

Effects of Wellness and Trainings on Fatigue

By

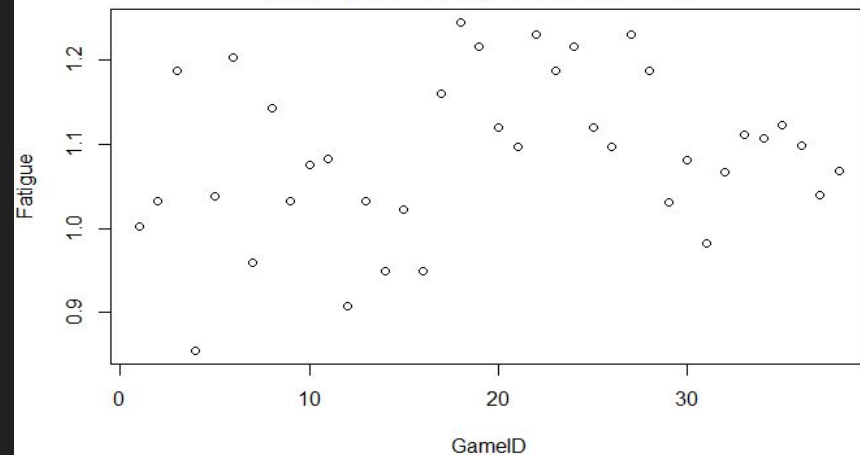
Team Significant

(Anthony Woo, Alexander Yang, Che-An Lin)

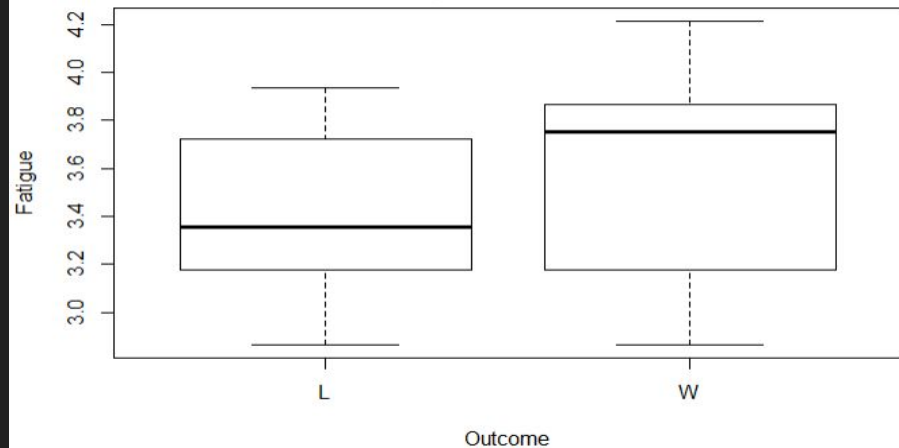
Explore the Data...

Finding relationship of fatigue and different variables ...

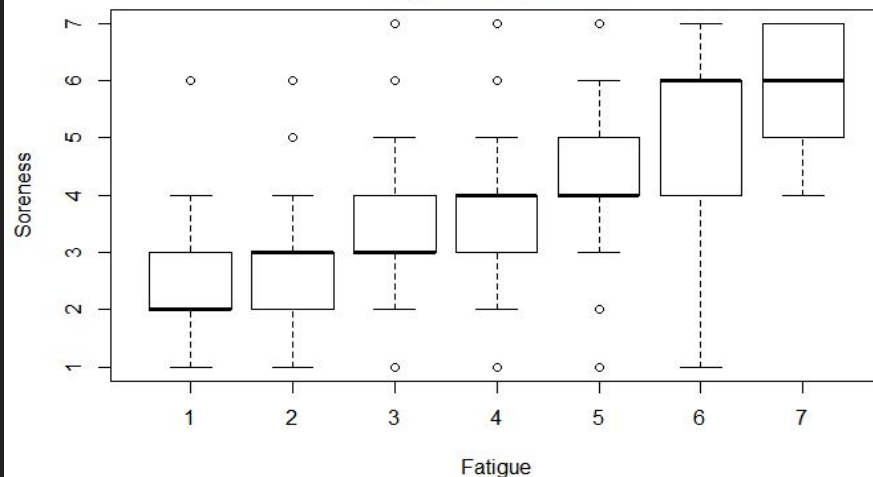
Avg Speed of Players in Each Game



Fatigue vs Outcome



Fatigue vs. Soreness



Linear Regression: Results

Looking at the significance
on each type of training ...

```
lm(formula = Fatigue ~ Desire + SleepQuality + Nutrition + Menstruation +  
SessionType + DailyLoad, data = merge.df)
```

Residuals:

Min	1Q	Median	3Q	Max
-2.91997	-0.46974	0.07145	0.47586	2.60972

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	4.175e-01	8.424e-02	4.957	7.65e-07	***
Desire	4.817e-01	1.607e-02	29.981	< 2e-16	***
SleepQuality	3.459e-01	1.355e-02	25.522	< 2e-16	***
NutritionOkay	5.548e-02	3.094e-02	1.793	0.07309	.
NutritionPoor	-8.942e-02	1.379e-01	-0.648	0.51680	
MenstruationYes	-8.528e-03	4.083e-02	-0.209	0.83456	
SessionTypeGame	-2.410e-01	7.694e-02	-3.132	0.00176	**
SessionTypeMobility/Recovery	-1.745e-01	5.549e-02	-3.144	0.00169	**
SessionTypeSkills	-9.321e-02	4.890e-02	-1.906	0.05672	.
SessionTypeSpeed	-3.422e-02	4.484e-02	-0.763	0.44547	
SessionTypeStrength	1.059e-01	5.729e-02	1.848	0.06471	.
DailyLoad	-2.584e-04	4.343e-05	-5.949	3.07e-09	***

signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.6963 on 2507 degrees of freedom
(4789 observations deleted due to missingness)

Multiple R-squared: 0.5123, Adjusted R-squared: 0.5101

F-statistic: 239.4 on 11 and 2507 DF, p-value: < 2.2e-16

Linear Regression: Results Cont.

Remove the trainings...

Now focusing at wellness

```
call:
lm(formula = Fatigue ~ Desire + SleepQuality + GameTrain + MobRecTrain +
    DailyLoad, data = change.df)

Residuals:
    Min       1Q   Median       3Q      Max
-2.91539 -0.49879  0.07276  0.48237  2.70873

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)  5.141e-01  7.066e-02   7.275 4.39e-13 ***
Desire       4.742e-01  1.474e-02  32.175 < 2e-16 ***
SleepQuality  3.310e-01  1.245e-02  26.581 < 2e-16 ***
GameTrainYes -2.759e-01  6.491e-02  -4.251 2.19e-05 ***
MobRecTrainYes -1.399e-01  4.278e-02  -3.270 0.00109 **
DailyLoad    -2.725e-04  3.704e-05  -7.357 2.42e-13 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.7132 on 2981 degrees of freedom
(4321 observations deleted due to missingness)
Multiple R-squared:  0.4763,    Adjusted R-squared:  0.4754
F-statistic: 542.2 on 5 and 2981 DF,  p-value: < 2.2e-16
```

Conclusion...

Training doesn't affect fatigue

