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Association Between Old Firm Football Matches and Reported Domestic (Violence) Incidents in Strathclyde, Scotland

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Damien J. Williams¹, Fergus G. Neville¹, Kirsty House², and Peter D. Donnelly¹

Abstract

Media reports have suggested that the number of reports of domestic violence may increase when Scotland's two largest, Glasgow-based football (soccer) clubs, Rangers and Celtic (traditionally referred to as the "Old Firm") play one another. This study considers the number of domestic (violence) incidents reported to Strathclyde Police between 2008 and 2011 in the 24 hours following these matches, and compares it with the number reported during two appropriate comparator periods. There is a statistically significant increase in the number of reports following Old Firm matches compared with the comparator periods. This preliminary analysis confirms previous speculation concerning the association between Old Firm matches and reports of domestic violence, and highlights the need to better understand the factors leading to such violence to inform preventive interventions.

Keywords

Old Firm, football, sport-related violence, domestic violence, violence prevention

Domestic Violence as a Public Health Problem

Domestic violence (typically violence against women) is acknowledged as a "major public health problem and violation of women's human rights" (World Health Organization [WHO], 2011). The WHO *Multi-country study on women's health and domestic violence against women* (García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005) found that domestic violence is highly prevalent across cultures and represents a major burden to the health of women. Not only is it associated with immediate physical consequences (lacerations, contusions, fractures, etc.) but also with a wide range of chronic physical health outcomes and mental health issues, sometimes manifesting as physical symptoms (García-Moreno et al., 2005). Despite this, Vine, Elliott, and Keller-Olaman (2010) note that it is proving difficult "to place domestic violence on the policy and/or public health agenda" (p. 339). Moreover, the Director-General of the WHO has highlighted the need to raise awareness of domestic violence to further our understanding of the problem, and implement appropriate interventions (García-Moreno et al., 2005).

Domestic Violence in Scotland

Reliable prevalence rates for domestic violence are notoriously difficult to obtain with systematic underreporting by

victims and political denial often contributing to spuriously low figures. However, the Scottish Government acknowledges that domestic abuse¹ is at an unacceptable level (Scottish Government, 2009), and recent statistics indicate a year-on-year increase in incidents of domestic abuse reported to the police² between 2002 and 2003 (35,877) and 2011 and 2012 (59,847). The majority of these incidents occurred in the Strathclyde Police jurisdiction,³ with the majority of victims being female (Scottish Government, 2012). Further, recent media reports (e.g., BBC, 2009, 2011a, 2011b, 2011c) have documented an apparent increase in the number of domestic incidents⁴ reported to Strathclyde Police each time the two biggest football (soccer) clubs in Scotland, Glasgow Rangers⁵ and Celtic (traditionally referred to as the "Old Firm") play one another.

Sport-Related Domestic Violence

Although much of the literature on sport and domestic violence has focused on partner abuse by male athletes (Young,

¹University of St. Andrews, UK

²University of Cambridge, UK

Corresponding Author:

Damien J. Williams, School of Medicine, University of St. Andrews, North Haugh, St. Andrews, KY16 9TF, UK.

Email: djw11@st-andrews.ac.uk

2012), there is evidence of a link between sporting events and increased levels of domestic violence in wider society (Brimicombe & Café, 2012). Palmer (2011) discusses the role of the “holy trinity” (see Wenner, 1998) of sports, alcohol, and hegemonic masculinity in the context of domestic violence. Sporting events are commonly associated with excessive alcohol consumption (e.g., Crawford et al., 2001). The disinhibiting effects of alcohol mean that certain individuals may become more prone to impulsive behaviors (Klostermann & Fals-Stewart, 2006) and be driven by the contextualized emotional cues of a sports event to perpetrate domestic violence. Furthermore, Palmer (2011) indicates that certain aggressive team sporting events are associated with “increased competitive tensions and aggressive forms of masculinity” (p. 15). The expression of this masculine identity can take the form of unprovoked and often spontaneous outbursts of violence both publicly and privately. Indeed, Radford and Hudson (2005) identify the danger to women (and children) of the heavily masculinist values that can hold together supporters of a local sport team. In addition, televised sporting events may exacerbate the problem by promoting the expression of masculinity and alcohol consumption (either unrestricted at home, or in licensed premises where there are fewer constraints than at sporting venues; see Gantz, Bradley, & Wang, 2006) among a large number of individuals.

Much of the work supporting the association between sport and domestic violence has been limited to the United States and American football (e.g., Card & Dahl, 2011; Gantz et al., 2006; Nelson, 1994; White, Katz, & Scarborough, 1992). What is more, various studies have failed to find an association between sport and domestic violence in different contexts (e.g., Braaf & Gilbert, 2007; Sachs & Chu, 2000), therefore questioning the reliability of the association and generalizability to other sports and countries. It has been recommended that further research is required to analyze and interpret any possible association between sport and domestic violence (Palmer, 2011). Indeed, there is a particular paucity of such research in the United Kingdom (cf. Radford & Hudson, 2005). One area in particular need of rigorous study is the relationship between Old Firm football matches and domestic violence.

Old Firm and Domestic Violence

The Old Firm fixture between Glasgow Rangers and Celtic has long-standing connections with conflictual political and religious identities (see Murray, 1984). As a consequence, matches between the two teams have often been blighted by incidents of collective violence and sectarianism (Carnochan & McCluskey, 2011). More recently, however, there has been increasing concern regarding the impact of this fixture on violence against women. Indeed, the fact that the First Minister of Scotland was questioned on the issue in the Scottish Parliament on March 3, 2011, highlights political

perceptions of the severity of the issue (Scottish Parliament, 2011). Moreover, in the same month, a Joint Action Group (JAG) was established “to maintain and protect the good reputation of Scottish football and to contribute positively to efforts to tackle wider social issues—in particular alcohol misuse, violence and bigotry” (p. 1), with a specific interest in “improving an understanding of the relationship between football and domestic abuse” (p. 4), particularly around Old Firm matches (JAG, 2011).

Evidence for Old Firm–Related Domestic Violence

In Scotland, concern regarding the apparent increase in the number of reports of domestic incidents associated with Old Firm matches has arisen in response to media reports based on Strathclyde Police data. However, there are a number of limitations in the analyses described in these media reports. First, figures for individual Old Firm matches are generated for the whole weekend or the day after the match. These are then crudely compared with those of an “average”⁶ weekend (BBC, 2011b) or an individual day after the match with the same day the previous week (BBC, 2011c). Both these approaches are limited due to insufficient data points, and the former is also potentially confounded due to seasonality effects evident in trends of domestic violence (e.g., Braaf & Gilbert, 2007; Farrell & Pease, 1994). To mitigate these issues, it is necessary to make comparisons between a greater number of data points with comparable time periods (e.g., the same day of the week and time of day). Second, no attempt has been made to explore whether the association is simply the result of high-profile football matches being played in the city (and related underlying variables that could account for increased levels of domestic abuse), such as through a comparison of Old Firm matches with Scotland International matches played at Hampden Park in Glasgow. Both these occasions present an opportunity for excessive consumption of alcohol and the expression of hegemonic masculinity, which have been associated with incidents of sport-related domestic violence.

This study represents a preliminary analysis of reported domestic incidents in the Strathclyde Police jurisdiction. A comparison is made between Old Firm matches and two sets of comparator data: non–Old Firm days, seven days after a match, to investigate the impact of Old Firm matches, and Scotland Internationals (played at Hampden Park, in Glasgow), to investigate the potential impact of high-profile football matches in the city. We hypothesize that the number of reported domestic incidents will be significantly higher for the Old Firm condition than the non–Old Firm comparator. Due to the unknown impact of high-profile football matches in the city, we reserve prediction as to whether the Old Firm condition will differ from the Scotland International condition, and whether this in turn will differ from non-Scottish International comparator days 1 week after matches.

Table 1. Total Number of Reported Domestic Incidents for Each of the Four Study Years.

Year	Total number of reports
2008	28,367
2009	28,106
2010	26,416
2011	28,585

Method

Data comprised anonymized reports of domestic incidents to Strathclyde Police for the period January 1, 2008, to December 31, 2011. This included

Any form of physical, sexual or mental and emotional abuse which might amount to criminal conduct and which takes place within the context of a relationship . . . between partners (married, co-habiting, civil partnership or otherwise) or ex-partners. The abuse can be committed in the home or elsewhere. (Police Scotland, n.d.)

In total there were 111,474 reported incidents across the 4 years (see Table 1).

To compare the reports of domestic incidents, four categories of data were created.

- Old Firm: Reported incidents were calculated for the 24 hour period following the kick-off (start of play) for each Old Firm match, including league ($n = 17$) and cup ties ($n = 4$), which were identified from the Scottish Premier League, Scottish Football Association, and Scottish Football League websites.
- Old Firm comparator: For each Old Firm match, the exact same 24 hour period seven days after the match was taken as its comparator (e.g., the Old Firm match played on Saturday March 29, 2008, was compared with data for Saturday April 5, 2008).
- Scotland International: Reported incidents were calculated for the 24 hour period following the kick-off for each Scotland International match, including competitive ($n = 8$) and friendly ($n = 5$) games played at Hampden Park in Glasgow, which were identified from the Scottish Football Association website.
- Scotland international comparator: For each Scotland International match, the exact same 24 hour period seven days after the match was taken as its comparator (e.g., the Scotland International match played on Saturday September 5, 2009, was compared with data for Saturday September 12, 2009).

All dates are shown in the appendix. Although a check was made that there was no clash between a comparator date and another Old Firm match or Scotland International, no consideration was made for whether another football match

was being played in Glasgow, or whether either Rangers or Celtic were playing other rival teams. Comparator data for the Old Firm match held on December 28, 2011, was unavailable (the data set did not extend to 2012), and so the comparator was taken as seven days prior to the match for this one instance.

The count of reported domestic incidents associated with each data point was taken from the time of kick-off for a 24 hour period. Thus, for an Old Firm match that kicked-off at 12.30 p.m. on a Sunday, all reported incidents from 12.30 p.m. Sunday to 12.29 p.m. Monday were included. This approach was chosen for consistency across groups and to ensure that each data point passed through a 24 hour cycle. Keeping this time period consistent and matching each football fixture with a comparator taken from the same day of the week ensured that comparator conditions were as similar as possible (accounting for other background variables) to the match days (Old Firm and Scotland International matches). Counts were undertaken independently by D.J.W. and F.G.N. and any inconsistencies checked. Data analysis was likewise undertaken independently by D.J.W. and F.G.N., using SPSS version 19.

Results

Table 2 shows the descriptive statistics for each of the four conditions. It is evident from the data that for both measures of central tendency the Old Firm condition had the highest number of reports of domestic incidents, with the remaining three conditions having similar numbers of reports.

Table 2. Descriptive Statistics.

Condition	Reports of domestic incidents				
	N	M	SD	Median	Range
Old Firm	21	118.48	25.02	121.00	72-164
Old Firm comparator	21	73.29	22.01	66.00	44-133
Scotland International	13	78.69	22.07	72.00	51-123
Scotland International comparator	13	78.38	21.21	78.38	54-117

Exploration of the characteristics of the data set indicated that there was some deviation from normality and equality of variance suggesting that the core assumptions for undertaking ANOVA were not met. Thus, the nonparametric equivalent independent-sample Kruskal–Wallace test was undertaken to compare reported domestic incidents between the four conditions, $\chi^2(3, N = 68) = 26.43, p < .001$. Subsequent comparisons using an adjusted alpha (to account for the multiple comparisons) identified the location of the difference (see Figure 1).

It was found that the median number of reported domestic incidents was significantly greater in the Old Firm condition, compared with the Old Firm comparator and both Scotland International conditions. Moreover, there was no statistical

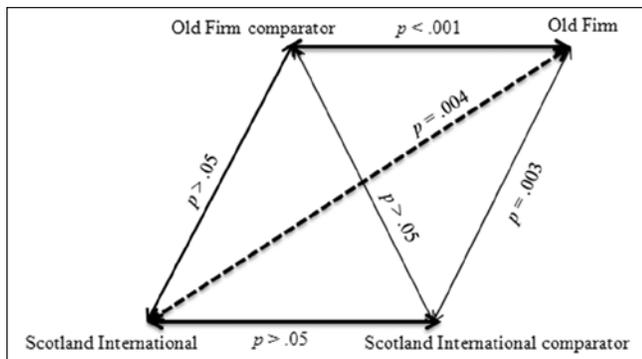


Figure 1. Statistical outcome of the multiple comparisons of the four conditions.

difference between the Scotland International and Scotland International comparator conditions. Additional comparisons indicated a statistically significant difference between Old Firm and Scotland International comparator conditions, but none between Scotland International and Old Firm comparator conditions.

Discussion

Recent data from the Scottish Government (2012) indicate the increasingly visible problem of domestic abuse in Scotland. What is more, these data indicate that the problem is most prevalent in the Strathclyde Police jurisdiction (which includes Scotland's largest city, Glasgow) and mostly has an effect on females. There is also mounting concern over an apparent increase in levels of domestic abuse associated with Old Firm matches (see BBC, 2009, 2011a, 2011b, 2011c; JAG, 2011). However, this link has been reported in the media based on crude comparisons of limited data sets. The aim of this initial study was to develop a robust analytical approach to undertake a preliminary exploration of the association between Old Firm matches and reported domestic incidents in the Strathclyde Police area.

The current study compared reported domestic incidents for the 24 hours following all 21 Old Firm matches between 2008 and 2011, with comparator conditions. First, the number of reported incidents associated with Old Firm matches was significantly greater than the number of incidents recorded seven days later (non-Old Firm days), thereby confirming our hypothesis. Second, there was no difference in the number of reported incidents associated with Scotland International matches hosted in Glasgow and the number of incidents reported seven days later (when there was no Scotland International match). Finally, there were significantly more reported incidents associated with Old Firm matches than Scotland International matches. These findings suggest that there were a greater number of reported domestic incidents associated with Old Firm matches. The fact that

there was no significant difference in the number of reported incidents following Scotland Internationals suggests that the Old Firm difference is not merely due to the presence of a high-profile football match in the city (and potentially the excessive alcohol consumption and hegemonic masculinity often associated with such events). The significant difference between the numbers of reported incidents during the 24 hours following an Old Firm match compared with the same period seven days later, suggests that the effect is not a consequence of seasonality or weekday differences in domestic violence.

The comparisons between the Old Firm and Old Firm comparator, and Scotland International and Scotland International comparator conditions, provide compelling evidence of an effect of the Old Firm matches on reports of domestic incidents. However, the analysis does have a number of limitations. First, the comparison between the Old Firm and Scotland International conditions should be interpreted with a degree of caution because there were almost half the number of data points in the latter, and the days and time cycles (i.e., start and finish times) for which reported incidents were calculated are not directly comparable: the majority of Scotland International matches were played mid-week during the evening, whereas the majority of the Old Firm matches were played on the weekend, mid-afternoon. Furthermore, five of the 13 Scotland Internationals were friendly matches compared with the competitive nature of each of the Old Firm matches. Although we acknowledge these differences as not representing a like-for-like comparison, we do believe these matches still represent a useful comparator.

In addition, the follow-up period of 24 hours may be too short to capture all associated reports of domestic incidents, and exclude relevant incidents reported prior to kick-off. However, our approach offers many advantages over the analytical method used in previous reports. First, an important consideration when inferring an association is the issue of temporality. With this in mind, it was felt that incidents reported after the start of a football match were more likely to be associated with that game than those that occurred prior to the start of the match.⁷ The association of reports of domestic incidents in the lead up to matches could, however, be a worthy topic for future research. What is more, our approach is preferable to previous analyses which examined whole weekends as single data points (as was the case in BBC, 2011b), thereby making the assumption that an incident reported in the early hours of Saturday morning was relevant to an Old Firm match that was not played until mid-afternoon on the Sunday.

Finally, it is acknowledged that police data may underestimate the true level of domestic violence as not all incidents are reported. Indeed, it has been recommended that health data be used in violence research as it provides a more valid indicator of levels of violence (e.g., Florence, Shepherd,

Brennan, & Thomas, 2011), and sport-related violence specifically (Sivarajasingam, Moore, & Shepherd, 2005). However, there are limitations in this approach such as capturing incidents among outpatients (see Carnochan & McCluskey, 2011) unless specific surveillance systems are set-up to collect the necessary data.⁸ Although our approach may underestimate the true impact of Old Firm matches on domestic violence, it nonetheless offers a conservative estimate of the severity of the problem, and any underestimation is likely to be consistent between our conditions.

We echo Palmer's (2011) call for further research to interpret and understand the association between sport and domestic violence. In the context of the Old Firm, we advocate a mixed-methods approach. First, by undertaking a more thorough analysis of the available police data (i.e., the impact of time, location, outcome of match, and location of reported incident) and cross-referencing this with health data, it will be possible to conduct a more fine-grained analysis of the phenomenon. Second, future research should also involve the collection of primary data (including the use of qualitative methods) to further unpick the narratives of sport-related

domestic violence. In the specific case of the Old Firm, this would include consideration of the traditionally antagonistic and politically complex nature of the fixture (see Murray, 1984).

In summary, this article describes an initial study, which concludes that there is a significant association between Old Firm football matches and reports of domestic incidents in the largest police jurisdiction in Scotland. Although our analysis precludes identification of the mechanism of this relationship, we do suggest that the Old Firm effect is not merely due to the presence of a high-profile football match in the city (and potentially the excessive alcohol consumption and expression of hegemonic masculinity that is often associated with such events), or seasonality, or weekday effects. Nonetheless, we acknowledge the limitations of the approach adopted and identify avenues for further work to better understand this association. It is hoped that such work will not only inform preventive interventions to tackle the association between Old Firm football matches and domestic violence, but will add to the literature advocating for prevention efforts to address sport-related domestic violence more generally.

Appendix

Data Points for Each Condition

Old Firm	Old Firm comparator	Scotland International	Scotland International comparator
29/03/2008	05/04/2008	26/03/2008	02/04/2008
16/04/2008	23/04/2008	20/08/2008	27/08/2008
27/04/2008	04/05/2008	11/10/2008	18/10/2008
31/08/2008	07/09/2008	19/11/2008	26/11/2008
27/12/2008	03/01/2009	01/04/2009	08/04/2009
15/02/2009	22/02/2009	05/09/2009	12/09/2009
15/03/2009	22/03/2009	09/09/2009	16/09/2009
09/05/2009	16/05/2009	03/03/2010	10/03/2010
04/10/2009	11/10/2009	07/09/2010	14/09/2010
03/01/2010	10/01/2009	12/10/2010	19/10/2010
28/02/2010	07/03/2010	10/08/2011	17/08/2011
04/05/2010	11/05/2010	03/09/2011	10/09/2011
24/10/2010	31/10/2010	06/09/2011	13/09/2011
02/01/2011	09/01/2011		
06/02/2011	13/02/2011		
20/02/2011	27/02/2011		
02/03/2011	09/03/2011		
20/03/2011	27/03/2011		
24/04/2011	01/05/2011		
18/09/2011	25/09/2011		
28/12/2011 ^a	21/12/2011 ^a		

^aComparator match taken as 7 days prior to target (Old Firm) match.

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Notes

1. The terms *domestic violence* and *domestic abuse* are often used interchangeably. Although we favor the use of the former, we will use the latter when referred to by other authors to reflect any nuance in usage between the two terms.
2. This may not be indicative of a true increase in the level of domestic abuse, but rather an increase in the reporting of such incidents.
3. Prior to the amalgamation of the eight regional forces into Police Scotland from April 1, 2013, Strathclyde Police was the largest regional police force in Scotland, and served the city of Glasgow, and the neighboring areas of Argyll and Bute; East, North, and South Ayrshire; East and West Dunbartonshire; Renfrewshire; East Renfrewshire; Inverclyde; and North and South Lanarkshire. The Strathclyde Police jurisdiction covered an area of 13,624 km² with a population of approximately 2.25 million, which is 42.5% of Scotland's population, with Glasgow accounting for approximately 593,000 of Strathclyde residents (National Records for Scotland, 2011).
4. The term *domestic incident* was exclusively used by Strathclyde Police when recording any report of domestic abuse (personal communication, Scottish Violence Reduction Unit).
5. In 2012 Rangers went out of business and were reformed as "The Rangers" in the Scottish Third Division. With Celtic remaining in the Scottish Premier League, they are unlikely to play one another until 2015, unless the teams draw each other in a cup competition or the leagues are substantially restructured.
6. An average day/weekend is reported by the media as presumably being the mean number of incidents over the course of a year (e.g., BBC, 2011b).
7. It is acknowledged that there is potential for reports of domestic incidents to occur prior to kick-off, which may be associated with factors linked to the "pre-match build-up." However, there is no indication of how long before kick-off would be an appropriate follow-up period, and many incidents during the 24 hour cycle (necessary to control for the influence of time of day) would most likely be unrelated to the fixture.
8. We argue that police data provide an important perspective on the problem to which the addition of health and self-report data will facilitate a more complete understanding.

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Author Biographies

Damien J. Williams is Lecturer in Public Health Sciences in the School of Medicine at the University of St. Andrews. His research interests are in violence prevention, behavior change, and health promotion. He was jointly awarded the Elizabeth Russell award from the Faculty of Public Health for his work evaluating the Glasgow Community Initiative to Reduce Violence.

Fergus G. Neville is Research Fellow in the School of Medicine at the University of St. Andrews. His research interests include violence prevention, social norms and behaviour change, and crowd behaviour.

Kirsty House is a medical student at the University of Cambridge, having completed a pre-clinical degree at the University of St. Andrews.

Peter D. Donnelly is Professor of Public Health Medicine in the School of Medicine at the University of St. Andrews. His two main areas of interest are violence reduction and health systems where he works with researchers, practitioners, politicians, and organizations from around the world, including the World Health Organization and the Milbank Memorial Fund. He was the joint recipient of the Elizabeth Russell award from the Faculty of Public Health for his work evaluating the Glasgow Community Initiative to Reduce Violence.