

The Application of FIFA 11+ Injury Prevention Program on Youth Football Club in Semarang City

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Abstract. To determine the effectiveness of FIFA 11+ kids as an injury prevention program in male youth football players. In addition, this study will evaluate the implementation of FIFA 11+ as warming up and injury prevention for the youth football club. The quasi experimental and descriptive survey study design was conducted in this study. 24 football clubs in Semarang were observed and analyzed using interviews and questioner. From 24 football clubs, just 20 football clubs have kid's teams between the ages of 9 and 12 in January 2018-June 2020. The total youth athlete is 980 kids. The average time each warming up is 15-20 minutes. The rate of injury during a competition in each game base on how many athletes were injured was fifty. The coach age was sufficient for implementing the program—the coach's license was also an active variable for the success injury prevention program in their athletes.

Keywords: warming up, injury prevention, kids, football

1 Introduction

Football is the most popular sport worldwide [1]. The percentage risk of injury incidence at football during matches was higher than in training [2]. Lower limb and thigh strain was common injury location and dominant muscle injury during tournament and training session [3].

FIFA Marc makes protocol warming up called FIFA 11+ to reduce injury percentage [4]. Various research found a positive effect of the FIFA 11+ program to the athletes [5][6][7][8]. The warming up program performed seven exercises for 15-20 minutes [9]. The exercises are focus on three exercises for unilateral and dynamic stability on the inferior extremity, three exercises for whole body strength and one exercises for falling technique [9].

The effectiveness of warming up the FIFA 11+ program was investigated. Numerous studies found that the FIFA 11+ reduced risk of injury inferior extremity, en-

hanced performance, and physical attributes in football players [4][5][6][8][9][10]. The program positively useful reduce injury rate of 20-50% in football players [11][12]. In Indonesia, a limited study about injury prevention focus on implementing FIFA 11+ in football clubs for youth football players. Therefore, this study aims to investigate the implementation of the FIFA 11+ warming up a program in Semarang football clubs for kids 9 to 12 years old.

2 Methods

A descriptive survey study design was conducted to assess the implementation of FIFA 11+ on Semarang city football clubs [13]. Twenty-four of football clubs in Semarang was recorded. The inclusion criteria were active football clubs and have a program for kids 9 to 12 years old, performed the training program minimum 2 times a week taken part as a participant in this study.

Before data collection, an online webinar meeting held to define the FIFA 11+ program, warming up exercise protocol to injury prevention in athletes. One of the researchers as speakers and explain the application to the coach, and the others supervised the coach training program on football club was used. The coach understand which is FIFA 11+ warming up program and usual warming they usually did.

Assessment for data collection, the coach asked to filled the questioner about the implementation of FIFA 11+ in youth football athletes. The warming up of FIFA 11+ exercise program was implemented during their coaching in 2018-2020.

The FIFA 11+ is an extensive warm-up program with six running exercises at the starting and three exercises to activate the cardiovascular system at the finishing, and six specific preventive exercises especially on core and leg strength, balance and agility with three progressive levels for each exercise, as well as inferior extremity and trunk alignment cues, and it takes for 20-25 minutes' complete program [4][6][8][14].

Data were analyzed using the statistical package for the social sciences (SPSS) version 20. For data analysis to describe the descriptive implementation program FIFA 11+ in Semarang city Football clubs.

3 Results and Discussions

There were on percentage of the active football clubs and have a program for kids.

Table 1. Characteristic of Semarang city football clubs, n=24

Variable Category	Percentage
Active football club	90%
Non active football club	10%
have a training program for kids 9 to 12 years old	83%
The training program for kids > 3 years	83%
The training program for kids < 2 year	17%
The club ever join the tournament in 2018-2020	87.5%
Followed the tournament > 6 times/year	62.5%
Followed the tournament 3-5 times/year	30%
Followed the tournament <2 times/year	8.5%
The exercise frequency (> 3 times/week)	62.5%
The exercise frequency 2-3 times/week	37.5%
The rate frequency of injury in each tournament > 4 athletes	50%
the rate frequency of injury each tournament 2-3 athletes	35%
the rate frequency of injury each tournament <2 athletes	15%
The duration of warm up program each training < 20 minutes	50%
The duration of warm up program each training 10-20 minutes	45%
The duration of warm up program each training < 10 minutes	5 %
The coach applied FIFA 11+ on warming up	8.3%
The coach applied usual warming up	91.7%

Table 2. The percentage Club with kids' football program n=980

Kids Age Program in Semarang Football club	Percentage
9 years	24%
10 years	29%
11 years	24%
12 years	22%

Table 3. The age percentage of the Coach Semarang city football club n=80

Age (year)	Percentage
< 25	20%
25-35	35%
35-45	35%
>45	10%

Table 4. The Football Coach License n=80

Name of License	Percentage
No license	13%
D	67%
C AFC	13%
B	8%
A AFC	0%
Pro AFC	0%

This study aimed to investigate the implementation of the FIFA 11+ warm-up injury prevention program on Semarang city football clubs. The study found that only two clubs which applied the FIFA 11+ warm-up program for injury prevention. The average coach age who applied the FIFA 11+ program was 24 years old.

Based on data collection found that the majority of Semarang football clubs have a program for kids. The dominant kid age was ten years old. In this age, they were followed tournament average seven times per year. Fifty percentage injury rate during the performance in the tournament. It is mean the coach not yet applied the FIFA 11+ warm-up injury prevention in training and before the competition.

The FIFA 11+ program proved to reduce injury rates in youth, young, and adult football athletes [4][5][9][10][12][15][16]. The program also helps to enhance the strength and performance of football athletes [6][7][8][10]. The others advantage of FIFA 11+ studied found that the warm-up protocol program increases the agility, dynamic balance, and flexibility [17][18][19][20].

The numerous study proved the effective FIFA 11+ warm-up injury prevention program. The proved study results were a reason the football clubs suggested to follow the program to reduce athletes from injury.

4 Conclusion

The football clubs which followed the FIFA 11+ warm-up program were minimum in Semarang city. The coach age was sufficient for implementing the program—the coach's license was also an active variable for the success injury prevention program in their athletes.

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