

Supplementary Material 4. Risk factors identified in the systematic review with best evidence synthesis.

Risk factor	Studies investigating	Direction	Measure of association and/or statistical analysis	Type of risk factor	Level of evidence
Age	Bissell & Lorentzos [48]	Players over 35 yrs at increased risk.	Knee χ^2 8.03, p=0.005 Ankle χ^2 22.17, p	Intrinsic Non-modifiable	Conflicting
	Franettovich et al.[50]	Players over 13.5 yrs at increased risk.	OR (95% CI): 3.1 (1.6 – 5.9) p=0.001		
	Hopper et al.[51]	Younger players at increased risk.	p<0.05		
	Smyth et al.[7]	Players U19 at increased risk (vs. U17)	Medical attention IRR (95% CI): 1.64 (1.08-2.51)		
		Players U17 at increased risk (vs. U19)	Sports incapacity IRR (95% CI): 0.69 (0.26-1.75)		
	Attenborough et al.[18]	No effect of age on ankle injuries.	OR (90% CI): 1.55 (0.42-5.52), p=0.36		
	Smith et al.[60]	No effect of age.	OR (95%CI): 1.099 (0.89-1.35), p=0.370		
Anaerobic fitness	Hopper et al.[51]	Players with superior anaerobic power at increased risk.	p<0.05	Intrinsic Modifiable	Conflicting
	Sinclair et al.[58]	No effect of anaerobic fitness.	Total time OR (95%CI): 0.95 (0.88-1.03), p=0.22 Perfect time OR (95% CI): 0.95 (0.86-1.03), p=0.22 Fatigue index OR (95%CI): 0.98 (0.87-1.10), p=0.75		
Balance (dynamic)	Attenborough et al.[18]	Star exercise balance test posterior-medial reach distance of \leq to 77.5% of an individual's leg length increases risk of ankle injury.	OR (90%CI): 4.04 (1.00-16.35), p =0.04	Intrinsic Modifiable	Moderate
Body fat percentage	Sinclair et al.[58]	Players with higher body fat percentage lower risk.	OR (95%CI): 0.86 (0.76-0.95), p <0.01	Intrinsic Modifiable	Limited
Body mass index (BMI)	Franettovich et al.[50]	Players with BMI >21.5 increased risk.	Unadjusted OR (95% CI): 1.9 (1.1-3.2), p=0.019	Intrinsic Modifiable	Conflicting
	Sinclair et al.[58]	Players with higher BMI decreased risk.	Multivariate analysis p>0.05 Unadjusted OR (95% CI): 0.84 (0.69-0.99), p=0.04		

		No effect of BMI.	Multivariate analysis OR (95% CI): 0.35 (0.03-3.84), p=0.39		
Body mass	Franettovich et al.[50]	Players with body mass >62.5kg increased risk.	Unadjusted OR (95% CI): 3.3 (1.9-5.7), p<0.001	Intrinsic Modifiable	Conflicting
		No effect of body mass.	Multivariate analysis p>0.05		
	Sinclair et al.[58]	Players with higher body mass decreased risk.	Unadjusted OR (95% CI): 0.94 (0.89-0.98), p=0.008		
		No effect of body mass.	Multivariate analysis OR (95% CI): 1.42 (0.61-3.3), p=0.41		
	Attenborough et al.[18]	No effect of body mass.	OR (90% CI): 2.08 (0.54-8.00), p=0.23		
Bracing	Bissell & Lorentzos [48]	Players who use a support have higher risk of overuse injury.	Knee χ^2 41.23, p=0.000 Ankle χ^2 99.19, p=0.000	Extrinsic Modifiable	Conflicting
	Franettovich et al.[50]	Use of ankle taping or bracing increases risk.	Unadjusted OR (95% CI): 2.3 (1.3-3.9), p=0.002		
		No effect of ankle bracing.	Multivariate analysis p>0.05		
	McManus et al.[57]	No effect of protective devices.	p>0.05		
Fatigue	Horgan et al.[54]	Bidirectional changes in fatigue in the 7-days prior increases injury risk.	OR: 1.01 \pm 0.07, p <0.001 AR: 0.81 \pm 0.14	Intrinsic Modifiable	Moderate
Hypermobility	Smith et al.[60]	Hypermobility increases risk of injury.	Beighton score 3-4 (vs. 1-2) OR (95%CI): 3.36 (1.26-8.97), p=0.02 Beighton score 5-9 (vs. 1-2) OR (95% CI): 2.998 (1.297-6.928), p=0.01	Intrinsic Non-Modifiable	Moderate
Limb asymmetry	Maulder[56]	Dominant limb asymmetry (>10%) during a 180degree agility task associated with injury.	R (90% CI) = 0.45 (-0.01 – 0.75), 89.9% likely probable chance	Intrinsic Modifiable	Limited

Lower body power	Hopper et al.[51]	Players with superior jumping abilities at increased risk of getting injured.	p<0.005	Intrinsic Modifiable	Conflicting
	Attenborough et al.[18]	No effect of lower body power on ankle injury.	OR (90% CI): 1.59 (0.42-5.96), p=0.23		
	Sinclair et al.[58]	No effect of lower body power.	OR (95% CI) Long jump: 1.04 (0.13-8.52), p=0.97 Double leg vertical jump: 1.10 (0.95-1.10), p=0.61 Single leg vertical jump: 0.97 (0.90-1.10), p=0.42 Forward step and jump: 1.01 (0.96-1.07), p=0.64 Jump and turn: 0.995 (0.95-1.05), p=0.85		
Motivation	Horgan et al.[54]	Increases in motivation in the 7-days prior increases risk.	OR: 1.04 ± 0.09, p <0.001 AR: 0.86 ± 0.29	Intrinsic Modifiable	Moderate
Muscle soreness	Horgan et al.[54]	Increases in muscle soreness 28-days prior increases risk.	OR: 1.00 ± 0.03, p<0.001 AR: 1.04 ±0.09	Intrinsic Modifiable	Moderate
		Bidirectional changes in muscle soreness in the 7-days prior increases risk.	OR: 0.99 ± 0.10, p <0.01 AR: 1.04 ± 0.33		
Personality trait: 'being open to new ideas'*	McManus et al.[57]	Not being open to new ideas increases risk of injury.	IRR (95% CI): 1.04 (1.00-1.07)	Intrinsic Non-modifiable	Limited
Playing experience	Smith et al.[60]	For every year of netball played, injury risk increases.	OR (95% CI): 1.5 (1.20-1.90), p = 0.000	Extrinsic Modifiable	Conflicting
	Bissell & Lorentzos [48]	Lower playing experience increase risk of overuse injury.	Knee (>6 yrs vs. under 6 yrs): χ^2 812.11, p = 0.001 Knee (>11 yrs vs. under 11 yrs): χ^2 5.997, p = 0.014 Ankle (>6 yrs vs. under 6 yrs): χ^2 5.96 p = 0.015		

Podiatric / foot type	Hopper et al.[52]	Rearfoot abnormalities increases risk of injuries.	p<0.05	Intrinsic Non-modifiable	Conflicting
	Hopper & Elliot[51]	No effect of foot type.	p>0.05		
Previous injury	McManus et al.[57]	Not being injured in last 12 months decreases risk.	IRR (95% CI): 0.58 (0.43-0.79), p=0.001	Intrinsic Modifiable	Conflicting
	Franettovich et al.[50]	History of lower limb injury in last 12 months increases risk.	Unadjusted OR (95%CI): 7.7 (4.1-14.2), p<0.001 Adjusted OR (95% CI): 6.9 (3.7-13.0), p<0.001		
	Attenborough et al.[18]	No effect of previous ankle sprain on ankle injury.	Unadjusted OR (90% CI): 0.58 (0.16-2.05), p =0.30		
Sleep	Horgan et al.[54]	Low sleep in 48-h prior increases risk.	OR: 0.91 ± 0.03, p = 0.005 AR = 4.00%	Intrinsic Modifiable	Moderate
Somatotype	Hopper et al.[51]	Players with lower endomorphy component are at increased risk.	P<0.05	Intrinsic Non-modifiable	Limited
Stiffness in soleus and Achilles	Pickering et al.[19]	Players with high stiffness of soleus and Achilles are at increased risk of <i>lower body</i> injury.	Soleus p=0.037, OR (95% CI): 16.00 (0.72-354.82), RR: 4.00 (0.66-24.37) Achilles p=0.004, OR (95% CI): 121 (2.02-7259.72), RR (95% CI): 11.00 (0.77-158.02)	Intrinsic Modifiable	Moderate
Stress	Horgan et al.[54]	High stress in 7-days prior increases risk.	OR = 0.99 ± 0.06, p = 0.004 AR = 0.87 ± 0.29	Intrinsic Modifiable	Moderate
Surface	Coetzee et al.[49]	Playing on cement surface increases risk of injury vs. synthetic surface.	1.9x higher injury rate	Extrinsic Modifiable	Limited
Training load	McManus et al.[57]	Training >4 hrs per week decreases risk.	IRR (95% CI): 0.66 (0.45-0.98), p=0.039	Extrinsic Modifiable	Conflicting
	Franettovich et al.[50]	Playing netball >4.5 hrs per week increases risk.	Unadjusted OR (95% CI): 2.0 (1.2-359), p=0.007 Multivariate analysis p>0.05		

No effect of training load

Use of warmups	McManus et al.[57]	Not warming up before a game increases risk.	IRR (95% CI): 1.04 (1.00-1.07), p=0.010	Extrinsic Modifiable	Limited
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*Personality trait of 'being open to new ideas' – a lack of openness encompasses narrow-mindedness, strict routines, and conservative thinking.[57]

OR = odds ratio, RR = risk ratio, IRR = incidence rate ratio, AR = absolute risk, CI = confidence intervals