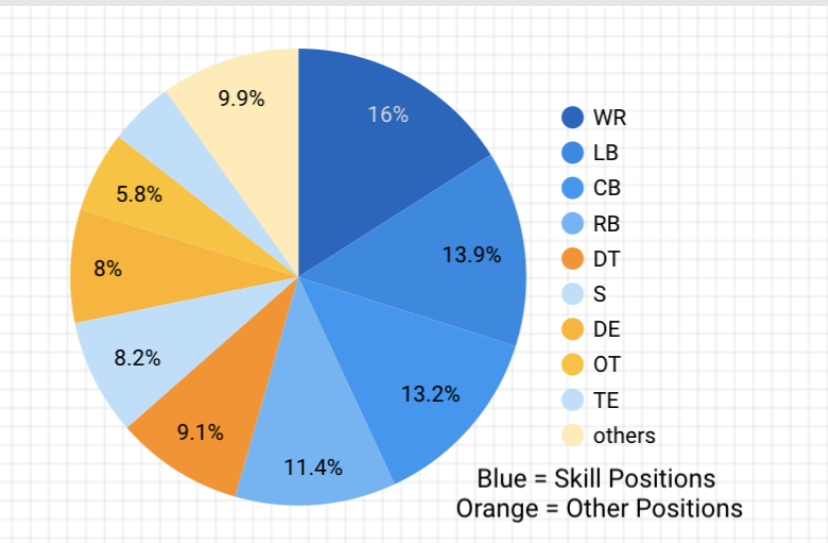


Are Head Injuries to Blame for NFL Player’s Antisocial Behaviour?

Introduction

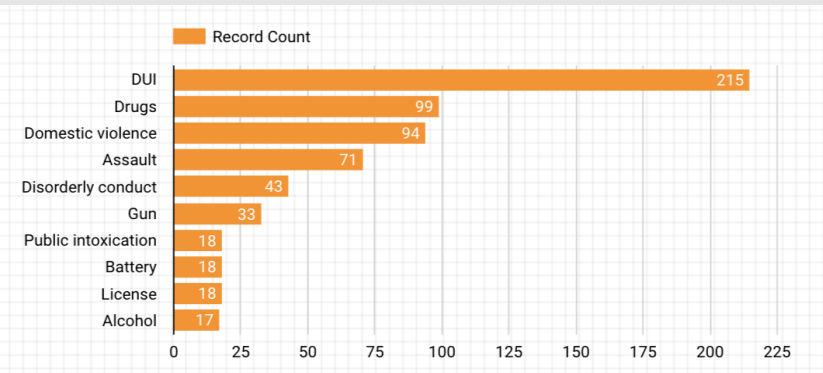
The American National Football League (NFL) has a well-documented, controversial history with regard to player welfare and how the game affects the player’s future health. The constant occurrence of concussions in the game have been shown to lead to permanent effects on a player’s health and wellbeing, despite the NFL repeatedly rejecting this scientific evidence. However in March 2016, the NFL organisation finally admitted there were significant health consequences from playing the sport. Using the dataset I would like to investigate whether the health effects caused by playing American football leads to more antisocial behavior in players.

Figure 1: Player Incident Percentages by Position



Position Name	Abbreviation	Offence or Defence
Wide Receiver	WR	Offence
Linebacker	LB	Defence
Cornerback	CB	Defence
Running back	RB	Offence
Defensive Tackle	DT	Defence
Safety	S	Defence
Defensive End	DE	Defence
Offensive Tackle	OT	Offence
Tight End	TE	Offence

Figure 2: Player Incident Types 2000-2017



Key: DUI = Driving under the influence

Choose Your Position Wisely

The skill positions in American football contain the offensive players who either run with the ball (RB), catch the ball (WR,TE) or the defensive players who tackle the offensive players to stop the ball moving closer to the endzone (LB,CB,S). These players tend to have the biggest collisions within the game and are at risk of having serious collisions without the ability to brace themselves for impact. Figure 1 highlights how the skill position players occupy 5 out of the top 6 positions for frequency of incidents and a total of 62.7% of all the incidents.

This link shows a video made by Josh Begley which highlights the graphic nature of NFL concussions and the horrifying scenes they create:

<https://twitter.com/joshbegley/status/959018523098890240?lang=en>

A Study On Brain Injury In American Football

A recent study set up by Rochester University (Hirad et al., 2019), investigated how brain structured measured by the fractional anisotropy (FA) of the university’s college football player’s brains were affected by playing a full season of football. FA is the “index [of] the structural integrity of major white matter pathways in the brain” which is associated with age related change in cognitive function (Grieve et al., 2007) and mental illness (Ferrara and Erausquin,2013). My hypothesis is that the damage to cognitive function and increased risk of mental illness, results in more NFL players making rash decisions and violent actions that result in antisocial and reckless behaviour. Figure 2 shows the number and types of different incidents that have occurred from 2000-2017, highlighting the range of impacts these players have on society. This emphasises the importance of research into the effects of playing American Football on individuals.

Conclusion

The dataset suggests there may be a link between American Football and irresponsible, careless and violent behaviour due to the observed link between player position and antisocial incidents. If I was going to do a further investigation I would collect data on the specific type of injuries received, especially the number of head injuries, as well as data on rates of antisocial incidents in a healthy same-age male population. This would establish more clearly whether there is a link and whether it is due to head injury.

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