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Tattoos and Penalty Success at the FIFA World Cup 2018

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Keywords

Tattoo · Personality traits · Penalties · Soccer · FIFA World Cup

In the past decade, the number of visibly tattooed footballers has greatly increased. Spectators were able to witness this continuing trend during the FIFA World Cup in Russia. Epidemiological studies have indicated that tattooed people are more risk-taking, extraverted and aggressive, but also more anxious and depressive than non-tattooed people [1–6]. It is unknown whether such personality traits reported in tattooed non-athlete populations may also apply to professional footballers, and if so whether this may have an impact on penalty success or not. Furthermore, it has been reported that seemingly insignificant visual cues play an important role for penalty outcomes. For example, the penalty taker's advance cues, kit colour, pre-penalty gaze and direction of vision can all influence the goalkeeper's performance [7, 8]. Therefore, it is conceivable that tattoos of penalty takers may have a signal effect on goalkeepers as well. With this in mind we sought to analyse the effect of tattoos on penalty success.

Methods

All penalties taken during the FIFA World Cup 2018 were analysed. This included penalties taken during match play and those taken during penalty shoot-outs. Penalty takers were divided into “tattooed” and “non-tattooed” players according to their visible tattoos on their upper and lower extremities, and neck. To double-check, pictures of the penalty takers taken during the penalties were screened for (smaller) tattoos using Google “images.” Thereafter, the penalty success rate was calculated for tattooed and non-tattooed players. In addition to the overall penalty success rate, the success rate in penalty shoot-outs was compared separately as the personality traits may be exaggerated due to the heightened stress

level. χ^2 tests were performed to test the data against the null hypothesis that the probability of scoring does not depend on whether or not the penalty taker is tattooed.

Results

A total of 69 penalties were taken, 48 of which (69.56%) were scored. Non-tattooed players took 44 penalties, and tattooed players took 25 (Table 1). The success rate of non-tattooed players was 68.18% (30/44), whereas the success rate of tattooed players was 72.00% (18/25) ($p > 0.05$). In the knockout stages, the success rate in the penalty shoot-outs was 62.50% (17/24) in non-tattooed and 73.00% (11/15) in tattooed penalty takers ($p > 0.05$).

Discussion

Penalties and in particular shoot-outs are often termed a “lottery” [9]. However, in recent years, attempts have been made to better understand and explain their outcomes scientifically [10–16]. It appears that many variables including kicking technique, visual search strategies, tactical skills and fitness contribute to the performance of penalty takers, alongside basic “chance” [17, 18]. However, psychological factors are reportedly the most influential determinant of penalty outcomes [14]. Visible tattoos may be of interest in this context for two reasons. Firstly, numerous publications have identified personality differences between tattooed and non-tattooed people [1–6], and these personality traits could affect the penalty taker's performance. Secondly, tattoos could possibly underline a dominant, self-confident appearance of the penalty taker, which could subconsciously intimidate the goalkeeper, like a modern “war paint.” Although tattooed penalty takers had slightly higher success rates (particularly in shoot-outs) than the non-tattooed penalty takers, the null hypothesis was not rejected in our analysis. However, the power to detect a difference between tattooed and non-tattooed players in a χ^2 test is very small with the current number of observations (69 penalties in total). Therefore, further analyses are needed to assess the impact of tattoos on penalty success. If scoring goals did indeed prove to be a tattoo “complication,” it would certainly be one of the more welcome complications there are [19, 20].

Key Message

Tattoos may have an influence on penalty success.

Disclosure Statement

The authors declare no conflict of interest.

Table 1. All penalties taken during the FIFA World Cup 2018 including the success rates of tattooed and non-tattooed penalty takers (overall success rate and success rate in the shoot-outs)

	Non-tattooed penalty takers	Penalty success	Tattooed penalty takers	Penalty success
Group phase	Salman Al-Faraj	1	Andreas Granqvist	1
Group phase	Karim Ansarifard	1	Andreas Granqvist	1
Group phase	Artem Dzyuba	1	Eden Hazard	1
Group phase	Artem Dzyuba	1	Victor Moses	1
Group phase	Mile Jedinak	1	Christian Cueva	0
Group phase	Mile Jedinak	1	Lionel Messi	0
Group phase	Shinji Kagawa	1	Bryan Ruiz	0
Group phase	Harry Kane	1	Antoine Griezmann (long sleeves)	1
Group phase	Harry Kane	1	Antoine Griezmann (long sleeves)	1
Group phase	Luka Modric	0		
Group phase	Luka Modric	1		
Group phase	Christiano Ronaldo	1		
Group phase	Christiano Ronaldo	0		
Group phase	Mohamed Salah	1		
Group phase	Ferjani Sassi	1		
Group phase	Gylfi Sigurdsson	1		
Group phase	Gylfi Sigurdsson	0		
Group phase	Carlos Vela	1		
Group phase	Fahad Al-Muwallad	0		
Knockout phase, regular time	Luka Modric	0	Antoine Griezmann (long sleeves)	1
Knockout phase, shoot-out	Andres Iniesta	1	Sergio Ramos	1
Knockout phase, shoot-out	Gerard Pique	1	Iago Aspas	0
Knockout phase, shoot-out	Koke	0	Fyodor Smolow	1
Knockout phase, shoot-out	Sergey Ignashevich	1	Aleksandr Golovin	1
Knockout phase, shoot-out	Denis Cheryshev	1	Ivan Rakitic	1
Knockout phase, shoot-out	Luka Modric	1	Simon Kier	1
Knockout phase, shoot-out	Milan Badelj	0	Lasse Schöne	0
Knockout phase, shoot-out	Andrej Kramaric	1	Michael Krohn-Deli	1
Knockout phase, shoot-out	Josip Pivacic	0	Marcus Rashford	1
Knockout phase, shoot-out	Christian Eriksen	0	Kieran Trippier	1
Knockout phase, shoot-out	Nicolai Joergensen	0	Mateus Uribe	0
Knockout phase, shoot-out	Harry Kane	1	Fyodor Smolow	0
Knockout phase, shoot-out	Harry Kane	1	Marcelo Brozovic	1
Knockout phase, shoot-out	Jordan Hendersson	0	Domagoj Vida	1
Knockout phase, shoot-out	Eric Dier	1	Ivan Rakitic	1
Knockout phase, shoot-out	Carlos Bacca	0		
Knockout phase, shoot-out	Falcao	1		
Knockout phase, shoot-out	Juan Cuadrado	1		
Knockout phase, shoot-out	Alan Dzagoev	1		
Knockout phase, shoot-out	Matteo Kovacic	0		
Knockout phase, shoot-out	Mario Fernandes	0		
Knockout phase, shoot-out	Luka Modric	1		
Knockout phase, shoot-out	Sergey Ignashevich	1		
Knockout phase, shoot-out	Daler Kuzyayev	1		
Total		44		25
Overall success rate, %		68.18 (30/44)		72.00 (18/25)
Success rate in the shoot-outs, %		62.50 (15/24)		73.33 (11/15)

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