

ABSTRACT

Roller derby is a full contact sport requiring strength and agility to block and maneuver around other skaters on the track in order to score points. Skating requires quick foot movements; including twisting, turning and stopping quickly, that could result in a variety of injuries from bruises to torn muscles and ligaments or broken bones. The primary purpose of the study was to describe the type and frequency of injuries among female roller derby skaters.

Methods

Data were collected from March to June 2015 using an electronic questionnaire. Requests were sent to roller derby leagues of the Women's Flat Track Derby Association (WFTDA) to forward the study information and the link to the electronic questionnaire to individual league members.

Results

Of the 1,278 respondents, 678 (53%) reported having at least one derby-related injury that required medical attention in the last 12 months. The most common injuries were to the knees (28%) and ankles (28%). Of the 75 head injuries, 75% were diagnosed with a concussion. Most of the injuries occurred while blocking (61%), during practices (46%).

Discussion

Knowing the types of injuries that skaters incur may help leagues develop safety policies to prevent injuries. The findings will be used to develop derby specific injury prevention training programs.

CONTACT

Michelle Cathorall, Dr.PH, MPH, MCHES
 Department of Applied Health
 Southern Illinois University Edwardsville
 Email: mcathor@siue.edu
 Phone: 618.650.2876

INTRODUCTION

Women's roller derby started in 1935 in the Midwest. Leo Seltzer, a promoter and creator of roller derby envisioned it as an endurance game that combined elements of football, ice hockey and wrestling (Kobler, 1950; Kearney, 2011). Unfortunately, the sports early associations with wrestling and the theatrics kept the sport from gaining legitimacy (Kobler, 1950). The rules of the sport have generally remained the same throughout the years (Kearney, 2011).

Roller derby is a full contact sport still played on an oval track, although today's game is played on a flat track versus the banked tracks of old. There are two teams of five on the track at time. Each team has three blockers, a pivot and a jammer. The objective is for the jammer to score points for the team by passing the other team's skaters, while the blockers and the pivot block the opposing team's jammer from getting through the pack. Teams simultaneously block the opposing team's blockers and pivot to help their jammer get through the pack of skaters and start scoring.

Injuries in roller derby were written about from the beginning, when the media regularly reported about hospital cases (Kobler, 1950). In the early 2000's derby experienced a revival and has continued to gain popularity since 2006. With the growing popularity of the sport, the number of injuries sustained by roller derby athletes has also increased. There have been a number of studies that have looked at the occurrence and type of injuries to female athletes who play sports similar to roller derby, such as ice hockey, soccer and roller skating. Roller derby is a full contact sport with the increased potential for injury. Women who play roller derby experience injuries, however there are no published studies examining what types of injuries they experience or how frequently they are injured. This data would be helpful to leagues as they train their skaters to try to prevent injuries and improve skater safety.

The primary purpose of the study was to describe the type and frequency of injuries among female roller derby skaters. A secondary purpose was to describe intrapersonal factors related to injuries, including off skates training, age, time skating, and position played.

METHODS

All women who play on roller derby leagues registered with the Women's Flat Track Derby Association (WFTDA) were recruited through the league Facebook page for this study to maximize participation. Snowball sampling was also used to broaden the reach and make sure that leagues that were new and/or not on the WFTDA's website were included. Participation was limited to WFTDA athletes because skaters must pass the same minimum skills tests and teams must follow the same safety guidelines as outlined by the association. Data were collected using an online survey.

The study population consisted of 1,278 female skaters from 526 WFTDA leagues from around the world. Participants had been skating for an average of 4 years. The mean age of skaters was 32 years, with a range of 18-62.

The majority of skaters were: white (93%), non-Hispanic (84%), and had a college degree (68%).

There were 678 injuries reported. 53% of the sample reported having at least one injury compared to 47% who were not injured during the previous 12 months.

- Descriptive statistics were run for all demographic and injury variables.
- Crosstabs were compared to examine differences between injured versus not injured skaters.

PARTICIPANT CHARACTERISTICS

	N=1,278
Years Playing Roller Derby	Mean 4 years (1-11)
Age	Mean 32 (18-62)
Position	
Jammer	24%
Blocker	61%
Pivot	12%
Highest Education Completed	
Some college	27%
Bachelor	42%
Master	21%
PhD or Doctoral	5%
Practice 2-3 times per wk	91%
Practice hours per wk	Mean 5.5
Off skates training hrs/wk	Mean 4

RESULTS

Injuries occur more frequently during practice (46%) than in bouts (28%) and scrimmages (26%). Almost two-thirds of the injuries occurred when blocking (61%) versus 33% jamming.

Majority of injuries were strains & sprains (37%) and fractures (25%).

Ankles and knees were the most frequently injured body parts (27.8% each). Eleven percent were head injuries, resulting in a concussion 75% of the time. Degree of the concussion was unknown by 52%.

Injury severity was:

- Severe (missing 22+ days or derby 43%)
- Moderate (missing 7-21 days 25%)
- Mild (missing 1-6 days 21%)

The frequency of injury did not differ by age or educational status.

DISCUSSION

With the growing popularity of roller derby knowing the types and frequency of injuries that occur is an important first step in prevention.

As with other sports more injuries occur during practice than bouts. Knowing the types of injuries that skaters incur may be helpful to leagues as they develop safety policies and train their skaters to to prevent injuries.

The findings will be used to develop derby specific off-skates injury prevention training programs.

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