

Enriching Player Development in Women's Futsal in Portugal: A Narrative Account of Case Examples.

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1 Enriching Player Development in Women's Futsal in Portugal: A Narrative Account of
2 Case Examples.

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26 **Abstract**

27 In Portugal, women's participation in futsal has increased 85.5% in the last decade, growing
28 from 5.406 to 10.028 female participants, making it one of the most popular sports in the
29 country. However, questions have been raised, generally, over the quality of coaching in
30 women's sports, raising issues over the enrichment of performance in female futsal athletes in
31 the future. This critical commentary seeks to: (a) to provide insights, through the tenets of
32 ecological dynamics theory, on future practical applications to improve enrichment of athlete
33 developmental experiences in female futsal in Portugal; and (b), advance new ideas for
34 research on this topic. Resorting to ecological dynamics theory may help futsal clubs consider
35 how to create an *individualised* and *contextualized* environment for enriching environmental
36 interactions of female futsal athletes. More meaningful opportunities for the development of
37 female futsal athletes may be provided by adopting more contemporary pedagogical
38 strategies and structures in futsal clubs by updating coach education in women's futsal,
39 increasing the amount and nature of enrichment activities undertaken each week, as well as
40 updating training facilities and equipment. Moving forward, systems-level changes are
41 needed to individualise and contextualise individual-environment relationships more
42 accurately, which will help to foster the growth of the sport. We humbly invite other
43 researchers and practitioners to co-produce responses that add to this debate and reflect on
44 what is to come next for female futsal across contexts.

45 **Keywords:** pedagogical practice; enriching athlete-environment relations; equity; female
46 sport; high-performance sport; athlete development.

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Enriching Player Development in Women's Futsal in Portugal: An Ecological

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Dynamics Perspective

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Over the past years, women's participation has grown significantly across a vast array of sports, which has become more accessible to children and youth worldwide (Eime et al., 2021; Tanaka et al., 2021). For example, Eime et al. (2021) examined changes in participation in multiple sports in Australia, over a five-year span, investigating basketball, hockey, netball, sailing, tennis, swimming and football. Findings showed that between 2015 and 2019 participation for women and girls increased, specifically for girls between the ages of 4 and 9 yrs. Additionally, Tanaka et al. (2021) recorded female sport participation in high school sport programmes between 1973 and 2018, revealing an increase from 24.2% to 42.9%.

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In Portugal, women's participation in futsal, one of the most popular sports in the country, has increased 85.5% in the last decade, growing from 5, 406 to 10, 028 female participants (Federação Portuguesa de Futebol, 2023a). Indeed, women's sports have gained increasing attention in policy and in mandates of in sport organizations (Meier & Uechtriz, 2019). Furthermore, increasing participation rates and opportunities to engage in sport for women, have also been reflected in the efforts made by researchers and practitioners towards fostering social justice in the form of equitable access and empowerment (Casey et al., 2022).

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To achieve the participation outcomes outlined above, strategies have begun to be employed towards creating better sport performance and development environments. However, this remains an ongoing challenge in research and practice.

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For example, Ekstrand and colleagues (2023) revealed that hamstring injuries in women's elite football were strongly associated with lack of knowledge of contemporary

76 coaching pedagogies and not player characteristics. Furthermore, Garcia and Croceta (2022),
77 highlighted perspectives of 6 coaches and 16 athletes, comparing incentives, training
78 conditions and motivations of male and female futsal athletes. Their findings showcased that
79 male futsal athletes had opportunities to participate in more competitions than their female
80 counterparts, although training conditions were similar between both genders. These studies
81 drew attention to operational data on sport science support conditions, featuring
82 accommodation, transportation, availability of sports equipment, sponsors, nutrition and
83 support materials. In line with these recent and rapid changes, futsal clubs and organizations
84 have begun to utilize strategies to create more competitive performance opportunities for
85 female athletes. For instance, in Portugal, athletes in the first division of the Futsal
86 competition, similar to their male counterparts, participate in three competitive events,
87 specifically the Portuguese cup, the league cup and the championship (Federação Portuguesa
88 de Futebol, 2023b). Indeed, equality of opportunity has become the standard for changes in
89 performance environments and competitive formats.

90 However, in this critical commentary, we consider how the *quality* (rather than the
91 quantity) of athlete support provided in these developmental opportunities (learning
92 experiences and practice environments) for female futsal players has not been sufficiently
93 considered. Here, we outline why more attention should be paid towards the specificity of
94 female athletes' developmental pathways, especially focusing on the need to provide
95 equitable opportunities for learning and growth (Bowes et al., 2021). It is proposed that the
96 provision of equal opportunities for female futsal players to develop can be achieved by
97 implementing contemporary ideas on skill development, identifying and focusing on the
98 specific needs of female participants to enrich their learning experiences in sports like futsal.
99 Enrichment of (female) athlete-environment relations in ecological dynamics refers to the
100 individualisation and contextualisation of coaching, athlete support, skill acquisition and

101 training designs based on the needs of the individuals within a specific group of athletes,
102 based on developmental status, age, sex and abilities (Davids et al., 2023).

103 A major barrier to understanding how to enrich the developmental pathways of
104 women athletes in futsal is related to the fact that their individual needs and wants are often
105 defined according to men's standards, although physiologically, historically, culturally and
106 socially there are substantial differences (Lebel et al., 2021; O'Brien et al., 2022). The
107 implication is that the needs and wants of each individual athlete, based on the demographic
108 that they belong to (e.g., children, athletes with different abilities, athletes from particular
109 cultures) must be carefully understood by coaches and sports science support staff. This
110 contemporary perspective, advocated in ecological dynamics, contrasts with traditional
111 coaching and training methods which adopt a universal 'one size fits all' approach, based on
112 'norms', typically gained from research with adult males, to support athlete development and
113 preparation for performance (for criticisms of the 'adultification' of children and youth sport
114 experiences, see Davids et al., 2023).

115 In sport science research, there has been a lack of urgency in understanding that
116 women do not have the same developmental and performance needs as men in sport (Lebel et
117 al., 2021). Applied scientific research and practice in sports like futsal needs to reject the
118 implicit assumption that all athletes are "honorary males" (i.e. the assumption is that all
119 athletes, regardless of sex and developmental status, have exactly the same personal
120 constraints as adult male athletes). This leaves a deficit in the sport science literature since
121 most research on futsal either has been centered on samples of male athletes (Mendes et al.,
122 2022; Martinez-Riaza et al., 2017) or has been gender neutral and neglected the specific
123 needs that female athletes have, based on their diverse gender identities (Méndez-Dominguez
124 et al., 2022). Recently, Mendes et al. (2022) conducted a systematic review to examine the
125 key features of talent identification and development in futsal, which revealed a database that

126 solely focused on samples of male athletes. A total of 238 articles were found, with a scarcity
127 of research centered on samples of female futsal athletes, especially with regards to variables
128 such as the key features of talent identification and development (Barbero-Alvarez et al.,
129 2015; Barth et al., 2016). In fact, the systematic review found no studies attempting to
130 examine the key features of talent identification and development based on needs of female
131 futsal athletes.

132 In response to this growth in participation and development in futsal, sport science
133 research on female's performance in futsal has increased only moderately (Sanmiguel-
134 Rodríguez, 2021). Further, previous studies have been mainly centered on physiological
135 aspects of performance, as well as on some social and cultural variables related to
136 engagement, participation and performance (Beato et al., 2017; Lago-Fuentes et al., 2020).
137 The implication is that there is a need to disrupt, adapt and refine 'technique reproduction'
138 models in designing practices for skill adaptation (not acquisition), as well as strength and
139 training programmes for women which have been derived, in many cases, from research on
140 men's sport performance. An important step in considering how female futsal players may be
141 better coached and trained in their development involves contemporising coaching and sport
142 science methodologies to emphasise the individualisation and contextualisation of training
143 programmes. Ecological dynamics is one such framework that focuses on the needs of
144 specific samples of athletes, such as women, children and those with different abilities, in
145 sport development programmes (e.g., Otte et al., 2021).

146 **Ecological Dynamics**

147 There is increasing understanding about the specific trajectories of individual-
148 environment relationships (Woods et al., 2020a; 2020b) and how they can be shaped to enrich
149 the relations of individual athletes with a performance environment, focusing specific needs
150 such as: (i) different skill levels, capacities and abilities, and experiences, including those

151 with different perceptual, cognitive and physical functions; (ii) sex differences; and (iii),
152 differences in maturation and development. Long-term participatory experiences in sport that
153 open pathway possibilities in recreational, competitive or high-performance sport, need to be
154 theoretically re-framed in order that athlete experiences can be individualised and
155 contextualised according to specific needs. Based on this premise, an ecological dynamics
156 rationale has been extensively used by researchers to examine the reciprocal relationship
157 between individual, task and environment in human behaviour (Gibson, 1979). Thus, the
158 ecology of sport is characterised by the physics of the location in which activity takes place
159 and the biological and psychological features of those who participate in sport, but also by the
160 socio-cultural significance and historical tendencies that enfold performance and practice
161 (Araújo & Davids, 2016; Araújo et al., 2006). These variables (especially social significance,
162 historical expectations and cultural aspects) are continually shaping coach-athlete-
163 performance environment relationships. Within the ecological dynamics framework, team
164 sports and coaching are positioned as needing to understand how athletes function within a
165 complex and evolving system of relationships (Davids et al., 2005). With this perspective in
166 mind, coaches can continually create learning opportunities, shaping the ability of athletes
167 and teams to satisfy constraints through adaptation of specific performance behaviors.

168 Research in ecological dynamics has contributed to understanding learning and
169 development, performance, research and coach education as inter-connected and inter-
170 dependent spheres in a complex adaptive system (Wood et al., 2022; Nunes et al., 2020;
171 Sarmiento et al., 2018). In this respect, ecological dynamics can help map the specific bio-
172 psychological, socio-cultural, historical tendencies and physiological variables that
173 continuously shape women's experiences in futsal placing *the individual athlete at the center*
174 *of the analysis.*

175 The purpose of this critical commentary is: (a) to provide insights, through tenets of
176 ecological dynamics theory, on future practical applications to improve athlete development
177 and enrichment of interactions in female futsal in Portugal; and (b), advance new possibilities
178 for research on this topic. To achieve these objectives we elaborate on bio-psychological,
179 physiological, socio-cultural and historical constraints related to women's experiences in
180 futsal, as well as provide concrete examples derived from personal experiences. The first,
181 third and fourth authors are Portuguese coaches with experience coaching high-performance
182 female futsal teams. The first author is also a researcher studying gender inequities and social
183 injustice in sport, specifically concerning female futsal athletes. The second author is
184 knowledgeable about the application of ecological dynamics theory in evidence-based
185 programs for athletes, teams and coaches that aim to foster holistic long-term athlete
186 development. The last author is a high-performance futsal athlete with more than 10 years of
187 experience at the national and international levels.

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189 **Evidence-based Approach Towards Athlete Development and Preparation**

190 As mentioned, the bulk of research on women's experiences in futsal has focused on
191 physiological aspects of performance (e.g., Barbero-Alvarez et al, 2015; Barth et al., 2016;
192 Beato et al., 2017; Chernysheva et al., 2015; Pascual Verdú et al., 2016; Kassiano et al.,
193 2019; Karavelioglu et al., 2016; Teixeira et al., 2019), injury prevention and incidence (e.g.,
194 Lago-Fuentes et al., 2020; Ruiz-Pérez et al., 2019), with less attention to technical and
195 tactical skill development (e.g., Silva et al., 2019). Research centered on physiological
196 aspects of performance has included studies of samples of elite, high-performance female
197 futsal athletes (Atakan et al., 2019).

198 These studies have resorted to quantitative approaches to highlight the need to
199 develop athlete-centered physical fitness programs that respect inter-individual responses to

200 training. Although these studies are valuable to the field and have practical applications, they
201 do not consider long-term developmental issues and challenges that female athletes
202 specifically face in many sports. In considering the individualisation of training, it is
203 important to note that female athletes may show diverse responses to training because, even
204 at a high-performance level in some sports, many individuals may not be full-time
205 professionals without other work commitments. They may train two to three times per week
206 with their clubs, which does not represent their routines within national team contexts where
207 they train more frequently with varying training demands.

208 The few studies that have investigated issues of injury prevention and incidence in
209 female futsal players, have revealed a substantial risk of injury located in ankle joints and
210 quadricep muscles with a moderate level of severity. Consequently, there is a need to develop
211 preventive strategies that are tailored to meet these needs (Lago-Fuentes et al., 2020).

212 Previous studies have revealed that most injuries in female athletes occur in the first few
213 weeks of competition and shortly after the end of year holidays. With regards to women's
214 futsal, it is worth considering the question whether better (i.e. more contextualised) coaching
215 is required to reduce the risk of such injuries (e.g., see Ekstrand et al., 2023). In ecological
216 dynamics, such coaching may infer the enrichment of women's interactions with the futsal
217 performance environment at different levels (i.e. developing more general athleticism and
218 multi-skills as well as specificity of practice) (Davids, et al., 2023).

219 Conversely, research on the role of enrichment in female athlete development is still
220 scarce. For example, Mascarin et al. (2019) analyzed Brazilian female athletes' perceptions
221 on athlete development and enrichment, highlighting that opportunities to practice futsal
222 skills were provided later in development, compared to male athletes. Specialization also
223 occurred later than expected in these athletes, with performance environments lacking
224 scheduled competitive events. These findings revealed the need to rethink athlete-

225 environment on-going interactions and to shape affordances (opportunities for actions in
226 performance) based on female futsal athletes' needs, instead of merely applying *normative*
227 models of athlete development. Normative models of athlete development are male-
228 dominated and implicitly assume that athletes have the same opportunities for training and
229 practice experiences across the developmental spectrum in sufficient quantity and quality
230 which is not the case for many female athletes. For example, most female futsal teams
231 competing at a senior level in the Portuguese first division do not have under-15 and under-
232 16 years age group teams, as in other countries. The implication is that competitive
233 performance opportunities for young women may only reside at senior competitive levels,
234 perhaps being presented before the development status of these athletes could support this
235 experience.

236 Thus, past research has provided limited insights about female athlete development
237 and enrichment, and the interacting influence of bio-psychological, physiological, socio-
238 cultural and historical constraints have not been considered as interconnected variables. Such
239 an approach undermines the impacts and transfer of current knowledge. However, as research
240 framed by ecological dynamics theory evolves in sport science applications (for examples see
241 Morris et al., 2022 Mesquida et al., 2022; Wood et al., 2022), there will be opportunities to
242 develop novel strategies and approaches to critically understand how to place the female
243 futsal athlete at the center of research and practice.

244

245

246 **Practice-based Approach Towards Athlete Development and Preparation**

247 Historically and politically, narratives and practices towards female athlete
248 development have reflected a reductionist approach (Lebel et al., 2021). A reductionist
249 approach does not acknowledge the tenets of ecological dynamics theory (Woods et al.,

250 2020a;2020b) and the *specific* development and preparation pathways for female athletes.
251 Decades of inequalities across female sport provide the necessary rationale to urgently
252 implement equitable policies and practices that support and enrich female athlete
253 development pathways (Eime et al., 2021; 2022; Spaaij et al., 2015).

254 Within the Portuguese context, female futsal athletes' experience abbreviated and, in
255 some cases, low-quality developmental processes with limited organizational structure and
256 guidance (Santos et al., in press). Through the development of this insights paper, we were
257 able to investigate and deepen our reflections about what futsal is becoming for female
258 athletes which we will expand on in the following section.

259 Due to lack of scientific and pedagogical understanding, at elite and developmental
260 levels in futsal, women (at all ages and levels of performance) tend to be treated as 'honorary
261 males' (Anderson, 2008). The implication is that the unique interacting constraints impinging
262 on the development of female futsal players are not considered, but merely interpreted from
263 the standpoint of what we know about male performers. This honorary status is also often
264 provided for other groups of athletes with unique needs and characteristics, such as children,
265 those with differing abilities and ageing (Masters level) performers (Davids et al., 2023).
266 Consequently these groups may be victims of a distorted sense of equality and morality.
267 Equality, in some respects, may manifest itself in providing the same competitive formats for
268 male and female athletes, organizing competitive events in the same locations (e.g., final four
269 of a league cup) and demanding the same level of performance – regardless of specific needs
270 of women futsal players at a specific moment in time. These are examples of 'equalities'
271 made available within the Portuguese context (Federação Portuguesa de Futebol, 2023b).
272 Although these competitive opportunities may be considered *positive* applications of the
273 principle of equality, they are not actually contextualised to the immediate, specific needs of
274 women futsal players. In fact, these opportunities do not provide *equality of opportunity*

275 (which considers individual needs and contexts at a moment in the timescale of development,
276 which we discuss next).

277 At this moment in time, most high-performance female futsal athletes across the
278 world are not full-time professionals. For instance, the last author of this paper is a futsal
279 player and a full-time technician at a local prison establishment. Therefore, organizing
280 competitive events in the same locations for male and female athletes, as well as using the
281 same competitive formats for all athletes is not possible and creates multiple challenges. One
282 of these challenges at this time is that most women's teams do not have the necessary funds
283 and time to travel and ensure accommodation for the necessary period to prepare (i.e., when a
284 competitive game takes place away from the club location, most athletes usually arrive,
285 perform and depart on the same day, regardless of travelling distance). Conversely, most
286 high-performance male futsal athletes are full-time professionals, having access to
287 organisation funds to prepare for games with the necessary structure and time. Viewing the
288 principle of equality in this way may differentially impact on athlete development,
289 preparation and performance (Calleja-Gonzalez et al., 2020).

290 Second, most high-performance female futsal athletes did not come through a
291 structured, youth sport programme pathway. Specifically, most athletes only started to play at
292 a late developmental stage following current trends across European countries (see Emmonds
293 et al., 2023 for youth sport participation trends in Europe). Most futsal clubs have only
294 recently started to organise youth teams. For a long period, many futsal clubs only had a
295 female senior team which attracted any attention and investment. Consequently, female futsal
296 athletes may have experienced far less development training and enrichment experiences and
297 loadings on reaching the age of 18 years, compared to their male counterparts (Lago-Fuentes
298 et al., 2020). Male futsal athletes typically have a full (unstructured and structured) youth
299 sport experience, typically across early childhood to late adolescence. Such a contrast may

300 justify why it is unreasonable and unfair to expect the same level of performance from male
301 and female futsal athletes, despite there being a common competitive format, but few
302 equitable practices to compensate the absence of appropriate developmental support (Till et
303 al., 2022). Despite the Portuguese Football Federation, where futsal is located, requiring
304 futsal clubs participating at national level competitive events to have youth teams, some still
305 attempt to bypass the system by having teams in the organisation, but not investing in them.

306 From an organizational standpoint, the lack of a well-developed and long-term plan to
307 develop female futsal athletes over time hinders the emergence of talented players and makes
308 futsal clubs reliant on a small number of specific athletes to sustain a competitive
309 performance outcome culture. In other words, the lack of investment in creating
310 environmental conditions for youth athletes to thrive, influences the playing resources
311 available to senior teams for build a competitive team. Subsequently, this dependence creates
312 an environment where a few female athletes can hold substantial social capital and power. In
313 some cases, this position allows them to influence decision making on appointment of
314 coaches, with little consequence for lack of rigor in application, even adopting disrespectful
315 attitudes, as well as maintaining their playing status, due to the current lack of a substantive
316 competitive performance environment. In some cases, female futsal athletes develop egos
317 that undermine their will and desire to disrupt the status quo (e.g., voice their opinion about
318 the need for systemic changes, urge other athletes to seek high quality developmental
319 opportunities). Key socio-cultural and historical constraints at play create an environment
320 where women have low expectations for participation in futsal and tend to reconcile
321 themselves with the idea that they should only practice three times per week, with low
322 expectations of conditions and opportunities for performance development. For example,
323 many high-performance teams always train later in the day than men (despite having better
324 performance outcomes) and have no support from physiologists or other specialized

325 professionals to prevent injuries and increase physical conditioning. In fact, some athletes
326 must “train by themselves” if they want to perform at a high level, seeking specialized
327 support and covering the costs. This lived experience leads to the fact that some athletes are
328 at risk of becoming overweight, many have an increased risk of injury and/or fail to improve
329 their ability to perform. Recently, in the first forum on female futsal held in Porto, Portugal
330 these issues were raised by one of the national team captains (Escola Superior de Educação
331 do Instituto Politécnico do Porto, 2022; see
332 <https://www.youtube.com/watch?v=iWiAAjMqP64> for the recording of this forum). The
333 current underlying ethos across female futsal seems to be: “This is good enough”. This
334 culture of acceptance undermines change from within futsal clubs and requires concrete
335 macro-level action (i.e., policies) towards increasing the quality of the processes. To
336 deconstruct and further provide a nuanced understanding about the current status quo across
337 female futsal teams within the Portuguese context, exemplary cases are highlighted next.
338 These exemplary cases derive from the authors’ reflections on lived experiences across the
339 female futsal landscape, especially considering prevalent social inequities and injustices,
340 being representative scenarios for athletes.

341 **Case 1**

342 Joana, a pseudonym utilised to illustrate this case, is a 36-year-old athlete who is
343 playing in the first division of the women’s futsal league. Currently, Joana would like to
344 better contribute to the team’s performance. However, she feels there are key defensive and
345 offensive fundamentals that still require substantial refinement in her performance
346 development. Joana feels her development could have been even slower if she did not play in
347 the boy’s competition in school sports.

348 To understand why Joana fails to master certain defensive and offensive fundamentals it is
349 important to understand her experiences until this point. Joana was provided with limited

350 opportunities to learn how to play the game and only started to play at age 17 yrs. In contrast
351 to her male counterparts who started to play futsal much earlier and practiced 3/4 times per
352 week, she had very few opportunities to play. Even in school, playing futsal was not socially
353 accepted, as she was a victim of discrimination. When Joana joined a futsal team for the first
354 time, male coaches, influenced by their sole experience of men's performance norms, were
355 only focused on achieving results at all costs, which made them neglect her development and
356 to solely focus on performance deficits. To 'remedy' these performance deficits, coaches
357 sought to mechanize Joana's movements/actions that could provide performance outcomes in
358 the short-term (e.g., breaking down techniques into components, telling her what to do at
359 each moment of the game/practice, limiting her autonomy, contributions and decision making
360 and creating activities with few opportunities to explore and understand the game) as well as
361 disregard her developmental needs (e.g., the need to be creative, engage in deliberate play).
362 This reductionist approach to Joanna's development in futsal actually did not 'fix' anything
363 and led to her to gain limited understanding about the importance of defensive and offensive
364 fundamentals, the game as a whole and was over-focused on simply reproducing and
365 rehearsing basic techniques without critical thinking and awareness. These initial experiences
366 in the sport shaped Joana's mindset now which makes her only value performance outcomes
367 like winning instead of ongoing development – this was the perspective that made her reach
368 high-performance sport. Her experiences forced her to prioritise coaches who disregard
369 autonomy and self-regulation in players. Instead, Joana prefers a more prescriptive, analytic
370 and controlling coach who can direct her to manage the pressure that problem solving and
371 increased tactical awareness imply. Consequently, Joana for now feels that training
372 conditions and demands are sufficient. She endorses a non-professional climate within a
373 high-performance league which is more comfortable and manageable for her at this point in
374 her journey. However, she still dreams about what she could have become with more time

375 and opportunities to just play at school and at the futsal club without any social, political or
376 cultural barriers.

377

378

379 **Case 2**

380 Monica, another pseudonym utilised to illustrate this case, is a 16-year-old athlete
381 who is playing in a local futsal club whose female senior team is competing in the first
382 division. She has been fortunate enough to join the senior team in some practices and even
383 competitive games. Although her progress in the club has been positive, she has seen multiple
384 harmful decisions made and experienced many negative experiences. Once she joined the
385 senior team, the coach who was also supervising the youth level teams was fired after seven
386 games. A new coach came in who also was made responsible for supervising the youth level
387 teams. In fact, the role and responsibilities of supervising the youth level teams was simply
388 an administrative formality the club had to fulfill, and the senior team coach was simply the
389 easiest choice. No supervision was indeed occurring at the club as practices were not
390 developmental for coaching Monica in the key defensive and offensive fundamentals. Monica
391 really thought that supervision and a more experienced coach providing support to the other
392 coaches could help increase the quality of her developmental experiences and make the club
393 develop a concrete long-term plan, but this was not the case. However, she views male futsal
394 teams and their overall structure as being much more organized and competent even in lower-
395 level futsal clubs. Monica feels expectations and demands are low which is disappointing
396 because she has worked very hard (as male athletes have done) to reach this position.

397 Nonetheless, Monica was pressured into performing to win at all costs in the under-17
398 years team and in the senior team. In fact, the coach at the senior team told her she would not
399 have much playing time now because she had not learned key defensive and offensive

400 performance fundamentals. However, her coach at the under-17 years level informed her that
401 he did not have enough time to coach her in developing these performance fundamentals.
402 Concurrently, she observed that many athletes had started to skip practices and only turned
403 up for competitive games, which was accepted by the club, due to lower numbers. She could
404 not understand how, despite having only two practice sessions per week, the club and the
405 coaches disregarded the value of practicing, learning and developing over time. She is not
406 able to reconcile with these types of procedures, despite her being motivated to achieve the
407 highest performance levels of which she is capable. Her male colleagues at school face few
408 such social challenges.

409 **Case 3**

410 Sara (a pseudonym) is a 28-year-old athlete who has been a player at the same club
411 for over 7 yrs. Her family members form part of the administration of the club, and she is the
412 team captain. Sara had much potential at an early stage of her career, but, due to her family
413 experiences, always wanted to be in control and influence how the club was organized.
414 Differently from male futsal, female futsal has few teams and a less well-established
415 structure, so she and her family saw an opportunity to reach a high level of competitive
416 performance with an amateur organization. Sara never understood her position at the club and
417 saw it more as a possession and a social space where she could take the lead in implementing
418 new ideas. Why? Because she could! With an amateur structure and with insignificant
419 investment they had achieved interesting results because the performance level was so low.
420 The entire club revolved around Sara and her family. Eventually, the club was terminated
421 because it did not fulfill the necessary administrative requirements set by the Portuguese
422 Football Federation in their nation-wide certification program that aims to assess the
423 effectiveness of sport organizations. Looking back, Sara feels she could have done things
424 differently. She feels that her egocentric mindset limited the club's evolution, interfered with

425 many coaches' efforts to make the team grow and hindered the emergence of new talents.
426 Aligned with thinking "my way or the highway", Sara contributed to the creation of a team,
427 not a club. For instance, the club did not have enough youth teams due to insufficient
428 numbers; some athletes were dismissed from practices and were only required to show up in
429 games; and verbal abuse and violent behaviors towards other teams, coaches and referees
430 were common everyday features. Sara now realizes she was part of the problem, not the
431 solution. More so, she was also a victim of being disregarded as an athlete and feeling she
432 had no worth or value because she was a woman playing futsal. Therefore, the dominance of
433 a club represented an opportunity for her to achieve some social capital and recognition – this
434 was all she wanted no matter the cost to other (non-familial) members of the club.

435 **Implications for Practice and Research**

436 The exemplary cases of Monica, Sara and Joana have been discussed to highlight the
437 need for researchers and practitioners to come together and adopt new research
438 methodologies for studying player development in futsal and co-produce new knowledge and
439 novel pedagogical strategies (Smith et al., 2022; Taylor, 2017; Uehara et al., 2016). This
440 theoretical insights paper has suggested why it is important to think how to progress beyond
441 simplistic policies and operational practices in clubs and sports organisations that have been
442 historically constructed and based on the needs and requirements of adult male athletes,
443 providing opportunities to develop contemporary research questions.

444 To deepen our understanding of the situations and lived experiences reported in the
445 cases of the futsal players Monica, Sara and Joana, it may be necessary to develop research
446 programs, together with sport organizations, that enable a comprehension of current patterns
447 in coaching practices and athlete outcomes through using a mixed methods rationale,
448 implementing qualitative and quantitative theoretical lenses. This needs assessment could
449 help inform entire research programmes and sport systems, specifically to help develop: (a)

450 female-focused athlete development and preparation models (for girls and women) that
451 consider *bio-psychological, physiological, historical, social and cultural* aspects of women's
452 performance in futsal; (b) appropriate coach education programming that foster diverging and
453 disruptive thinking beyond simply reproducing and rehearsing movement techniques
454 displayed by adult male athletes; and (c), infuse ecological dynamics theory into women's
455 performance preparation and development programmes (see Uehara et al., 2016).

456 Subsequently, efforts could be employed towards examining the impacts of new and updated
457 policies, coach education programs and coaching practices attending to the specific needs of
458 female futsal athletes, their outcomes and experiences (beyond assessing global statistical
459 measures on win percentages and number of female participants).

460 Enriching player development in women's futsal through the lens of ecological
461 dynamics theory requires considering the web of relationships (i.e., the complex
462 entanglement) between environmental factors and the individual which requires coaches to
463 position athletes' needs first and adapt periodization, programming and planning strategies to
464 meet their performance and development needs (Woods et al., 2020a; 2020b). Traditional,
465 conservative and restrictive ways of coaching, developed by male coaches, predominantly for
466 male athletes, may not be compatible with such an approach (Bjørndal & Ronglan, 2021). If
467 sport organizations and coaches continue to disregard the complex nature and the
468 particularities of female athlete development and performance needs, futsal athletes will
469 continue to be exposed to social injustices (e.g., female athletes training less frequently than
470 their men counterparts, with lower quality facilities and coaching support) and will eventually
471 have to conform to the current state of affairs to simply maintain their position in high-
472 performance sport. Based on the assumption that coaching methodologies should consider
473 athlete's personal developmental needs, efforts are required by coaches and sport
474 administrators towards valuing learning in female futsal (O Sullivan et al., 2021; 2022). To

475 value learning in the female futsal environment, it requires coaches, trainers, educators and
476 sport administrators to think beyond high-performance sport and actively contribute to
477 enriching athlete developmental experiences throughout time and space. This must include
478 valuing female athletes' developmental trajectories until they reach high-performance sport
479 (i.e., at the youth level) and understanding *who they are, what they need and how to help*
480 *them become better athletes*. Further, coaches and sport administrators may have an added
481 responsibility of avoiding female futsal to become infused by a 'winning at all costs'
482 perspective and develop other pedagogical concerns (Renshaw et al., 2019). Such a
483 perspective may, then, come at the cost of meaningfully discussing the nature of athletes'
484 developmental processes and simply presenting a number of wins versus loses ratio as the
485 benchmark for success (Richard et al., 2023). For example, there are high-performance
486 female futsal teams that have reduced the number of practice sessions per week from three to
487 two as a way to decrease costs and facilitate logistics of space and equipment. One of the
488 teams that has decreased the number of practices per week has managed to maintain positive
489 performance outcomes. Conversely, as complementary note, there are male youth-level futsal
490 teams that practice four times per week. As we know there are significant benefits derived
491 from enhancing training opportunities that include increased: (a) opportunities for
492 development, (b) better skill acquisition and tactical understanding, and (c), competitiveness
493 (Abbott et al., 2005). This is why a winning at all costs perspective may harm discussions and
494 innovation developments that seek to improve athlete development (Richard et al., 2023)
495 within female futsal because the social, cultural and political variables at play are quite
496 different from male sports.

497 In this critical commentary, we attempted to provide a voice for athletes involved in
498 female futsal through the case experiences of Monica, Sara and Joana. However, more
499 research is needed on the perceptions and insights of actors and agents involved in the sport

500 performance and development system to facilitate open discussions to deconstruct the status
501 quo, considering both positive and negative aspects, and facilitating reflections on future
502 steps. We, as scholars and practitioners, should be aware of how adult, male-oriented sport
503 designs and concerns for practice and competition tend to dominate our understanding,
504 explanatory rationales and decisions. More so, in the product-oriented environment that we
505 live in today (Richard et al., 2023), qualitative items, experiences, perspectives and the
506 hidden curriculum in female futsal are aspects that need to be investigated and reflected upon.
507 Female futsal clubs and sport organizations, in general, should encourage coaches, athletes
508 and sport administrators to be more critically aware of their sport experiences and to engage
509 deeply in a reflection about current social issues and challenges. Indeed, “coaches could play
510 a vital and visible role in challenging dominant sporting discourses” however “they may in
511 fact often be complicit in maintaining the discourse that positions male athletes at the top of
512 the sporting hierarchy” (Haan & Knoppers, 2022, p. 643).

513 The statement above highlights the need to move beyond voices and take action to
514 develop context-specific programs for athlete development and enrichment that consider
515 specific bio-psychological, historical, social and cultural constraints. Athlete enrichment
516 tenets can be used to balance the potential absence of a meaningful youth sport experience for
517 males and, most importantly for our argument, females (Ribeiro et al., 2021). Nonetheless,
518 policies that ensure gender equality of opportunity should consider the need for sport
519 organizations to prioritize athlete enrichment, and influence coaching and coach education
520 programming which have been normative and male-oriented spaces for the most part
521 (Borrueco et al., 2022). For instance, the Portuguese Football Federation’s nation-wide
522 certification program assesses sport organizations’ effectiveness, which may move towards
523 including specific criteria relevant for overseeing female futsal. Specifically, this certification
524 program could help instigate sport organizations become empowered to: (a) create

525 partnerships with schools and other organisations to increase the number of female futsal
526 participants across all age groups; (b) deliver coach education courses centered around the
527 issues that shape the development of female futsal players in their context; (c) develop and
528 implement their own long-term athlete development programs that respect athletes' personal
529 needs (see Richard et al., 2023); (d) prioritize female futsal in their political agenda which
530 implies engaging policy makers in discussions around the logistical and financial aspects that
531 may need to be considered for better athlete development; and (e), establish partnerships with
532 further and higher education institutions to monitor such initiatives and provide practitioners
533 and participants with the support needed. Furthermore, to value athlete enrichment tenets, it is
534 also necessary to train sport scientists (future and professionals already working with sport
535 organisations) to specialise in supporting performance and development of women athletes
536 across futsal. Moving forward, more attention may need to be paid towards understanding
537 how to increase the quality of the processes for athlete development in futsal, as well as
538 empower and optimize the sport and research systems to help achieve this objective. It should
539 be noted we found no studies conducted on female futsal in Portugal.

540

Conclusions

541 The purpose of the present manuscript was to provide insights, through the tenets of
542 ecological dynamics theory, on future practical applications useful for changing the status
543 quo in athlete development and enrichment in female futsal in Portugal, and advance new
544 possibilities for research in this field. Studies that have attempted to examine female futsal
545 athletes' developmental pathways are scarce (Machado et al., 2022; Rodriguez, 2021) which
546 hinders a comprehensive understanding about their specific needs and wants. Within the
547 Portuguese context, more efforts are needed to fully capture the complexity of the issues that
548 affect the sport and create numerous challenges for athlete development and for a truly
549 equitable environment to exist. Several important steps have been taken to increase

550 opportunities for athlete development, however there are still many needs that will certainly
551 impact what is to come in terms of policy and practice. It has become clear that quantitative
552 metrics in the form of win percentage and statistical data on number of participants cannot be
553 the only indicators used to assess the effectiveness of the sport system. Resorting to athlete
554 enrichment and ecological dynamics tenets may help futsal clubs consider how to create an
555 appropriate environment (*individualised* and *contextualised*) for all athletes. On the other
556 hand, increasing meaningful opportunities through more contemporary pedagogical strategies
557 and structures provided by futsal clubs (e.g., quality of training, improved coach education
558 offerings, number of sessions per week, modernised facilities and equipment) is urgent.
559 Systems-level change is needed to impact individual-environment relationships more
560 accurately and influence the multiple social, political and cultural variables that may hinder
561 equity and social justice. The present manuscript represents a first step to develop a sincere
562 and open dialogue about emergent challenges that may require action in futsal that can also
563 become prevalent in other socio-cultural contexts. We humbly invite other researchers and
564 practitioners to co-produce responses regarding possible changes to the status quo and present
565 their reflections on how to improve equity and social justice within female futsal.

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