

Author/Date	Study Design	Downs & Black Score (/32)	Sport	Sample/Sex	Age Characteristics of Sample	Injury Definition	Reporting of Injury Outcomes
Bowerman et al., (2014)	Prospective 6 months	12	Dance	30 ♀ 16 ♂	Mean age 16.0 ± 1.6 years	Any physical harm resulting in pain or discomfort that required a dancer to modify their dance activity during one or more classes, or which required a dancer to cease all dance related activity	Incidence overall injury rates both as the number of injuries per/1000 dance hours and per/1000 dance exposures. Severity was coded as modified class, off class up to 3 days, or off class more than 3 days.
Bult et al. (2018)	Prospective 3 years	15	Soccer	170 ♂	U12-U19	Any physical complaint resulting from a soccer match or training that prevented a player from taking full part in future soccer training or match play	Injury incidence density (IID) calculated pr subgroup ((number of injuries/hours of exposure) x1000). Incidence Ratio (IR) calculated as change of sustaining an injury compared chance in total group (IID subgroup)/(IID total group). Injury Burden calculated as (number of injuries x median number of time-loss days pr injury) per/1000 hours soccer exposure.
Fourchet et al., (2011)	Prospective 3 seasons	12	Track and Field	110 ♂	13-18 years	A trauma occurring during track and field training or competition, which required one or more physiotherapy treatments and prevented the athlete from participating in one or more training sessions or competitive events.	Injury Rate no definition provided. Injury Severity defined basis of time-loss minor athlete out of training/competition for 1-3days, moderate absence lasted 4-7 days, major if absence was 1-3 weeks, sever absence greater than 3 weeks.
Hall et al., (2022)	Prospective 1 year	18	Soccer	502 ♂	9-23 years	Injury diagnosis and recording by club medics followed published guidelines of Fuller et al, 2006 Any physical complaint requiring the attention of medical staff which occurred during squash related training (specific squash training, strength and conditioning) and competition or non-squash related training.	Injury Incidence rates (IRR) presented as number of injuries per/1000 hours. Injury Prevalence Proportions (IPP) defined as percentage of players injured.
Horobeau et al (2019)	Prospective 1 year across 6 playing season years	10	Squash	21 ♂	Mean age 14.5 ± 1.7 years	Traumatic injury: injury resulting from a specific and identifiable mechanism, including contact and non-contact circumstances with acute onset. Overuse injuries: injuries resulting from insidious onset without a recognizable	Injury Incidence per/1000 hours exposure Injury Severity defined on number of days absent from usual sports participation classified as slight (1day), minimal (2-3 days), mild (4-

						mechanism. Growth condition injuries, which are unique to young athletes, resulted from an increase in the involvement in squash activities	7days), moderately serious (8-28 days), serious (>28 days-6 months) or long-term (>6 months).
Johnson et al (2020)	Prospective 2 year	15	Soccer	76 ♂	U11-U16	Time-loss injuries preventing a player from participating in full training or matches. This study only considered non-contact injuries defined as those sustained by a player without extrinsic contact by another player or other object on the field of play	Time loss defined as prevention of a player from participating in full training or matches. Training. Injury burden - non-contact injuries only defined as sustained by a player without extrinsic contact by another player or other object on the field of play.
Johnson et al (2022)	Prospective 1 year	18	Soccer	49 ♂	U13-U16	A time-loss injury defined as a player being unable to take part in full football training or match play. Only injuries that occurred during training, gym or football competition were counted, those unrelated to academy activities were not recorded. Only non-contact injuries were analysed; these were defined as those sustained by a player without extrinsic contact by another player or other object on the field of play	Injury incidence a total value (cumulative value) and as the number of injuries per/1,000 player-hours Injury severity the number of days elapsed between the initial injury date and the player's return to full availability for training and/or matches. Injury burden was given by the injury incidence rate multiplied by the mean days missed per injury, giving the days of absence per 1000 hours per
Johnson et al (2009)	Prospective 6 years	13	Soccer	292 ♂	9-16 years	No clear definition - only injuries associated with training and match play, those not related to playing football were excluded	Injury incidence injuries each player per/1000 hours total exposure, and total injuries per/1000 hours training and match play. Burden - days lost per/season averaged to injury days per/player season
Kemper et al (2015)	Prospective 1 season	10	Soccer	101 ♂	U12-U19	Injuries defined following the FIFA Consensus Model for Injury Registration, included registration of type, severity, mechanism of injury (acute or overuse) and activity	Injury incidence defined number injuries per/1000 hours training and match hours. Injury rate per/1000 hours match and training in matches Burden - the mean (SD) number of time loss from soccer activities
Le Gall et al., (2007)	Prospective 1 year across 10 different seasons	12	Soccer	233 ♂	U14	A recordable injury defined an injury received during training or competition that prevented the injured player from participating in normal training or	Injury incidence was calculated as the number of injuries per/1000-h exposure in training and matches Injury severity depended upon the time the player was absent from

						competition for more than 48h, not including the day of the injury	training or competition and was classed into four sub-divisions, as major (more than 4 weeks), moderate (1–4 weeks), mild (4–7 days) and minor (2–3 days)
Light et al (2020)	Prospective over 4 seasons	14	Soccer	190 ♂	U9-U21	Injury resulting from playing football and leading to a player being unable to fully participate in future training or match play (i.e., time-loss injury).	Injury count Injury frequency and incidence per/1000 playing hours Severity - time loss from training or match play in days, classified as minimal, mild, moderate and severe
Materne et al (2021)	Prospective over 4 seasons	16	Soccer	283 ♂	U13-U19	Injury recorded as a result of any physical complaint resulting from a game or training that required the attention of the medical staff. Medical department visit requiring a clinical examination without missing a full training session or game was classified as a medical attention injury. A visit resulting in a player being unable to fully participate in the training session or game the following day was classified as a time-loss injury (TLI)	Total number of injuries Time-loss injury incidence via injuries per/squad-season Burden - days lost per/squad-season Frequency, prevalence and incidence per/squad-season presented injury types and locations
Monaco et al (2019)	Prospective over 2 seasons	8	Handball	Total sample 133 ♂ youth 31 ♂ adults	12-27 years	Injury defined via UEFA guidance as any injury occurring during a training session or match and causing an absence for at least the next training session or match (time-loss injury).	Injury incidence calculated as the number of injuries per 1000 player h ( $\Sigma$ injuries/ $\Sigma$ exposure h $\times$ 1000) Injury prevalence presented by number of injuries and injury types
Monasterio et al EJSS (2023)	Prospective over 20 seasons	14	Soccer	110 ♂	10-17 years	Injury defined as a physical complaint that prevented players from participating in future training sessions or matches. Described via the FIFA consensus	Incidence calculated via time-loss in days per/player-season Injury burden accounted for both frequency (incidence) and severity (mean absence) of injuries, Injury burdens were presented as number of days lost per/player-season
Monasterio et al IJSM (2023)	Retrospective over 20 seasons	13	Soccer	124 ♂	10-18 years	Injury defined as when a player was unable to participate in a future training session or match due to a physical complaint resulting from a soccer training or match. Classification based on FIFA consensus	Incidence determined via time-loss days per/player-season Burden - number of days lost per/player-season including both frequency (incidence) and severity (mean absence) of injuries

Monasterio, I. Bidaurrezaga-Letona, et al (2022)	Prospective 1 year over 9 seasons	17	Soccer	183 ♂	U14	Injuries were recorded when a player was unable to participate in a future training session or match due to a physical complaint. Classified via FIFA guidelines	Injury burden was calculated to account for both frequency (incidence) and severity (mean absence) of injuries and was presented as the number of days lost per/1000 player hours. Injury burden of early versus on-time versus late matures were compared by calculating rate ratios (RRs)
Monasterio, S.M. Gil, et al (2021)	Prospective over 10 years	15	Soccer	63 ♂	10.7 ± 0.4. years inclusion criteria Inc. U11-U19	The club's medical staff diagnosed, treated, and recorded all time-loss injuries. From the 2007–2008 season, this was done following the consensus on definitions and data collection procedures outlined by the International Federation of Association Football (FIFA)	Number and frequency of injury types
Muller et al (2017)	Prospective 2 seasons	16	Alpine Skiing	31 ♀ 51 ♂	9-14 years	Traumatic injury defined as injury with a sudden onset based on time loss, classified via injury-surveillance consensus paper of the International Olympic Committee. Overuse injury was defined as any physical complaint that was not attributable to a single identifiable event and caused time loss from full participation in training	Incidence defined per 1,000 hours of training exposure (athletic and skiing-specific) was assessed by the number of injuries divided by total number of hours of exposure multiplied by 1,000 Prevalence calculated via traumatic, overuse or illness Injury severity classified via time loss - minimal, time loss of 1–3 days; mild, 4–7 days; moderate, 8–28 days; severe, >28 days; injury causing end of career
Patel et al., (2021)	Prospective 8 weeks	13	Gymnastics - Trampoline	8 ♀ 13 ♂	9-19 years	"All-complaints" definition of injury was used	Prevalence of injury amongst gymnasts was calculated for each week by dividing the number of gymnasts reporting an injury by the total number of gymnasts completing a training diary. The same method was used to calculate the prevalence of injury that resulted in modified training. Severity was reported as time lost (number of days that the player was not able to take full part in competition or training): slight for 0 days; minimal for 1–3 days; mild for 4–7 days; moderate for 8–28 days; severe for >28 days
Rinaldo et al (2021)	Prospective 1 season	17	Soccer	88 ♂	U9-U13	Injuries defined as any physical complaint suffered by a player resulting from a soccer match or training, regardless of the necessity of medical care or time lost from soccer activities.	Severity was reported as time lost (number of days that the player was not able to take full part in competition or training): slight for 0 days; minimal for 1–3 days; mild for 4–7 days; moderate for 8–28 days; severe for >28 days

							injury incidence as the number of injuries per 1000 exposure player-hours in training and matches, as follows: $(\sum \text{injuries} / \sum \text{exposure hours}) \times 1000$ Prevalence of overuse and acute injuries
Read et al., (2018)	Prospective 1 season	xx	Soccer	356 ♂	U11-U18	Non-contact lower extremity injuries that occurred during footballing activity resulting in player not being able to participate for 48 hours, not including day of incident	Injuries recorded by each club's respective medical personnel in accordance with methods outlined in Premier League's EPPP policy.
Rommers et al (2021)	Prospective 2 seasons	19	Soccer	378 ♂	U13-U15	Injury defined as any injury that required medical attention or an assessment by medical or paramedical staff	Individual football exposure was recorded by the teams' coaches in minutes. Attendance at training as well as individual playing time during matches were registered after each training session or match. We used the individual average weekly exposure before occurrence of the first injury in our analyses.
Rommers et al (2020)	Prospective 1 year	16	Soccer	314 ♂	U10-U15	Injury was defined as a medical attention injury, that is, any injury that required an assessment of medical or paramedical staff.	injury incidence defined as the number of overuse or acute injuries per/player-season Injury burden defined as the number of days lost per/player-season
Rudavsky et al (2020)	Prospective 2 year	13	Dance - Ballet	34 ♀ 24 ♂	11-18 years	Ultrasound images used to determine presence of patella tendinopathy	Prevalence of patella tendinopathy across dancers Injury incidence of per/1000 h of training
Steidl-Muller et al 2020	Prospective 1 season	16	Alpine-Skiing	39 ♀ 50 ♂	mean age: 12.1 ± 1.3 years 10-14 years	Traumatic injury was defined as an injury with a sudden onset based on time-loss definition. An overuse injury was defined as any physical complaint without a single identifiable event being responsible Type of injury and body part defined according to the injury surveillance consensus paper of the International Olympic Committee.	Prevalence defined number of overuse and traumatic Burden defined by injury severity was classified via time loss of 1–3 days, as mild (4–7 days), moderate (8–28 days), severe (>28 days), or career ending Mean injury severity of each athlete was calculated (total days of absence due to traumatic and overuse injury/total number of injuries)

van der Sluis et al (2014)	Prospective 3 years	11	Soccer	26 ♂	mean age at commencement: 11.9 ± 0.8 years	Injury defined as: Any physical complaint sustained by a player that results from a soccer match or a soccer training, irrespective of the need for medical attention or time loss from soccer activities	Training and match injury incidence was calculated as the number of injuries per 1000h of exposure in training and matches. Severity of the injury was deemed slight (no absence from training session or match, also recorded as "medical attention injury"), minimal (1–3 days time loss), mild (4–7 days time loss), moderate (8–28 days time loss), severe (more than 28 days time loss) and career-ending injuries. Prevalence presented as overuse or traumatic injuries.
van der Sluis et al (2015)	Prospective 3 years	7	Soccer	26 ♂	mean age at commencement: 11.9 ± 0.8 years	An injury was defined as: "any physical complaint sustained by a player that results from a soccer match or a soccer training, irrespective of the need for medical attention or time loss from soccer activities" Following FIFA consensus statement	Injury incidence defined as number of days that the player was not able to take full part in competition or training sessions. Severity of the injury was deemed slight (no absence from training session or match, also recorded as "medical attention injury"), minimal (1–3 days time loss), mild (4–7 days time loss), moderate (8–28 days time loss), severe (more than 28 days time loss) and career-ending injuries. Presented as overuse or traumatic injuries.
Wik et al (2020)	Prospective 4 years	19	Track and Field	85 ♂	11-17 years	Time-loss injury as defined as the athlete not being able to fully take part in athletics training and/or competition the day after the incident occurred (min 1 day lost). Entries in the injury database were classified as either "sudden onset" or "gradual onset" based on consensus definitions. Sudden onset injuries that did not originate from athletics training sessions or competitions were excluded from analyses.	Incidence defined as rate-ratios. Days lost was calculated based on the date of clinical examination and the date of return to full participation. Burden classified via severity (Minor: 1-7 days lost, Moderate: 8-28 days lost, Serious: >28 days lost).

Author/Date	Study Design	JBI Critical Checklist (/10)	Sport	Sample/Sex	Age Range	Injury Definition	Reporting of Injury Outcomes
Fawcett et al., (2020)	Qualitative Phenomenology	8	Gymnastics	10 MDT National Team support staff	N/A	Lower Back Pain (LBO) presentation and causation	Lower Back Pain and Injury
Patel et al., (2021)	Qualitative - Interpretive	8	Gymnastics	44 MDT National Support Staff Coaches	N/A	Injury themes around as injury causes, injury types and injury prevention were explored	7 key themes pertaining to adolescent injury established 1) Physical changes during growth and maturation 2) Temporary skill loss/confusion in youth gymnasts 3) Psychological challenges in pubertal gymnasts 4. Injuries in youth gymnasts - causes, types, injury prevention during growth 5. Training load in youth gymnasts - planned training, adapting training 6) Monitoring growth and maturity in young gymnasts 7. Gymnastics specific medical and scientific knowledge and support

APHV = Age at Peak Height Velocity, BMI = Body Mass Index, FIFA = Federation Internationale de Football Association, IRR – Injury Incidence Rate, IPP = Injury Prevalence Proportions, LBP = Lower Back Pain, MDT = Multidisciplinary team, PHV = Peak height Velocity, SD = Standard Deviation, UEFA = Union of European Football Associations, %PAH = Percentage of Predicted Adult Height