Supplementary Table 8. Expert-based sub-themes that did not reach consensus, median research

priority (interquartile range) calculated from 5-point Likert scale, and percentage of expert

agreement.

Expert-based Theme	Sub-themes	Median Research Priority (IQR)	Low (%)	Medium (%)	High (%)
Female health	Relationship between hormonal contraceptive use, training and performance	4.0 (1.0)	17	27	57
	Pelvic health	3.0 (1.0)	13	50	37
	Effects of the menstrual cycle and hormonal contraceptives on concussion testing and treatment	3.0 (1.0)	13	43	43
	Use and decision-making process of hormonal contraceptive use	3.0 (1.0)	23	40	37
	Pregnancy and childbirth	3.0 (2.0)	30	33	37
	Breast health	3.0 (1.8)	33	30	27
	Urinary incontinence	2.5 (1.0)	50	33	17
	Polycystic ovarian syndrome	3.0 (1.0)	43	47	10
Injury	Strength profiling for high-risk areas (e.g., neck, shoulder)	4.0 (1.0)	10	23	67
	Recovery time-frames from specific injuries	3.5 (1.0)	13	33	53
	Injury and wellness (e.g., sleep, stress, mood, soreness) relationship	4.0 (1.0)	10	33	57
	Knowledge and attitudes of injury prevention	3.0 (1.0)	13	40	47
	Strategies to optimise injury education of players and coaches	3.5 (1.0)	13	37	50

	Neuropsychological testing (e.g., memory, executive function, dementia) of players, and relationship to injury history	4.0 (1.0)	20	23	57
	Head acceleration kinematics	3.0 (1.0)	13	43	43
	Nutritional strategies to reduce concussion risk	3.0 (1.0)	33	43	23
Match Characteristics	Relationship between match characteristics (e.g., total distance) and injury	4.0 (1.0)	10	27	63
	Relationship between match characteristics (e.g., running distance) and key performance indicators (e.g., tackle success, time spent attacking)	3.5 (1.0)	13	37	50
	Technical and tactical match-play characteristics (e.g., tackle, pass, decision-making)	3.0 (1.0)	13	47	40
	Match characteristics e.g., total distance, high-speed running distance (incl. performance levels [e.g., junior, elite], positional differences, halves of play and changes over time)	3.0 (1.0)	17	47	37
	Peak sequences in match-play (e.g., worst-case scenarios)	3.0 (1.8)	30	43	27
Physical Performance	Physical characteristics (e.g., strength, speed, power) (incl. performance levels [e.g., junior, elite] and changes over time)	4.0 (1.0)	13	27	60
	Interventions (training, nutritional) to enhance performance (e.g., strength training to optimise ball-carrying)	4.0 (1.0)	3	43	53
	Preparation for tournament-play (e.g., short match turnaround in rugby world cups)	4.0 (1.0)	10	33	57
	Training adaptations (incl. positional differences)	4.0 (1.0)	13	30	57

Longitudinal wellness (e.g., sleep, stress), training load (e.g., rating of perceived exertion) and physical performance (e.g., strength)	4.0 (1.0)	13	33	53
Difference in physical and performance characteristics between women and transwomen	3.5 (2.0)	30	23	47
Physiological profiles of women's rugby players (e.g., biochemical markers)	3.0 (1.0)	23	30	47
Optimising microtechnology for female athletes (e.g., global positioning system [GPS] vests designed for women's bodies, female-specific running speed thresholds)	3.0 (2.0)	30	23	47
Biomechanical effects (e.g., Q angle) on rugby performance (e.g., tackle, scrum, jackal)	3.0 (1.0)	23	43	33
Nutritional requirements and supplementation (incl. performance levels [e.g., junior, elite])	3.0 (0.8)	17	57	27
Relationship between physical performance (e.g., lower body strength) and rugby (e.g., dominant tackle)	3.0 (2.0)	30	37	33
Reliability of microtechnology for rugby specific skills (e.g., collisions, accelerations)	3.0 (1.0)	23	47	30
Anthropometric characteristics (e.g., body mass, bone mineral density) (incl. levels of performance [e.g., junior, elite])	3.0 (1.0)	17	57	27
Transwomen participation in rugby	3.0 (2.0)	33	23	43
Reliability and validity of physical performance tests	3.0 (1.8)	30	43	27
Residual training effect of physical characteristics (i.e., how long it takes to de-train)	2.0 (1.0)	53	33	13
Psychology — Psychological aspects of dual-career players	4.0 (1.8)	20	20	60

Supplemental material

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Psychological demands of rugby	4.0 (1.0)	7	33	60
Optimising the relationship between (male) coaches and women's rugby players	4.0 (1.0)	13	30	57
Psychological barriers to rugby participation	4.0 (1.0)	17	27	57
Psychological aspects of post-rugby career players	3.0 (1.0)	17	33	50
Mental toughness	3.0 (2.0)	33	33	33

IQR, interquartile range.