A COMPARATIVE STUDY OF INJURIES TO DIFFERENT FIELD POSITION AMONG AGED GROUP FOOTBALL PLAYERS

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Abstract

The aim of the present study was to compare the injuries to different field position among aged group football players. The investigator has made an attempt to classify or define the groups of footballers based on age. Accordingly three groups of footballers were targeted; Junior, Young and senior group football players aged between 14 to 30 years. The investigator personally contacted the players and the purpose of the study was explained to them. Further instructions were given by the investigator to the players for the completion of questionnaire. A questionnaire prepared by Cromwell & Gromely (2000) for elite Gaelic football players and modified by the investigator was used. The information of injuries collected from 685 football players of three groups Total 480 injuries out of 388 football players were found out over the one year of the period. Means, Standard deviations, one way analysis of variance and Scheffee post hoc test were utilized to compare and identify the incidence of injuries among three groups of competitive footballers. The result reveals that there was statistically significant differences of incidence of injuries was found in center forward ($F = 28.16$, $P < .05$),right full back ($F = 7.18$, $P < .05$), left full back ($F = 13.12$, $P < .05$), out Side left forward($F = 3.47$, $P < .05$), center halves($F = 12.60$, $P < .05$) and non specific midfielder ($F= 11.70$, $P < .05$) in relation to different field positions.

Keywords: Injuries, Risk, Incidence and Position.

Introduction

Football is one of the most popular sports in the world. Currently FIFA Unifies 203 National associations and represents about 200 million active players of which about 40 million are women. The incidence of football injuries is estimated to be 10-35 per 1000 game hours. One athlete plays on average 100 hours of football per year. From 50 hours per players of a local team up to 500 hours per player for a professional team. 50 every player will have minimum one performance limiting injury per year. Australian football association, surveyed injuries between 1992 to 1998. There were 4681 injuries, that satisfied the definition of missing a regular season game, over 97706 players in a weeks. players from team in Northern states were slightly (14%) more likely to be injured then players from teams in victoria (RR 1.14, 95% C1 1.07 – 1.21). There was no significant difference in the risk for any of the categories of upper limb trunk or head and neck injuries. Many of the lower limb injury categories had greater incidence in players from Northern teams, including ankle injuries (RR 1.71, 95% C1 1.36 – 2.58), Calf strain (RR 1.35, 95% C1 1.03 – 1.71). Football is a high risk sport dominated by overuse injuries while recovery time from injuries is relatively long, but only a few working days are lost by the players to return back to play, thus leading to abuse of the injured sites. In football only a few studies have been made in the literature regarding incidents of injury and pattern, possible risk factors and injury prevention (Winter Griffith, 1989; Wastan. 1993; Junge, 2004). In football overuse injuries are the most frequent incidences of injury; and injuries are traditionally divided into contact and non contact mechanism in which case contact refers to players contact. Some of the forces involved in a non contact injury are transmitted from the playing surface to the injured body part. Football is sports that make heavy demands on the player. The physical work is intermittent involving high intensive activity interspersed with short pauses. When the time of exposure is taken into account, men have a higher injury risk than women and recreational player a high risk than elite players. Contrary to most other sports the relative injury risk is higher during training than in match. The scarcity of research in comparison of injuries to different field position to aged group football players so the investigator has taken a study.

Materials and Methods

The present study deals with comparison of injuries in different field position. The investigator has made an attempt to classify the footballers based on the aged. Accordingly three groups of footballers were targeted. Junior, young and senior group football players aged between 14 to 30 years. The data was collected with the help of questionnaires prepared by Cromwell, F.J. Walsh Gromley for Elite Gaelic footballers (2000) and it was modified by the investigator and utilized. The subjects were required to fill out a questionnaire for each injury for one year. The information of injuries collected from 685 football players of three groups Total 480 injuries out of 388 football players were found out over the one year of the period. This explores and measures the injuries incidence in three group football players. The groups are junior (aged14-18), Young (aged19-24) and senior (aged 25-30) groups football players.

Research Design

The design in a research study refers to "the researcher's overall plan for answering the researcher's question or testing the research hypotheses. This study involves a comparative

survey of injuries in different field position among three group of football players in a non-experimental, retrospective study design.

Statistical Analysis

Statistical techniques play very significant role in the interpretation of numerical data obtained from individuals by giving numerical expressions to the relationships and the variations with respect to different aspects. Keeping in view the aim of the study. The statistical computation of data of the present study is used by using SPSS package in the computer. The result computed also crosschecked by using following statistical variables.

Results and Discussion

This section is dedicated to the presentation of results along with the discussion of present study. The results and discussion have been presented in concise and comprehensive manner that is easy to understand. Comparison of injuries in different field position among three groups of competitive footballers. The primary aim of the study was to statistically compare the incidence of injuries at with the help of one way analysis of variance. The results concerning this are presented in the form of tables For the sake of convenience and methodical presentation of the results, following order has been adopted.

TABLE – 1

MEAN SCORES AND STANDARD DEVIATION OF INCIDENCE OF INJURIES IN RELATION TO DIFFERENT FIELD POSITION AMONG THREE GROUPS OF FOOTBALL PLAYERS

S. No	Field Position	Football players	Number	Mean Scores	Standard Deviations
1	Left Full Back	Young	16	1.37	0.44
		Junior	14	1.00	0.32
		Senior	05	1.20	0.36
2	Left Halves Back	Young	15	1.33	0.41
		Junior	18	1.16	0.38
		Senior	05	1.40	0.46
3	Right Full Back	Young	18	1.37	0.45
		Junior	24	1.87	0.62
		Senior	03	2.00	0.86
4	Inside Left (forward)	Young	11	1.45	0.49
		Junior	18	1.16	0.38
		Senior	03	1.66	0.56
5	Outside Left (Forward)	Young	13	1.30	0.43
		Junior	04	1.27	0.50
		Senior	08	1.75	0.56
6	Center Forward	Young	13	2.30	0.75
		Junior	13	1.38	0.46
		Senior	04	1.25	0.41
07	Centre Halves	Young	16	1.50	0.51
		Junior	19	1.39	0.45
		Senior	02	1.00	0.32
08	Non Specific Mid fielder	Young	04	1.00	0.32
		Junior	15	1.06	0.35
		Senior	03	2.00	0.67

As Table- 1, shows that the mean scores and standard deviations of incidence of injuries in relation to different field position among three groups of football players.

The Mean (S.D.) of incidence of injuries in relation to their field positions; the mean score (SDs.) of injuries of young group left full back football players was 1.37 (0.44), junior group was 1.00 (0.32) and senior groups was 1.20 (.29). Mean scores (S.Ds.) of incidence of injuries in relation to different fieldposition young group Left halves Back football player was 1.33 (0.41), junior group was 1.16 (0.38) and senior group 1.40 (0.46). Mean scores (S.Ds.) of incidence of injuries in relation to different field positions young group Right Back football players was 1.37 (0.45), junior group was 1.87 (0.62), and Senior group was 2.00(0.86). Mean scores (S.Ds.) of incidence of injuries in relation to different field positions young group inside left forward football players was 1.45 (0.49), junior group was 1.16 (0.38), and Senior group was 1.66(0.56). Mean scores (S.Ds.) of incidence of injuries in relation to different field positions young group outside left Forward football players was 1.30 (0.43), junior group was 1.27 (0.50), and Senior group was 1.75(0.56). Mean scores (S.Ds.) of incidence of injuries in relation to different field positions young group center forward football players was 2.30 (0.75), junior group was .38 (0.46), and Senior group was 1.25(0.41). Mean scores (S.Ds.) of incidence of injuries in relation to different field positions young group center halves football players was 1.50 (0.51), junior group was 1.39 (0.45), and Senior group was 1.00(0.32) and Mean scores (S.Ds.) of incidence of injuries in relation to different field positions young group Nonspecific football players was 1.00 (0.32), junior group was 1.06 (0.35), and Senior group was 2.00(0.67).

In order to find out the statistically significant difference of injuries in relation to different field position among three group football players; ANOVA was applied the results of which is presented in Table 2.

TABLE – 2

ANALYSIS OF VARIANCE OF INCIDENCE OF INJURIES IN RELATION TO DIFFERENT FIELD POSITIONS AMONG THREE GROUPS OF FOOTBALL PLAYERS

S. No.	Field Position	Source of Variance	df.	SS	MSS	F-ratios
1.	Center Forward	Between groups	02	06.77	3.38	28.16*
		Within groups	27	03.41	0.12	
2.	Right Full Back	Between groups	02	3.12	1.56	7.18*
		Within groups	42	9.12	0.27	
3.	Left full back	Between groups	02	1.05	0.52	13.12*
		Within groups	32	1.45	0.04	
4.	Out Side left forward	Between groups	02	01.39	0.69	3.47*
		Within groups	20	04.27	0.21	
5.	Center halves	Between groups	02	5.81	2.90	12.60 *
		Within groups	37	8.68	0.23	
6.	Inside left (Forward)	Between groups	02	0.98	0.49	2.45NS
		Within groups	29	5.89	0.20	
7.	Left halves back	Between groups	02	0.33	0.16	0.12NS
		Within groups	35	9.45	0.25	
8.	Non Specific midfielder	Between groups	02	2.34	1.17	11.70*
		Within groups	19	1.93	0.10	

NS = Not Significant.* Significant at .05 level.

As per Table 2 , indicates the analysis variance of injuries in relation to different field position among three group of football players. In order to find out the difference of incidence of

injuries in relation to different field position among three group football players. F-ratio was computed for each field position separately. Total out of eight field position are included in this present study. Difference of incidence of injuries was calculated for only eleven different field position. In case of others field position not reported by senior group football players hence others field position could not be included in these field positions. The data given in Table 2 show that there was statistically significant differences of incidence of injuries was found in center forward (F = 28.16, P < .05),Right Full back (F = 7.18, P < .05) ,Left full back (F = 13.12, P < .05),Out Side left forward(F = 3.47, P < .05), Center halves(F = 12.60, P < .05) and Non Specific midfielder (F= 11.70, P < .05) in relation to different field positions. However, there was statistically insignificant difference of incidence of injuries were found in Inside left Forward(F= 2.45), and Left halves back(F=1.12) in relation to different field position of football players. In order to locate the incidence of injuries to Center forward among three group of footballs; Scheffe post hoc test was used to statistically comprise the injuries to Center forward among three groups of competitive football players. Table 3 shows the possible comparison for three means.

TABLE – 3
POST HOC OF INJURIES TO CENTER FORWARD AMONG THREE GROUPS OF COMPETITIVE FOOTBALL PLAYERS

Mean Scores				
Young	**Junior**	**Senior**	**Mean difference**	**C.D. at 5% level**
2.30	1.38		0.92	0.84*
2.30		1.25	1.05	0.80 *
	1.38	1.25	0.13	0.80

* Significant at 0.05 level.

Table 3, reveals statistically significant difference of injuries was found between junior and young group football players of center forward field position. Young group football players was found to have got more incidence of injuries as compare than their counter part. Statistically significant difference of injuries to center forward field position was found between Young and senior group football players; Young center forward football players having got more incidence of injuries as compared to Senior center forward football players and no significant difference of incidence of injuries was found between junior and senior group center forward football players.

In order to locate the incidence of injuries to Right full back among three groups of competitive football players; Table 4 shows the possible statistical comparison for three groups mean.

TABLE – 4
POST HOC TEST OF INJURIES TO RIGHT FULL BACK FIELD POSITION AMONG THREE GROUPS OF COMPETITIVE FOOTBALL PLAYERS

Mean Scores				
Junior	**Young**	**Senior**	**Mean difference**	**C.D. at 5% level**
1.37	1.87		0.50	0.27
1.37		2.00	0.63	0.59
	1.87	2.00	0.13	0.41*

* Significant at .05 level.

Table 4, reveals insignificant difference of incidence of injuries found between Junior and Young group Right full back football players. No Statistically significant difference of incidence of injuries was found between young and senior groups Right full back football players group Right Full back football players. Statistically significant difference of injuries found between junior and senior groups Right full back football players. Senior group Right full back football players reported more injuries as compare than junior group football players.

TABLE – 5
POST HOC STATISTICAL OF INJURIES TO LEFT FULL BACK AMONG THREE GROUPS OF COMPETITIVE FOOTBALL PLAYERS

Mean Scores				
Young	**Junior**	**Senior**	**Mean difference**	**C.D. at 5% level**
1.37	1.00		0.37	0.32*
1.37		1.20	0.17	0.45
	1.00	1.20	0.20	0.46

* Significant at 0.05 level.

Table 5, reveals statistically significant difference of incidence of injuries found between Junior and Young group Left full back football players. Junior group football players incur significantly less incidence of injuries as compare than young group football players. No statistically significant difference of incidence of injuries was found between young and senior group Left full back football players. No statistically significant difference of injuries found between junior and senior group Left full back football players.

TABLE-6
POST HOC STATISTICAL OF INJURIES TO OUT SIDE LEFT FORWARD AMONG THREE GROUPS OF COMPETITIVE FOOTBALL PLAYERS

Mean Scores				
Young	**Junior**	**Senior**	**Mean difference**	**C.D. at 5% level**
1.30	1.75		0.45	0.44*
1.30		1.50	0.20	0.94
	1.75	1.50	0.25	0.95

* Significant at .05 level.

Table 6, reveals statistically significant difference of incidence of injuries found between junior and young group Out Side left forward football players. Junior group football players incur significantly more incidence of injuries as compare than young group football players. No statistically significant difference of incidence of injuries was found between young and senior group Out Side left forward football players. No statistically

significant difference of injuries found between junior and senior groupOut Side left forward football players.

In order to locate the incidence of injuries to Center halves among three groups of competitive football players; Table 7 shows the possible statistical comparison for three groups mean.

TABLE-7

POST HOC TEST OF INJURIES TO CENTER HALVES AMONG THREE GROUPS OF COMPETITIVE FOOTBALL PLAYERS.

Mean Scores				
Young	**Junior**	**Senior**	**Mean difference**	**C.D. at 5% level**
1.50	1.39		0.11	0.42
1.50		1.00	0.50	0.19 *
	1.39	1.00	0.39	0.36*

* Significant at .05 level.

Table 7, reveals (i) insignificant difference of incidence of injuries found between junior and young group Center halves football players. Junior group football players incur significantly less incidence of injuries as compare than young group football players. (ii) Statistically significant difference of incidence of injuries was found between young and senior group Center halves football players. Young group football players got having more incidence of injuries as compared to senior group Center halves football players. (iii) Statistically significant difference of injuries found between junior and senior group Center halves football players. Senior group Center halves football players reported minimum injuries as compare than junior group football players.

In order to locate the incidence of injuries to Non Specific Midfielder among three group of competitive football players; Table 8 shows the possible statistical comparison for three groups mean.

TABLE: 8

POST HOC TEST OF INJURIES TO NON SPECIFIC MIDFIELDER AMONG THREE GROUPS OF COMPETITIVE FOOTBALL PLAYERS

Mean Scores				
Young	**Junior**	**Senior**	**Mean Difference**	**C.D. at 5% level**
1.00	1.06		0.06	0.23
1.00		2.00	1.00	0.20*
	1.06	2.00	0.61	0.16*

* Significant at .05 level.

Table 8, reveals no Statistically significant difference of incidence of injuries found between junior and young group Non Specific Midfielder football players. Statistically significant difference of incidence of injuries was found between young and senior group Non Specific Mid fielder football players; senior group football players got having more incidences of injuries as compared to young Non Specific Mid fielder football players. Statistically significant difference of injuries found between junior and senior group Non Specific Mid fielder football players. Senior group Center halves football players reported maximum injuries as compare than junior group football players.

Discussion

Football requires a variety of physical attributes and specific playing skills, therefore participants need to train and prepare to meet at least a minimum set of physical, physiological and psychological requirements to cope with the demands of the game and to reduce the risk of injury. It is an enjoyable and social sport than can be played from childhood to old age, either at a recreational level or as competitive sports. Football playing largely involves starting, running, slopping, twisting, jumping, kicking, and turning movements that place the players to greater risk of injury (Waston 1993).Several studies are available on injury risk in football related to player position on the field. Other studies have not found differences in injury rate between different playing positions (Ekstrand and Gillquist 1983a; Nielsen and Yde 1989; Luthje et al. 1996; Hawkins and Fuller 1998b; Chomiak et al. 2000). Chomiak et al. found that 33% of injuries occurred on the own half,21% close to the midline and 46% on the opponent half. Rahnama et al. also found that 30% of injuries occurred in the defending area, 40% in the midfield area and 30% in the attacking area. Therefore, most studies have not found any difference in injury risk between different playing positions, but more research is needed that take into account different playing strategy of the participating teams. Consequently, the most important usage of this research is to prevent the incidence of injuries to different field position by identifying injured athletes and to provide preventive strategies. This can be also used in rehabilitation of impairments and disabilities of injured athletes. Ultimately, the findings will increase the awareness of Players, Coaches and physical educates regarding ill effects of injuries and effects of performance

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