Provided for non-commercial research and education use. Not for reproduction, distribution or commercial use.



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

http://www.elsevier.com/copyright



Available online at www.sciencedirect.com



Journal of Science and Medicine in Sport

Journal of Science and Medicine in Sport 12 (2009) 633-636

www.elsevier.com/locate/jsams

Discordance in injury reporting between youth-athletes, their parents and coaches

Original paper

Ian Shrier^{a,*}, Debbie Feldman^{b,c}, Huguette Akakpo^b, Barbara Mazer^c, Claude Goulet^d, Imen Khelia^{a,c,d,e}, Willem Meeuwisse^e, Bonnie Swaine^{b,c}

^a Centre for Clinical Epidemiology and Community Studies, Lady Davis Institute for Medical Research,

the Department of Family Medicine, SMBD-Jewish General Hospital, Montréal, Canada

^b École de Réadaptation, Université de Montreal, Montreal, Quebec, Canada

^c Centre de Recherche Interdisciplinaire en Réadaptation du Montréal (CRIR), Jewish Rehabilitation Hospital,

School of Physical and Occupational Therapy, McGill University, Montreal, Quebec, Canada

^d Department of Physical Education, Laval University, Québec, Canada

^e University of Calgary Sport Medicine Centre, Calgary, Alberta, Canada

Received 12 March 2008; received in revised form 27 May 2008; accepted 2 June 2008

Abstract

Hiring experienced health professionals to collect data on sport injuries is expensive, limits resources, and may be prohibitive for surveillance studies. The objective of this study was to obtain pilot data on whether youth self-report deserves further study. We followed 67 recreational and elite soccer players aged 11–17 for one season and compared responses of injured players with those of their parents/coaches. We defined our main outcome of discordance as any disagreement in responses between the youth, parent and coach (triad). When one person didn't know the answer, we categorised the responses as "concordance" if the other two members agreed. We omitted data when two people responded "Don't Know". Of 10 injuries that could be analysed, 29/30 interviews occurred within 21 days. For factual questions analysed, there was 100% concordance for the type and side of injury, and place where the injury occurred. There were 1–2 discordant triads for each of time of day, activity during injury and specific body part injured. There were greater discordances for date of injury, first-aid treatment, and opinions concerning underlying reasons for the injury. Interview-report by youth themselves should be explored as a possible low cost method of documenting youth sport injuries.

© 2008 Sports Medicine Australia. Published by Elsevier Ltd. All rights reserved.

Keywords: Agreement; Reliability; Epidemiology; Youth; Injury; Sport

1. Introduction

Although physical activity in adolescence has been associated with many benefits,^{1,2} injuries are common³ and often associated with pain, weakness and functional disabilities.^{4,5} The study of injuries requires reliable and valid documentation. Although investigators can use health care professionals employed by elite/professional teams to document injuries, these methods are not routinely available in community samples and investigators sometimes rely on adult self-report. Because recall bias or misclassification may be accentu-

* Corresponding author. *E-mail address:* ian.shrier@mcgill.ca (I. Shrier). ated in youth, some investigators have professionals follow each team.⁶ However, the associated costs limit financial resources and would likely prohibit longer surveillance studies.

Before one can evaluate youth self-report as a low-cost alternative in a definitive study, a pilot study is necessary to determine if it even deserves further study. As part of a larger project examining the feasibility of studying return to activity following injury in youth, we obtained pilot data focused on the congruence of injury reports between injured youth and their parents and coaches. Although available data did not permit a direct comparison with professionals to assess validity, youth data could be compared to adult reports (which are generally considered acceptable⁷).

^{1440-2440/\$ -} see front matter © 2008 Sports Medicine Australia. Published by Elsevier Ltd. All rights reserved. doi:10.1016/j.jsams.2008.06.001

I. Shrier et al. / Journal of Science and Medicine in Sport 12 (2009) 633-636

2. Methods

For our pilot study, we chose to evaluate three elite and three community level soccer teams [English and Frenchspeaking youth aged 11–17 years old] in the Montreal, Canada area. The local soccer associations supplied names of potential teams.

For brevity, we describe only the relevant processes of the larger feasibility study. We remunerated a designate for each team (\$125 CDN). When an injury occurred (defined as missing a game or practice due to trauma or overuse on or off the field), the team designate informed the research assistant by telephone, email or pager. The research assistant conducted separate telephone interviews with the youth athlete, parent and coach ("the triad") as soon as possible. The current analysis includes questions asked of each triad member with regards to both factual injury data [date, time, injury type, body part, side of injury, activity, place, first-aid treatment applied], and opinion data on the underlying causes of injury [field conditions, rough play, attention, fatigue and general physical condition].

All triad members and the team designate signed informed consent documents and the ethics committee of the Montreal Centre for Interdisciplinary Rehabilitation Research approved the study.

Because this was a pilot study with a low expected injury rate (64 per 1000 players per season⁸), we provide descriptive statistics only and report the proportion of discordance/concordance for each question. We report the answers for each interviewee in Table 1. For analysis of concordance among triads, we assigned categories for each question as follows: (1) concordance if all three members of the triad agreed, or if one member didn't know the answer and the other two members agreed, (2) discordance if one member didn't know the answer and the other two members did not agree or if one member disagreed or all three disagreed and (3)not applicable if two persons of the triad didn't know (unable to assess congruence, data still presented). We opted for this categorisation because if there was concordance between the two study participants able to respond, future studies could arrange for a secondary source to be contacted if the primary source didn't know the answer to one or more specific questions.

3. Results

We approached 18 teams to obtain the 6 teams (3 elite and 3 community) necessary for our study. Of the 108 possible triads among these 6 teams, 67 (62%) agreed to participate (40 community and 27 elite). There were 11 injuries in 11 study participants (7 males and 4 females) during the season. The mean (S.D.) age of the injured athletes was 14.5 (0.9) years. One injured player could not be reached for interviews and was omitted from the analysis (10 injuries analysed).

The responses from each triad member are shown in Table 1, sorted by the number of days between the injury and interview (sorting is approximate because different triad members had different delays between injury and interview). For the factual questions where at least 2 triad members responded, there was 100% concordance for the type of injury (8/8), side of injury (7/7) or place where the injury occurred (10/10). There were few (1-2/10) discordant triads for time of day, activity during injury, and body part (includes youth-report of foot where coach/parent report first toe) For injury date, the youth report differed by 2 days once, and 5-7 days twice. For first-aid treatment, the youth agreed with an adult in all but one case. However, for the five opinion-related questions, there were a total of 20/40 discordances (eight triads for five questions), and at least 3/8 discordant triads for each question (10/20 discordances were due to the coach). The pattern of responses did not appear related to the number of days between injury and interview in this small sample for which most study participants were interviewed within 1-3 weeks of the injury.

4. Discussion

The results of this pilot study suggest that youth injury self-report should be explored as a low cost alternative to record factual information regarding injuries, but is less likely to be successful for questions related to injury date, first-aid treatment and subjective questions concerning the underlying causes of injury.

The reliability and validity of self-reported outcomes is a concern in all epidemiological studies. Information from hospital registries/insurance companies underestimate the frequency of sport injuries because injuries not requiring emergency room visits or para-medical expenses are excluded. Injury self-report is considered acceptable in adults if conducted within 4 weeks of the injury⁷ but the number of injuries will be underestimated if 1-year recall is used.⁹

The reliability and validity of youth injury self-report has not been studied. Although there were considerable differences for underlying causes of injury, the results of our pilot study suggest that youth self-reports may be consistent with parental and coach reports for a variety of injury-related questions. Although we could not address validity directly, if youth are consistent with adults and adult reporting is acceptable, then youth reporting would likely be acceptable as well. Adult reporting of witnessed child events is considered reliable¹⁰ but it remains to be determined if parent reporting of a child's injury is acceptable in our context. If larger studies support our small pilot study findings concerning factual information, hiring professionals to follow teams may be unnecessary for some research questions. Valuable and limited financial resources could then be re-directed to more research

Table 1

Discordance between youth athlete, coach and parent (triad). Age, sex, and competitive level (community vs. elite) of the athlete, and number of days between the injury and the interview for each member of the triad are shown. If one person didn't know an answer, we considered the responses as "No Discordance" if the other two members agreed and "Discordance" if the other two members did not agree. When two persons of the triad didn't know the answer, the question was omitted from the analysis

Subject Age Sex Level Injury-Interview Injury-Interview Injury-Interview Poor Field Rough Play Team Poor Attention Fraid-No Youth 15 M Community 1 25-Lubed Attention Sprain Table Leve Right Recreational Fried No Medium Don't Know Eaving Youth 1 25-Lubed Attention Sprain Table Leve Right Recreational Fried No Medium Don't Know Eaving						FACTUAL DATA								OPINION DATA				
Youth 15 M Community 1 25-Jui-06 Alternaon Spran 1st toe Right Recreasional Field No Medum ModMid Medum ModMid Early Youth 13 F Elite 1 25-Jui-06 Alternaon Spran 1st toe Right Recreasional Field No Medum ModMid Don't Know	Subject	Age	Sex	Level	Days Between Injury-Interview	Injury Date	Time of Day	Type of Injury	Body Part	Side of Injury	Activity	Place Occurred	First-Aid	Poor Field	Rough Play Team	Poor Attention	Fatigue	Physical Condition
Coach 1 23.44/06 Afternoon Spran 1st toe Right Recreational Field No No Mild Medum Oon Know Don't Know </td <td>Youth</td> <td>15</td> <td>Μ</td> <td>Community</td> <td>1</td> <td>28-Jul-06</td> <td>Afternoon</td> <td>Sprain</td> <td>1st toe</td> <td>Right</td> <td>Recreational</td> <td>Field</td> <td>No</td> <td>Medium</td> <td>Medium</td> <td>Medium</td> <td>No/Mild</td> <td>Equiv</td>	Youth	15	Μ	Community	1	28-Jul-06	Afternoon	Sprain	1st toe	Right	Recreational	Field	No	Medium	Medium	Medium	No/Mild	Equiv
Parent 1 28-Jul-08 Afternoon Sprain fet toe Right Recreational Field No Medium No/Mid Medium Don't Know Den't Know	Coach				1	28-Jul-06	Afternoon	Sprain	1st toe	Right	Recreational	Field	No	No/Mild	Medium	Don't Know	Don't Know	Equiv
Youth 13 F Elite 1 T-Lim-00 Alternoon Muscle Thigh Left Game Field Yes NotMid A lot Don't Know	Parent				1	28-Jul-06	Afternoon	Sprain	1st toe	Right	Recreational	Field	No	Medium	No/Mild	Medium	Don't Know	Equiv
Youth 13 F Elite 1 T/Lun-00 Afternoon Muscle Tright Left Game Field Yes NotMid Allot Don't Know Medium Less Good Parent 1 Don't Know Eguit																		
Coach 2 Dark Know Dark Know <thdark know<="" th=""> Dark Know <thdark< td=""><td>Youth</td><td>13</td><td>F</td><td>Elite</td><td>1</td><td>17-Jun-06</td><td>Afternoon</td><td>Muscle</td><td>Thigh</td><td>Left</td><td>Game</td><td>Field</td><td>Yes</td><td>No/Mild</td><td>A lot</td><td>Don't Know</td><td>Medium</td><td>Less Good</td></thdark<></thdark>	Youth	13	F	Elite	1	17-Jun-06	Afternoon	Muscle	Thigh	Left	Game	Field	Yes	No/Mild	A lot	Don't Know	Medium	Less Good
Parent 1 17-Jun-06 Alternoom Muclic Trigh Left Game Field Yes NoMilid A lot NoMilid No Youth 14 F Eite 4 20-Jun-06 Evening Sprain Anide Left Game Field Yes NoMilid	Coach				2	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know
Youth 14 M Community 24 4-Sep-06 Afternoon Don't Know	Parent				1	17-Jun-06	Afternoon	Muscle	Thigh	Left	Game	Field	Yes	No/Mild	A lot	No/Mild	No/Mild	Equiv
Youth 14 M Community 2 Alsep-06 Atternool Don't Know NotMid																		
Coach 24 Dank Know	Youth	14	M	Community	2	4-Sep-06	Afternoon	Don't Know	Knee	Left	Recreational	Home	No					
Parent 1 4-Sep-06 Attendo Muscle Cat Don't Know Recreational Home Yes Youth 14 F Elife 4 20-Jun-06 Evening Sprain Anide Left Game Field Yes No/Mild	Coach				24	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know	Don't Know			Not a soccer injury	1	
Youth 14 F Elite 4 20-lun-06 Evening Sprain Ankle Left Game Field Yes NofMid	Parent				1	4-Sep-06	Afternoon	Muscle	Calf	Don't Know	Recreational	Home	Yes					
Count Interview	Vaudh	4.4	-	C lite		00 km 00	Evening	Carola	Andre	1 - 4	0	Tiol 4	Vee	Ale (Millel	NI-ACI-	NI- MAL	AL- MAILE	Enviro
Condition 4 advoluting Evening Sprain Anlog Lett Califie Fee Notifie Notifie Notifie Notifie Youth 14 F Eite 6 22-May-06 Moming Concussion Head NA Practice Field Yes Notified	Ceeeb	14	5	Ente	4	20-Jun-06	Evening	Sprain	Ankle	Leit	Game	Field	Yes	Normid	NO/MIIC	NO/WIIG	No/Wild	Equiv
Yauth 14 Lobalito Extent Sprain Anke Can Can Can Induit Ind	Derent				4	20-Jun-06	Evening	Sprain	Ankle	Leit	Game	Field	Yes	No/Mild	No/Mild	Medium	No/Mild	Less Good
Youth 14 F Elite 6 22.Map.06 Morring Ocnoussion Head N/A Practice Field Yes NoMilid ModMid NoMilid No Youth 15 M Elite 16 Dont Know Dont Know Crinin Right Other Henrie No Youth 15 M Elite 16 Dont Know Evening Sprain Ankle Right Other Henrie No Youth 15 M Elite 16 Dont Know Evening Sprain Ankle Right Other Henrie No <td< td=""><td>Farent</td><td></td><td></td><td></td><td>4</td><td>20-3011-00</td><td>Evening</td><td>oprain</td><td>AINE</td><td>Leit</td><td>Game</td><td>Field</td><td>162</td><td>Normina</td><td>INO/MIIU</td><td>NO/WIIG</td><td>NO/MIIC</td><td>Equiv</td></td<>	Farent				4	20-3011-00	Evening	oprain	AINE	Leit	Game	Field	162	Normina	INO/MIIU	NO/WIIG	NO/MIIC	Equiv
Coach Field Yes NoMilid Medium NoMilid N	Youth	14	F	Flite	6	22-May-06	Morning	Concussion	Head	N/A	Practice	Field	Yes	No/Mild	No/Mild	No/Mild	No/Mild	Equiv
Parent 9 20-May-06 Attempon Concussion Head NA Practice Field Yes Not/Mid Not/Mid Don't Know Don't Know Youth 16 M Community 10 17-Juh-06 Evening Sprain Ankle Right Other Home No Parent 10 17-Juh-06 Evening Sprain Ankle Right Other Home No Parent 15 17-Juh-06 Evening Sprain Ankle Right Other Home No Youth 15 M Elde 16 Don't Know Sprain Practice Field No No/Mid No/Mid No/Mid Evening Youth 15 M Elde 16 Don't Know Grain Don't Know Practice Field No No/Mid No/Mid No/Mid Equiv Youth 15 M Elte 14 31-May-06 Evening Sprain Foot Eight Game Field No No/Mid No/Mid Medum Medum	Coach			Linto	10	20-May-06	Morning	Concussion	Head	N/A	Practice	Field	Yes	No/Mild	Medium	No/Mild	No/Mild	Better
Youth 15 M Classe 12-Jun-06 Sprain Ankle Right Other Home No No/Mid NotA Source injury Youth 15 17-Jun-06 Don't Know Don't Know Ankle Right Other Home No No/Mid No/Mid NotA Source injury Youth 15 15 Don't Know Don't Know Groin Right Other Home No No/Mid No/Mid No/Mid Equiv Youth 15 M Eite 16 Don't Know Groin Right Other Practice Field No No/Mid Medum Moduli Equiv Parent 14 Don't Know Don't Know Don't Know Practice Field No No/Mid Medum Medum No/Mid Equiv Youth 15 M Eite 14 31-May-06 Evening Sprain Foot Right Game Field No No/Mid Medum Medum Medum Medum Medum Medum Medum Medum No/Mid Equiv Youth 15 M Eite 14 31-May-06 E	Parent				9	20-May-06	Afternoon	Concussion	Head	N/A	Practice	Field	Yes	No/Mild	No/Mild	Don't Know	Don't Know	Equiv
Youth 16 M Community 15 172-Jun-06 Evening Sprain Ankle Right Other Home No Parent 10 117-Jun-06 Evening Sprain Ankle Right Other Home No Parent 15 112-Jun-06 Evening Sprain Ankle Right Other Home No Youth 15 M Eite 16 Don't Know Evening Sprain Fractice Field No NoMMid NoMMid NoMMid Equiv Coach 16 Don't Know Don't Know Don't Know Grain Don't Know Grain Don't Know Grain Don't Know Field No NoMMid NoMMid NoMMid Equiv Youth 15 M Eite 14 31-May-06 Evening Sprain Foot Eight Genie Field No Youth 15 M Eite 14 31-May-06 Evening Sprain Foot Eight Genie Field No Youth 15 M Eite 14 31-May-06 Evening Sprain Foot Eight <	i di citti				Ū	20 may 00	Villentoon	Concussion	Tioda	10/1	110000	1 Iolu	100	Homma	Homina	Boirtraion	Bontration	Eddin
Coach Parent 10 17-Juhr-60 (Jame) Don't Know Don't Know Ankle Right Other (Den't Other Home Home No No Not a soccer injury Youth Parent 15 M Elite 16 Don't Know Don't Know Groin Right Practice Field No No/Mid No/Mid No/Mid No/Mid Equiv Youth Parent 15 M Elite 16 Don't Know Evening Opn't Know Groin Right Practice Field No No/Mid Medum Medum No/Mid Equiv Youth Parent 14 Don't Know Don't Know Don't Know Practice Field No No/Mid Medum Medum No/Mid Equiv Youth Parent 15 M Elite 14 31-May-06 Evening Sprain Foot Right Game Field No No/Mid Medum Medum Better Coach 15 M Elite 14 31-May-06 Evening Sprain Foot Right Game Field No No/Mid Medum No/Mid Medum Equiv Youth 15 M	Youth	16	М	Community	15	12-Jun-06	Evening	Sprain	Ankle	Right	Other	Home	No					
Parent 15 12-Jun-00 Evening Sprain Ankle Right Other Home Yes Youth 15 M Elite 16 Don't Know Evening Sprain Right Other Home Yes Coach 16 Don't Know Evening Don't Know Grain Don't Know Field No No/Mild No/Mild Medium Medium Equiv Youth 15 M Elite 14 31-May-06 Evening Sprain Foot Right Game Field No No/Mild Medium Beter Coach 19 Don't Know Don't Know Don't Know Game Field No No/Mild Medium Beter Parentt 19 Don't Know Don't Know Don't Know Game Field No No/Mild No/Mild Medium Equiv	Coach				10	17-Jun-06	Don't Know	Don't Know	Ankle	Right	Other	Home	No			Not a soccer injun	1	
Youth 15 M Eite 16 Dent Know Evening Dent Know Groin Right Practice Field No No/Mid No/Mid No/Mid No/Mid No/Mid No/Mid No/Mid No/Mid No/Mid Equiv Parent 14 Dent Know Errain Field No No/Mid Medium Medium No/Mid Equiv Youth 15 M Eite 14 31-May-06 Evening Sprain Foot Right Game Field No Nedum Medium Medium Equiv Youth 15 M Eite 14 31-May-06 Evening Sprain Foot Right Game Field No Medium Medium Beter Coach 19 Dent Know Equiv Game Field No No/Mid Medium Equiv Parent 19 Dent Know Equiv Game Field No N	Parent				15	12-Jun-06	Evening	Sprain	Ankle	Right	Other	Home	Yes					
Youth 15 M Elite 16 Don't Know Evening Don't Know Groin Dist Know Paratice Field No NoMMid NoMMid Medium Equiv Youth 15 M Elite 14 31-May-06 Evening Sprain Foot Right Game Field No NoMMid Medium Medium Beter Coach 16 31-May-06 Evening Sprain Foot Right Game Field No NoMMid Medium Medium Equiv Coach 19 Dant Know Dont Know Cont Know Game Field																		
Coach 16 31-May-06 Evening Muscle Grain Dent Know Game Field No No/Mid Medium Medium No/Mid Equiv Parent 14 Dent Know Dent Know Dent Know Practice Field Dont Know Medium Equiv Youth 15 M Elite 14 31-May-06 Evening Sprain Foot Right Game Field No Medium Medium Medium Better Coach 16 31-May-06 Evening Sprain Fistoe Right Game Field No No/Mid Medium Medium Equiv Parent: 19 Dent Know Casthe Field Casthe Field Casthe No/Mid Medium Casthe Equiv	Youth	15	M	Elite	16	Don't Know	Evening	Don't Know	Groin	Right	Practice	Field	No	No/Mild	No/Mild	No/Mild	No/Mild	Equiv
Parent 14 Don't Know Don't Know Don't Know Groin Don't Know Practice Field Don't Know Northid North Medium Medium Equiv Youth 15 M Elite 14 31-May-06 Evening Sprain Foot Right Game Field No North Medium Medium Better Coach 16 31-May-06 Evening Sprain Istoe Don't Know Game Field No North Medium Medium Equiv Parent 19 Don't Know Don't Know Don't Know Ist toe Right Game Field No North Medium Don't Know North Equiv	Coach				16	31-May-06	Evening	Muscle	Groin	Don't Know	Game	Field	No	No/Mild	Medium	Medium	No/Mild	Equiv
Youth 15 M Elite 14 31-May-06 Evening Sprain Foot Right Game Field No Medium Medium No/Mild Medium Better Cosch 16 31-May-06 Evening Sprain 1st toe Don't Know Game Field No No/Mild No/Mild No/Mild Medium Equiv Parent 19 Don't Know Don't Know Don't Know 1st toe Right Game Field Don't Know No/Mild Medium Don't Know No/Mild Equiv	Parent				14	Don't Know	Don't Know	Don't Know	Groin	Don't Know	Practice	Field	Don't Know	No/Mild	No/Mild	Medium	Medium	Equiv
Youth 15 M Elite 14 31.May-06 Evening Sprain Foot Right Game Field No Medium Medium No/Mild Medium Beter Coach 16 31.May-06 Evening Sprain 1istoe Don't Know Game Field No No/Mild No/Mild Medium Beter Parent 19 Don't Know Don't Know Don't Know 1st toe Right Game Field Don't Know No/Mild Medium Don't Know No/Mild Equiv																		
Cosch 16 31-May-06 Evening Sprain 1st toe Don't Know Game Field No NofMild NofMild NofMild Medium Equiv Parent 19 Don't Know Don't Know Don't Know 1st toe Right Game Field Don't Know NofMild Medium Don't Know NofMild Equiv	Youth	15	M	Elite	14	31-May-06	Evening	Sprain	Foot	Right	Game	Field	No	Medium	Medium	No/Mild	Medium	Better
Parent 19 Don't Know Don't Know Don't Know 1st toe Right Game Field Don't Know No/Mild Medium Don't Know No/Mild Equiv	Coach				16	31-May-06	Evening	Sprain	1st toe	Don't Know	Game	Field	No	No/Mild	No/Mild	No/Mild	Medium	Equiv
	Parent				19	Don't Know	Don't Know	Don't Know	1st toe	Right	Game	Field	Don't Know	No/Mild	Medium	Don't Know	No/Mild	Equiv
			-	_														
Youth 14 F Elite 12 16-Aug-06 Evening Sprain Knee Left Game Field Yes No/Mild Medium No/Mild Less good	Youth	14	F	Elite	12	16-Aug-06	Evening	Sprain	Knee	Left	Game	Field	Yes	No/Mild	Medium	Medium	No/Mild	Less good
Coach 18 10-Aug-06 Evening Don't Know Knee Left Game Field Yes No/Mild Allot Medium Allot Less good	Coach				18	10-Aug-06	Evening	Don't Know	Knee	Left	Game	Field	Yes	No/Mild	A lot	Medium	A lot	Less good
Parent 20 9-Aug-06 Evening Sprain Knee Left Game Field Yes No/Mild Medium No/Mild No/Mild Equiv	Parent				20	9-Aug-06	Evening	Sprain	Knee	Left	Game	Field	Yes	No/Mild	Medium	No/Mild	No/Mild	Equiv
		45		F 14	10		F erraria a	Developing	11	1.6	0	P1.1.1				A		Detter
Yourn 15 M Einte 19 31-May-ub Evening Don'trow Heel Left Game Field Yes Medium Alot NorMid Medium Better	routh	15	м	Elite	19	31-May-06	Evening	Dont Know	Heel	Left	Game	Field	res	Medium	Allot	No/Mild	Medium	Better
Coach 10 <u>Point Now</u> Sprain Heel <u>Point New</u> Game Field No Normal Medium Normald Normal Equiv	Coach				16	Don't Know	Don't Know	Sprain	Heel	Dont Know	Game	Field	No	NorMild	wedium	No/Mild	NorMild	Equiv
rarent 19 31-way-uo evening Sprain neen Leit Game Pielo Yes Alot Alot NorMild NorMild Equiv	rarent				19	31-may-06	Evening	oprain	meel	Lett	Game	Field	Tes	A IOI	ATION	MorMild	NOWIID	Equiv

Legend: Green: Triads with no discordance. Yellow: youth was discordant Blue: coach was discordant

Orange parent was discordant Real All three were discordant. Blass Either not applicable, the person did not know the answer or only one person knew the answer.

I. Shrier et al. / Journal of Science and Medicine in Sport 12 (2009) 633-636

studies, including more individuals, addressing more questions and thus considerably expanding our knowledge base about youth injury. If more detailed information is required that cannot be provided by the youth, additional follow-up with adults involved may be included in the protocol.

We would however like to underscore that our results are based on a small pilot sample and need to be confirmed in larger studies. Further, our study participants were usually interviewed within 1–3 weeks and the effect of longer delays (expected to increase problems with recall) needs to be examined. In conclusion, youth self-report may be a possible inexpensive, feasible solution to the identification of injuries in youth and deserves further investigation.

Acknowledgements

Dr. Shrier is a recipient of the Clinical Investigator Award and Dr. Swaine is a recipient of the Investigator Award from the Fonds de la Recherche en Santé du Québec. Dr. Debbie Ehrmann Feldman is a recipient of a career award from the Arthritis Society. This study was funded in part by the Réseau Provincial de Recherche en Adaptation-Réadaptation (REPAR).

References

- Dwyer T, Sallis JF, Blizzard L, et al. Relation of academic performance to physical activity and fitness in children. *Pediatr Exerc Sci* 2001;13(3):225–37.
- Pate RR, Trost SG, Levin S, et al. Sports participation and healthrelated behaviors among US youth. Arch Pediatr Adolsc Med 2000;154(9):904–11.
- Danseco ER, Miller TR, Spicer RS. Incidence and costs of 1987–1994 childhood injuries: demographic breakdowns. *Pediatrics* 2000;105(2):E27.
- Freeman MAR. Instability of the foot after injuries to the lateral ligament of the ankle. J Bone Joint Surg 1965;47B:669–77.
- Konradsen L, Holmer P, Sondergaard L. Early mobilizing treatment for grade III ankle ligament injuries. *Foot Ankle* 1991;12:69–73.
- Emery CA, Meeuwisse WH, Hartmann SE. Evaluation of risk factors for injury in adolescent soccer: implementation and validation of an injury surveillance system. *Am J Sports Med* 2005;33(12):1882–91.
- Valuri G, Stevenson M, Finch C, et al. The validity of a four week self-recall of sports injuries. *Injury Prevent* 2005;11(3):135–7.
- Hamel D, Goulet C. Étude des blessures subies au cours de la pratique d'activités récréatives et sportives au Québec en 2004. Quebec, Canada: Institut national de santé publique de Québec (INSP) et Ministère de l'éducation, du loisir et du sport (MELS); 2006.
- Gabbe BJ, Finch CF, Bennell K, et al. How valid is a self-reported 12 month sports injury history? *Br J Sports Med* 2003;**37**:545–7.
- Macarthur C, Dougherty G, Pless IB. Reliability and validity of proxy respondent information about childhood injury: an assessment of a Canadian surveillance system. *Am J Epidemiol* 1997;145(9):834–41.