 2.299   
## 1 observation deleted due to missingness