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How do professional Australian Football League (AFL) players utilise social media during periods of injury? A mixed methods analysis

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ABSTRACT

Objectives: The objective of this study was to explore how social media is used by a population of injured professional athletes, by comparing the content and frequency of posts on social media, pre and post-injury.
Design: A retrospective mixed methods design was utilised.
Methods: Professional Australian Football League (AFL) players, injured during the 2015 season, were included in the study. Publicly accessible social media profiles for these players were identified on Twitter and Instagram. All posts published on verified profiles, from four weeks prior to injury until return to play, were extracted. Thematic analysis was used to investigate the content of these posts, while univariate and multivariate linear regression was used to investigate the frequency of posts during this time period.
Results: Two reoccurring themes were identified exclusively post-injury; 'supporting team from the sideline' and 'sharing information about injury and rehabilitation'. The frequency of total posts did not differ significantly pre and post-injury, but the frequency of injury related posts increased in the immediate post-injury phase, then decreased between 4–8 weeks and 8–12 weeks post-injury. The frequency of injury related posts was higher with more severe injuries.
Conclusions: The findings of this study suggest that injured players use social media to seek social support from their followers, especially in the immediate post-injury period and after sustaining a severe injury. The role of social media in injury rehabilitation may warrant further investigation, to determine if it could be used to facilitate return to play.

1. Introduction

Injuries can result in physical and psychological impairments, both of which have a flow on effect on participation in everyday life.[1] The response to injury is moderated by a number of environmental and personal factors.[1] In the professional athlete, this response to injury is complex and often pronounced.[2,3] Feelings of frustration, anxiety, depression, anger and/or isolation are common and can potentially impact on an athlete's rehabilitation outcomes.[2] Therefore, the psychology of the injury, and of recovery, has become an important element in the rehabilitation of professional athletes.

The popular integrated model of response to sports injury suggests that an athlete's cognitive appraisal of their injury and rehabilitation, is directly influenced by personal and situational factors.[3] This cognitive appraisal influences emotional and behavioural responses, which can significantly impact on rehabilitation outcomes.[3] Emotional responses can affect psychosocial recovery, while behavioural responses, such as adherence to rehabilitation or withdrawal from team activities, can affect both psychosocial and physical recovery.[2,4] Furthermore, athletes who return to sport have been shown to have significantly higher levels of motivation, confidence and positive emotions, when compared to those who have not.[5]

In order to positively influence an athletes' response to injury and facilitate return to sport, psychological interventions are commonly used as part of sports injury rehabilitation.[2,6] One such intervention, provision of social support, has been associated with

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the psychological response to injury, with higher levels of support resulting in a decreased negative emotional response to injury.[7,8] In the integrated model of response to sports injury, social support influences an athlete's appraisal of their injury and engagement with this support is a positive behavioural response.[3] However, in order to be effective, social support must be provided at the correct time, by the correct source, in the correct form (e.g. emotional support from family whilst the athlete is reacting to their injury).[2]

Injury support groups, where athletes can connect with others who have suffered similar injuries, have been shown to be useful in the provision of social support.[9] In a similar way, social media platforms could be used to provide social support to injured individuals. In the decade from 2005 to 2015, the reported use of at least one social media platform by young adults (18–29) increased from 12% to 90%.[10] This trend has also been observed in the professional athlete population.[11] One major use of social media in this population, is personalised, unfiltered communication between athletes and their friends, family, fans and teammates.[12] This not only gives fans an inside look into their favourite athletes' personal lives, but also provides a medium for athletes to receive support from their followers. To our knowledge, there is no literature available which observes the usage of social media by professional athletes when injured. Therefore, the aim of this study was to explore how social media is used by professional athletes when injured, by comparing the content and frequency of social media usage pre and post-injury.

2. Methods

This study utilised a retrospective mixed method design to analyse both qualitative and quantitative aspects of injured professional athletes' social media usage.[13] The qualitative component used a grounded theory approach to investigate what athletes post on social media when injured.[14] The quantitative component then compared the frequency of social media use pre and post-injury. Ethics approval for this study was sought and received from the Monash University Human Research Ethics Committee (MUHREC) and was conducted according to the National Statement on Ethical Conduct in Human Research.[15]

Australian Football League (AFL) players injured during the 2015 season were eligible for inclusion in the study if they satisfied the following criteria: (1) on the team list of one of the 18 AFL clubs involved in the 2015 season, (2) injured following the start of Round 1 (02/04/2015) resulting in at least 1 missed game, and (3) not present on the injury list due to suspension. Players were sourced using the official AFL injury list[16] and official club websites. Players were not excluded if they were injured on multiple occasions; instead each injury was recorded as a separate injury incident. In order to achieve a 99% confidence level with a margin of error of 5%, the first 335 of the 673 injuries that occurred in the 2015 were analysed.[24] In order to analyse typical in-season injuries, the authors analysed the first 335 injuries to occur, instead of a random sample which may have resulted in a pre-finals injury being included in the analysis.

Publicly accessible social media profiles of eligible players were identified on two social media platforms, Twitter[17] and Instagram.[18] These social media platforms were selected because: (1) profiles are often publicly accessible, (2) individuals can display text on their profile and (3) profiles were able to be authenticated. Additionally, a report by Duggan[19] found that Twitter and Instagram are the 2nd and 3rd most frequently used social media platforms by young adults (18–29 year olds). Profiles on Twitter were accepted as authentic profiles if they had been verified by Twitter,[17] while Instagram profiles were accepted as authentic if they had been listed as the player's official account on a verified Twitter profile. Following this process, NVivo 11 software[20] was used to extract all posts made by each individual player on Twitter and Instagram prior to January 2016.

Each eligible player's age, injury type, injury location, date of injury and date of return were accessed from the official AFL injury list[16] and official AFL websites. These data were used to classify the severity of each injury by the time taken to return to play, either in the first team or the reserves: short-term lasting 1–13 days, medium-term lasting 14–28 days and long-term lasting >28 days.[21,22] The qualitative analysis reviewed posts extracted from Twitter for two time periods: (i) four weeks prior to injury and (ii) from the date of injury until return to play. The quantitative analysis identified the number of total posts and injury related posts on Twitter and Instagram for four time periods: (1) four weeks pre-injury, (2) four weeks post-injury, (3) 4–8 weeks post-injury and (4) 8–12 weeks post-injury. This method was used to determine if there was a pattern in social media usage over an extended period post injury.

Thematic analysis, following a grounded theory approach,[14] was used to explore the content of one social media platform, Twitter, pre and post-injury. Two researchers (BN, LF) independently examined social media posts on Twitter from two periods: (1) 4 weeks prior to injury and (2) date of injury until return to play. For each time period, analysis was completed until saturation of themes occurred. A five step process was used: (1) investigators familiarised themselves with the raw data, (2) reoccurring words and phrases were identified as codes (3) similar codes were grouped into categories, which were then organised to develop preliminary themes, (4) preliminary themes were explored in relation to the raw data and initial codes and (5) final themes were established.[23] After individual analysis, the two investigators compared findings and any disagreements were resolved by discussion. A third investigator (SM) was consulted if a disagreement could not be resolved via discussion.

For quantitative analysis, data from Twitter and Instagram were combined for each of the four time periods due to the relatively small sample and the low number of posts by each individual player. Player ages were grouped into tertiles for analysis ($\leq$20 years, 21–25 years, $\geq$26 years). Data are presented as means $\pm$ standard deviations (SDs) or frequency data. The analysis of posts made by players used a stepwise multivariate linear regression of apriori predictors to determine the effect of age groups, time, injury type and injury severity, on the number of total and injury related posts. The pre-injury time point was dropped for the injury related post analysis, and the immediate post-injury period (0–4 weeks) was used as the reference. Statistical significance was assigned when $P < 0.05$.

3. Results

Of the 335 included injuries, 5.4% (n = 18) were classified as re-injuries. 51.6% were sustained by a player with a verified Twitter account and 23.0% had an associated verified Instagram account. In regards to injury severity, 28.1% of injuries were short-term, 29.8% were medium-term and 42.1% were classified as long-term. The mean age (SD) of all players included in the study was 23.6 (4.2) years. The age of players with no verifiable accounts was 24.0 (4.4) years, while players who had both Twitter and Instagram had a mean age of 22.2 (3.6) years.

Saturation in thematic analysis was achieved after analysis of 81 injuries in the pre-injury period and 68 injuries in the post-injury period. Two themes were identified detailing what AFL players use social media for when injured (Table 1). Eight themes were identified that detailed what AFL players use social media for when uninjured (Supplementary Table 1). Seven of these themes were

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