What Effect Do Injuries Have on NFL Teams

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I. Abstract

This study examines the impact of player injuries on NFL team win probabilities over the seasons 2013 to 2019. The research dissects the data by the number of injuries, overall team influence, and the effect at each position. The findings suggest that injuries have a variable impact on win probabilities, with certain positions showing a more pronounced effect.

II. Exploring Position Level Data

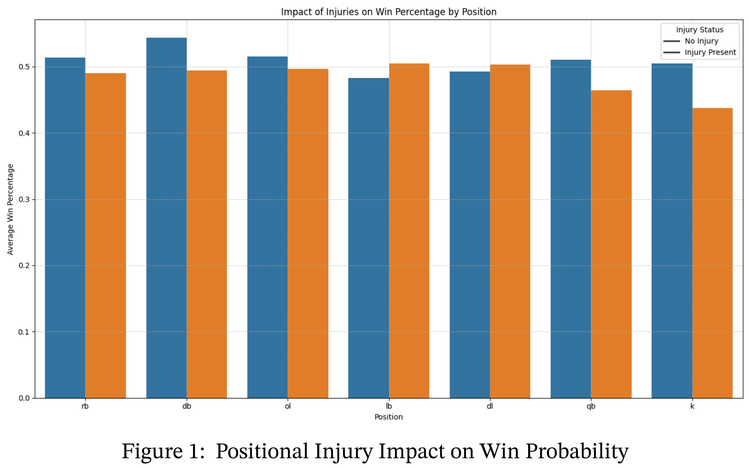

Figure 1: Positional Injury Impact on Win Probability

The initial analysis at the position level indicates a general decline in win probability when injuries occur. However, the degree of impact varies significantly by position.

Position	Coefficient	P-value	95% CI Lower	95% CI Upper
rb	-0.1436	0.0341	-0.2764	-0.0107
db	-0.1519	0.1391	-0.3532	0.0494
lb	0.1933	0.0179	0.0333	0.3532
dl	0.0036	0.9619	-0.1435	0.1506
te	0.1444	0.031	0.0132	0.2757
wr	-0.2033	0.0063	-0.3491	-0.0575
p	0.1981	0.3218	-0.1938	0.5899
ol	0.0332	0.6962	-0.1334	0.1997
ls	-0.2847	0.0717	-0.5946	0.0252
qb	-0.2468	0.0022	-0.4049	-0.0887
k	-0.304	0.0181	-0.5565	-0.0515

Figure 2: Weights and Statistical Significance by Positions

When assessing the weights and statistical significance, it becomes evident that Running Backs (RB), Quarterbacks (QB), Wide Receivers (WR), and Kickers (K) show significant correlation with win probabilities. Surprisingly, Tight Ends (TE) and Linebackers (LB) exhibit positive weights, which is an intriguing aspect warranting further investigation.

III. Model