

TITLE

Research on women's football: a scoping review

AUTHOR

Okholm Kryger, Katrine; Wang, Albert; Mehta, Ritan; et al.

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1 **Research on women’s football: a scoping review**

2

3 **ABSTRACT**

4 This study aims to scope available peer-reviewed literature published in a FIFA language to
5 understand the current quantity of research on women’s football. Five databases were searched
6 (PubMed, PsycINFO, Web of Science, Scopus, SPORTDiscus) on the 15/12/2019. Studies
7 were included when containing original research published in a peer-reviewed journal around
8 female competitive football of any level, any age and on any subject. Author, journal, title and
9 abstract of all included studies were scoped. Population assessed, number of participants, level
10 of play, age level of football and publication theme(s) were extracted. A total of 1,634 articles
11 were screened. The oldest publication dated back to 1939, whilst a total of 202 studies were
12 gathered from 2019. The publication theme most frequently researched was sports medicine
13 (N=521) followed by strength and conditioning (N=331) and sociology (N=299). The majority
14 of studies focused on elite (N=442), senior (N=977) players. A continuous growth in research
15 attention has been seen. However, the numbers are not comparable to current research output
16 levels in men’s football. This study represents an essential first step in a larger ‘research agenda
17 setting’ project to determine research priorities for women’s football during the next ten years.

18

19 **Keywords: soccer, female, girl, ladies, evaluation**

20 INTRODUCTION

21 Football became organised with the foundation of the English Football Association (FA) in
22 1864. The first official recorded female match was played in Scotland in 1892, yet, whilst the
23 men's game saw continuous devolvement throughout the 20th century, the women's game did
24 not gain similar popularity. This included a ban of women from the fields by the FA in 1921
25 (Williams and Hess, 2015), which was only lifted in 1971 (Williams, 2011). While the first
26 Fédération Internationale de Football Association (FIFA) Men's World Cup took place in
27 1930, the first FIFA Women's World Cup was hosted in 1991 (Williams, 2011). The men's
28 game, therefore, has a large advantage in its long history with continuous progression in
29 professionalism, popularity and recognition in comparison to the women's game.

30 The elite female game has recently seen a large increase in popularity (UEFA, 2017a)
31 and consequently professionalisation of the game has transformed the quality of play, media
32 attention and support (FIFA, 2019; Welford, 2015). Governing strategies have recently been
33 implemented to improve the women's game. The FIFA vision of Making Football Truly Global
34 is based on eleven goals in which the eighth goal is to accelerate the growth of women's
35 football. A goal to which FIFA have committed a 1 billion USD investment in women's
36 football during the period 2020-22 demonstrates the ambition worldwide to develop women's
37 football (FIFA, 2020).

38 Concomitant with the substantial rise in participation and the increased recognition
39 from international governing bodies (FIFA, 2020, 2016, 2014; UEFA, 2017b, 2016), women's
40 football has recently received increased attention from sport academics around the world,
41 though still not comparable to their male counterparts (Pfister, 2015). While research in men's
42 football has been well established, women's football and consequently research on this topic
43 is still in a developing phase compared to their male counterparts. It is not known and often

44 questioned whether applying what we know from men's football to the women's game can
45 provide us an accurate and comprehensive understanding of the women's side of the game.

46 The current study aims to review the current literature available in women's football
47 and while not the first to review women's football literature, previous studies have limited their
48 search to either exclusively reviewing sport sciences outcome (e.g. physiological demands and
49 player physical characteristics; Martínez-Lagunas et al., 2014) or women's football from social
50 sciences and management perspectives (e.g. economics, history, management, marketing,
51 sociology; Valenti et al., 2018). In addition, both reviews were conducted on English language
52 studies only. Therefore, our study aims to scope all available peer-reviewed literature published
53 in English, French, German, and Spanish (i.e., languages officially used by the FIFA) on any
54 level of competitive football for women, to understand the current quantity of research on
55 women's football. An understanding of the current quantity of research in women's football is
56 essential as a building block to identify what areas are currently being addressed in research
57 and to open up debates about knowledge gaps to steer future research directions. Our study
58 represents an essential step in a larger 'research agenda setting' project to determine research
59 priorities for women's football during the next ten years. After all, research priorities set today
60 determine the agenda, practices and technology of tomorrow (Brundtland, 1999; Foster et al.,
61 2018) and are essential to maximise the impact of investments (Viergever et al., 2010) such as
62 time, energy and money.

63

64 **METHODS**

65 The protocol for this scoping review was pre-registered on Open Science Framework
66 (osf.io/gp7fb). The study followed the Preferred Reporting Items for Systematic reviews and
67 Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist (Tricco et al., 2018)

68 as well as the recommended best practise guidelines for scoping reviews by Levac et al. (2010).
69 No statement of consent is required for this manuscript.

70

71 **Search Strategy**

72 An initial limited search was performed on Google Scholar to ensure novelty by search for
73 scoping reviews on women's football. The search was built using female and football as search
74 terms. Relevant synonyms were discussed, and truncations and Booleans were added to
75 optimised to search. The following keywords were therefore applied *football OR soccer AND*
76 *female* OR woman OR women OR ladies OR lady*. Five relevant databases were selected
77 through researcher discussion and searched (PubMed (1966-2019), PsycINFO (1967-2019),
78 Web of Science (1900-2019), Scopus (1788-2019), SPORTDiscus (1892-2019)). The search
79 was conducted on December 15, 2019.

80

81 **Study selection**

82 All retrieved studies were downloaded to Mendeley (Elsevier, Amsterdam, Netherlands).
83 Results were cross-referenced and duplicate studies were deleted. Two reviewers (AW and
84 KK) independently reviewed titles and abstracts of all identified articles using Rayyan QCRI,
85 (Qatar Computing Research Institute, Doha, Qatar) to assess eligibility of inclusion using pre-
86 established inclusion/exclusion criteria (Table 1). Reviewers met at the beginning, midpoint
87 and final stages of the abstract review process to discuss challenges and uncertainties related
88 to study selection and to go back and refine the inclusion/exclusion criteria and theme
89 definitions where needed as suggested by (Levac et al., 2010). A third independent reviewer
90 was consulted to resolve discussions (RM). Where the abstract did not clearly clarify the type
91 of football played or the language of the publication, post-hoc full text checks were performed.
92 Journals were also assessed post-hoc to ensure a peer-review process was in place. Manual

93 searches were performed for articles where titles but no abstracts were extracted from the
94 databases. If follow up searches for abstracts from three different university databases did not
95 return anything, the study would be excluded. The number of excluded studies due to missing
96 abstracts was recorded. No search would be conducted for grey literature.

97

98 **** Table 1 near here****

99

100 **Data extraction**

101 The author, journal, title and abstract of all included studies were exported from Rayyan QCRI
102 into an Excel Spreadsheet (Microsoft, Albuquerque, New Mexico). Based on the information
103 provided in study titles and abstracts, two reviewers (KK and AW) independently extracted,
104 where possible, the population assessed, number of subjects, level of play involved, age level
105 of football involved and performed a thematic analysis (inductive style) to determine the
106 publication theme(s). Although an inductive style of analysis was applied, inspiration for theme
107 titles was taken from common terminology extracted from FIFA, Union of European Football
108 Associations (UEFA), The FA, British Association of Sports and Exercise Sciences, British
109 Association of Sports and Exercise Medicine and the International Olympic Committee (Table
110 2). Reviewers, again, met at the beginning to independently extract and analyse 20 articles
111 followed by a discussions on challenges and uncertainties related to criteria and definitions
112 used, leading to and refinements of the extraction and analysis strategies where needed as
113 (Levac et al., 2010). This was repeated at four time points during the extraction and analysis
114 process. When studies covered more than one theme, population, level or age group, multiple
115 outcomes were assigned. At times, the split between psychology and sociology was not
116 distinguishable. Given problems in distinguishing between themes of psychology and
117 sociology, both disciplines were assigned to a study when no clear decision could be made.

118

119 **** Table 2 near here****

120

121 To standardise level of play and age, grouping of descriptions was applied (Table 3 and 4).

122

123 **** Table 3 near here****

124 **** Table 4 near here****

125

126 **Data charting**

127 The data were compiled in a single Microsoft Excel spreadsheet (Microsoft Corporation,
128 Redmond, WA). Data was charted in Tableau (Mountain View, Seattle, WA) using line charts
129 for continuous data (publication year), and bar charts for categorical data (journal, theme,
130 population, age group and playing level). Categorical data of theme, population, age group and
131 playing level were also assessed using multilevel content evaluation, which was charted using
132 bar charts. For multilevel content evaluation, it must be noted that studies may have assessed
133 multiple themes, experiments, populations, age groups, and/or levels of play. For example, if
134 a study investigated coaching psychology and its relationship with player injury, it was
135 assigned to both player and coach population (i.e., population) as well as psychology and injury
136 (i.e., theme). The study would in this case appear under both coach and player population for
137 both the psychology and injury themes and hence may overcalculate the number of interactions
138 made in the literature.

139

140 **RESULTS**

141 Online search of the five mentioned databases yielded 28,229 results (Figure 1). After removal
142 of duplicates using Mendeley, 16,071 titles and abstracts were screened. A total of 1,634

143 articles remained after initial title and abstract screening including full text screening to ensure
144 studies met the eligibility criteria (Appendix 1). A total of 39 articles were excluded as no
145 access to an abstract was achieved despite attempting from three different university libraries.

146

147 ***** Figure 1 near here *****

148

149 **Publication tendencies**

150 The oldest publication dated back to 1939, yet 1997 was the first year with more than ten
151 publication on women's football (Figure 2). Since then, the number of publications per year
152 has gradually increased with peaks around FIFA World Cups years (2003, 2007, 2011, 2015,
153 2019; Figure 2. 2019 was the year with the highest number of publications with a total of 202
154 studies. Similar trends were observed when reviewing the number of publications annually
155 within each theme (Figure 3).

156

157 ***** Figure 2 near here *****

158 ***** Figure 3 near here *****

159

160 Research on women's football was published in a total of 456 different peer-reviewed journals,
161 of which, Journal of Strength and Conditioning contained the highest collection of studies (109
162 studies; Figure 4).

163

164 ***** Figure 4 near here *****

165

166 **Publication themes**

167 The publication theme most frequently concerned sports medicine related content (521
168 studies), of which 451 studies were injury focused, 29 illness focused and 68 health focused
169 (Figure 5). The second most researched topic included strength and conditioning (331 studies),
170 followed by sociology (299 studies; Figure 5).

171

172 **** Figure 5 near here ****

173

174 **Sample characteristics**

175 The majority of studies focused on the player (1,552), whilst 57 focused on coaching in
176 women's football, 31 on the media coverage of women's football, 29 on the business and
177 organisational side, 27 on fans and spectators of women's football, nine on parents of female
178 players, seven on referees in women's football, six on retired players and two on female para-
179 football players.

180 The level of play assessed was not mentioned in 628 of the 1,634 abstracts (38%). Within the
181 publications stating the level assessed, 442 studies (27%) contained data from elite football, 49
182 (3%) from high level football, 311 (19%) from college/university football and 234 (14%) from
183 recreational football. Within elite football, six studies (1%) contained data from the Olympic
184 games, whilst 18 studies (4%) contained FIFA World Cup data, four studies UEFA European
185 Championship data and 78 studies (18%) contained data from national teams without
186 mentioning of a specific tournament.

187 The playing age group could not be extracted in 528 (32%) of the abstracts. A total of 430
188 studies (26%) focused on pre-senior football, whilst 977 studies (60%) involved senior football.
189 Two studies (<1%) were performed on veteran players and five (<1%) on former, now retired,
190 players.

191

192 **Multilevel content evaluation of publications**

193 Adding all levels of assessment (theme, population, level played and age group assessed;
194 Figures 6A-C), together evaluates where research has focused within these sub-levels.
195 *Anthropometry* was predominantly assessed in able-bodied players, whilst one study included
196 assessment of elite senior deaf football players (Figure 6A). Within the able-bodied players, 34
197 studies focused on senior elite, four on high level, 30 on college/university, five on recreational
198 and 24 did not report the level, whilst pre-seniors were assessed in 18 studies of varying levels
199 and 29 studies not reporting playing level (Figure 6A). *Illness* within *medical research* has
200 focused on elite players in ten studies, of which five were senior players, two retired players,
201 one pre-senior and two did not identify the level of play. Seven studies included
202 college/university players and eleven studies within varying age groups did not report the level.
203 (Figure 6A). Additionally, one study included focus on illness and referees in female football.
204 *Medical research focusing on injury* covered more populations (N = 7; Figure 6A), yet the
205 majority of studies involved abled player focused (N = 576, 96%; Figure 6A). One study
206 focused on disability (deaf) players, 16 studies included coach focus and four included admin
207 focus (Figure 6A). Able bodied player focus showed a large spread between playing levels and
208 between pre-senior and senior players, though a large proportion of studies did not report level
209 and/or age group (N = 210, 36%; Figure 6A).

210

211 **** Figure 6A near here ****

212

213 *Biomechanics* was only assessed in able bodied players, of which a large proportion did not
214 report level and/or age group (N = 87, 44%; Figure 6B). Of the remaining, elite level players
215 were assessed 22 times as seniors and ten times in pre-seniors. Three studies contained high
216 level seniors, 52 college/university level senior and recreational player focus were spread

217 across eleven senior and ten pre-senior studies (Figure 6B). *Equipment* focused studies has
218 received little attention to reporting level and/or age group (N = 27, 69%; Figure 6B).
219 *Equipment* focused studies contained able bodied players only, apart from one study including
220 admin related focus (Figure 6B). *Nutrition/hydration/supplementation* was studied purely in
221 able bodied players with a spread between playing levels and senior and pre-senior age groups,
222 though again, a large proportion of studies did not report level and/or age group (N = 20, 33%;
223 Figure 6B). *Match play performance analysis* has been assessed predominantly in elite senior
224 able bodied players (N = 34, 32%) and college players (N = 14), whilst *single skill*
225 *performance* analysis was also predominantly assessed in senior, though with a larger spread
226 in level (N = 38, 48%; Figure 6B). Single skill performance studies purely included able bodied
227 players, whereas match play performance studies also included admin (N = 1), coaches (N =
228 2) and referees (N = 3) focuses (Figure 6B). *Physiology* has solely been assessed for abled
229 players. Of studies mentioning age group assessed, 18% focused on pre-seniors (N = 39) and
230 51% on seniors (N = 113). Both distributed out over varying playing levels, though a large
231 proportion did not report level and/or age group (N = 108, 49%; Figure 6B). *Strength and*
232 *conditioning* was assessed in studies including senior and pre-senior admin (N = 2), various
233 levels of coaching (N = 8), elite senior disability players (deaf; N = 1) and a broad range of
234 able players (N = 398; Figure 6B). Again, a large proportion of studies did not report level
235 and/or age group (N = 186, 45%; Figure 6B).

236

237 ***** Figure 6B near here *****

238

239 *Business* focused studies presented a broad range of population focuses (admin N = 13, coach
240 N = 1, fans/spectators N = 15, media N = 7, able player N = 26; Figure 6C). Of these, the
241 majority covered elite football (N = 34, 55%; Figure 6C). *Coaching* did also present a broad

242 range of population focuses, however, the majority of studies focused on coaches (N = 43,
243 51%) and players (N = 39, 46%) within varying playing levels and active age groups (Figure
244 9c). The *history* of women's football was presented predominantly with a player focus (N =
245 60; 79%), of which a high proportion not report level and/or age group (N = 49, 85%). Other
246 focuses included admin (N = 8), coaching (N = 1), fans/spectators (N = 2) and media (N = 5;
247 Figure 6C). *Law* focused studies included able players only, of which one was on elite senior,
248 one elite pre-senior, one college/university senior and one recreational senior and one
249 recreational pre-senior (Figure 6C). *Psychology* focused studies included three populations
250 (coaches of varying levels and age groups N = 22, parents of pre-senior players N = 2, players
251 of broadly varying levels and age groups N = 193; Figure 6C). *Sociology* focused studies
252 presented a broad range of population focuses (admin N = 14, coach N = 21, fans/spectators N
253 = 20, media N = 24, parents N = 7, able player N = 272, referees N = 3; Figure 6C). Again,
254 broadly varying in playing level and age groups the studies focus on (Figure 6C).

255

256 ***** Figure 6C near here *****

257

258 **DISCUSSION**

259 Our scoping review is the first study attempting to scope quantity and topics within research
260 conducted on women's football using a broad approach with five scientific databases searched
261 in all FIFA languages. The study represents a part of a larger research agenda setting project
262 in women's football and represents a key section of 'information gathering' in order to help
263 identify gaps in knowledge (Viergever et al., 2010). Specifically, this scoping review represents
264 preparatory work for a larger 'research setting agenda' project. Based on our systematic search,
265 a total of 1,634 studies were extracted from 456 different peer-reviewed journals with a clear
266 trend of increased research focus year-by-year, though small peaks were visible around FIFA

267 World Cup years. In comparison to previous reviews on sub-areas of women football research,
268 this study scoped a substantially larger proportion of literature (social sciences, humanities and
269 management disciplines, N = 117 studies, Valenti et al., 2018; physiological demands and
270 player physical characteristics, N = 49 studies, Martínez-Lagunas et al., 2014).

271

272 ***Overall quantity of peer-reviewed literature available compared to male football***

273 Since 1997, the first year more than ten studies on women's football were published in a FIFA
274 language in a peer-reviewed journal, a continuous growth in research attention has been seen
275 with extra attention surrounding FIFA Women's World Cup competition years. However, the
276 numbers are far from comparable to current research output levels in men's football. For
277 instance, searching PubMed for men's football research using the following keywords
278 (((*Soccer*) OR (*football*)) AND (*male*)) OR (*men**) OR (*boy**), on June 12, 2020 resulted in a
279 total output of 587,269 results, in comparison to our initial PubMed search return of 4,393
280 studies. This highlights a clear gap between sexes in quantity of football related research.
281 Although it is important to note that quality and relevance is far more important than quantity,
282 and one of the main reasons for this larger project on 'setting the research agenda for Women's
283 football' is to avoid the potential for poor quality studies and studies that are not directed
284 towards what key stakeholders actually want and need.

285

286 ***Population assessed***

287 The vast majority of studies (N = 1,552) focused on the player, whilst less attention has been
288 given to e.g. coaches (N = 57) referees (N = 7) or female disability football players (deaf; N =
289 2). The majority (N = 442) of studies presenting the level of play focused their research on elite
290 football and the majority of studies (N = 977) focused on senior players. It is, however, essential
291 to highlight that the level of play was not reported in 38% and age of players was absent in

292 27% of the abstracts, leaving a high underrepresented value. This needs to be accounted for
293 when reviewing level of representation within the literature. Leaving out essential information
294 in abstracts about the population assessed makes it difficult for potential readers to easily
295 review the relevance of the article in relation to the information they are searching. Future
296 research is therefore recommended to include a thorough presentation of the female football
297 level and age group included within the abstract in accordance with the relevant quality
298 reporting instrument e.g. the Enhancing the QUALity and Transparency Of health Research
299 (EQUATOR) instruments (EQUATOR network, 2020).

300

301 *Themes covered in the literature*

302 The studies covered a total of 15 different themes ranging from medicine to biomechanics and
303 history (Figure 5). However, the number of studies varied from two focusing on law to 442
304 focusing on medical aspects of injuries in women's football, identifying a large variation of
305 attention given to women's football from researchers of different football related research
306 fields. The focus within each theme varied. Some themes, e.g. biomechanics and
307 nutrition/hydration/supplementation, only included information on able bodied players, whilst
308 others, e.g. business and sociology, contained a broader range of populations. This comes down
309 to the nature of the theme, however, other active participants, such as disability players and
310 referees, were infrequently included in the published research. Most themes contained a broad
311 range of level played and age groups assessed, although veteran and retired players were also
312 infrequently included. In general, when themes were further diluted by sub-categorising using
313 the population, level and age group assessed, limited research was seen for each sub-category.
314 The largest sub-category collection was 87 studies on injuries in elite/college players. This
315 number is especially small taking into consideration the vast level of potential sub-themes to

316 cover (e.g. different injury locations, types and overall research focus such as prevention,
317 diagnosis or rehabilitation strategy).

318

319 *Implications for future research*

320 This study identified that quantity of evidence is limited with discrepancies in publication
321 numbers between research themes. Whilst attempts have been made to draw conclusions
322 through systematic reviews within more popular research areas such as injury, conclusions are
323 commonly made based on low-level evidence (Crossley et al., 2020; Mentiplay et al., 2019).

324 An understanding of the current quantity of research in women's football can be considered as
325 an essential building stone to identify the broad areas currently being addressed in research and
326 for other research groups seeking to delve deeper into specific areas with for example
327 systematic reviews or to identify gaps with key stakeholders through qualitative interviews and
328 focus groups. The current research group will now aim to contribute by a subsequent research
329 agenda setting project in women's football relating specifically to health and performance. This
330 step will involve interviews and surveys with players, coaches and support staff to determine
331 their needs and understand with research and practitioner experts (also through interviews and
332 surveys) to understand to what extent the current research literature meets these needs and
333 where and how to focus future efforts.

334

335 *Strengths and Limitations*

336 The scoping review followed the PRISMA-SR Checklist (Tricco et al., 2018) as well as the
337 recommended best practise guidelines for scoping reviews by Levac et al. (2010). The study
338 assessed five databases and scoped for studies written in five languages. Yet, the chosen
339 methodology still contained certain limitations which should be addressed. Firstly, five of the
340 largest peer-review journal databases were searched for articles presented in any of the FIFA

341 languages. This was chosen as based on our interest to scope the literature from formal channel
342 of research - peer reviewed journals. Hence, it must be acknowledged that studies not available
343 from these databases will not have been included in this study. The search strategy was
344 dependent on authors mentioning both football/soccer and women/female/girls in the abstract.
345 Some studies did not identify the sport and/or the sex of the athletes, causing exclusion from
346 the review. Additionally, a large proportion of studies lacked clarification on level and age
347 group assessed in the study. Finally, the authors manually classified the studies into themes,
348 which although screened by two independent reviewers may have been influenced by some
349 level of bias.

350

351 **CONCLUSION**

352 This study was the first to scope peer-reviewed literature on all aspects of competitive women's
353 football. A total of 1,634 studies were included from 456 different peer-reviewed journals
354 highlighting large variations in attention given to women's football within the different themes.
355 The most researched area was injuries in women's football. Injuries were predominantly
356 assessed in epidemiology studies and focused more frequently on the whole body, knee or
357 head/face injuries. Little attention has been given to research on para-football. The majority of
358 studies providing age and level of play information were focusing on elite senior football. A
359 future critical expert evaluation of this current quantity of research in relation to their perceived
360 specific questions needing answering to help develop and improve women's football would
361 help guide researchers to provide relevant research.

362

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365 **REFERENCES**

- 366 Brundtland, G.H., 1999. Statement of the chair at the first meeting of the Steering Committee for the International
367 Conference on Health Research for Development. April 1999, in: Okello D, Chongtrakul P, COHRED
368 Working Group on Priority Setting, Eds. A Manual for Research Priority Setting Using the ENHR
369 Strategy.
- 370 Crossley, K.M., Patterson, B.E., Culvenor, A.G., Bruder, A.M., Mosler, A.B., Mentiplay, B.F., 2020. Making
371 football safer for women: a systematic review and meta-analysis of injury prevention programmes in 11
372 773 female football (soccer) players. *Br. J. Sports Med.* 54, 1089–1098. [https://doi.org/10.1136/bjsports-](https://doi.org/10.1136/bjsports-2019-101587)
373 2019-101587
- 374 EQUATOR network, 2020. . Report. Guidel. URL <https://www.equator-network.org/reporting-guidelines/>
375 (accessed 6.14.20).
- 376 Fédération Internationale de Football Association, 2020. FIFA Forward Football Development Programme
377 [WWW Document].
- 378 Fédération Internationale de Football Association, 2019. FIFA Women’s World Cup 2019 watched by more than
379 1 billion (Press release). [https://www.fifa.com/womensworldcup/news/fifa-Women--World-Cup-2019tm-](https://www.fifa.com/womensworldcup/news/fifa-Women--World-Cup-2019tm-Watch.--More--1-Billion)
380 Watch.--More--1-Billion Retrieved 18 October 2019.
- 381 Fédération Internationale de Football Association, 2016. FIFA 2.0: THE VISION FOR THE FUTURE [WWW
382 Document]. URL
383 https://www.sportanddev.org/sites/default/files/downloads/fifa_2.0._the_vision_for_the_future.pdf
384 (accessed 4.27.20).
- 385 Fédération Internationale de Football Association, 2014. WOMEN’S FOOTBALL SURVEY [WWW
386 Document]. URL [https://resources.fifa.com/image/upload/fifa-women-s-football-survey-](https://resources.fifa.com/image/upload/fifa-women-s-football-survey-2522649.pdf?cloudid=emtgxvp0ibnebltvi3b)
387 2522649.pdf?cloudid=emtgxvp0ibnebltvi3b (accessed 4.27.20).
- 388 FIFA, 2020. Making football truly global. [https://resources.fifa.com/image/upload/making-Footb.-Truly-Glob.-Vis.-](https://resources.fifa.com/image/upload/making-Footb.-Truly-Glob.-Vis.-2020-2023pdfcloudidz25oyskjgrxrudi7iym)
389 2020-2023pdfcloudidz25oyskjgrxrudi7iym 27.
- 390 Foster, J., Bautista, C., Ellstrom, K., Kalowes, P., Manning, J., Pasek, T.A., 2018. Creating a Research Agenda
391 and Setting Research Priorities for Clinical Nurse Specialists. *Clin. Nurse Spec.* 32, 21–28.
392 <https://doi.org/10.1097/NUR.0000000000000344>
- 393 Kitchin, P.J., Bloomer, S., 2017. An investigation into the engagement of disabled people in European football.
394 Levac, D., Colquhoun, H., O’Brien, K.K., 2010. Scoping studies: advancing the methodology. *Implement. Sci.* IS
395 5, 69. <https://doi.org/10.1186/1748-5908-5-69>
- 396 Martínez-Lagunas, V., Niessen, M., Hartmann, U., 2014. Women’s football: Player characteristics and demands
397 of the game. *J. Sport Health Sci.* 3, 258–272.
- 398 Mentiplay, B., Culvenor, A., Mosler, A., Bruder, A., Patterson, B., Crossley, K., 2019. Injury risk reduction
399 strategies for female football: systematic review and meta-analysis. *J. Sci. Med. Sport* 22, S96–S97.
400 <https://doi.org/10.1016/j.jsams.2019.08.121>
- 401 Pfister, G., 2015. Assessing the sociology of sport: On women and football. *Int. Rev. Sociol. Sport* 50, 563–569.
- 402 Tricco, A.C., Lillie, E., Zarin, W., O’Brien, K.K., Colquhoun, H., Levac, D., Moher, D., Peters, M.D.J., Horsley,
403 T., Weeks, L., Hempel, S., Akl, E.A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A.,
404 Wilson, M.G., Garritty, C., Lewin, S., Godfrey, C.M., MacDonald, M.T., Langlois, E. V., Soares-Weiser,
405 K., Moriarty, J., Clifford, T., Tunçalp, Ö., Straus, S.E., 2018. PRISMA extension for scoping reviews
406 (PRISMA-ScR): Checklist and explanation. *Ann. Intern. Med.* <https://doi.org/10.7326/M18-0850>
- 407 UEFA, 2017a. Women’s football across the national associations. UEFA Rep. 1–93.
- 408 UEFA, 2017b. Women’s football across the national associations 2016/17 [WWW Document]. URL
409 [https://www.uefa.com/MultimediaFiles/Download/OfficialDocument/uefaorg/Women'sfootball/02/43/](https://www.uefa.com/MultimediaFiles/Download/OfficialDocument/uefaorg/Women'sfootball/02/43/13/56/2431356_DOWNLOAD.pdf)
410 13/56/2431356_DOWNLOAD.pdf (accessed 4.27.20).
- 411 UEFA, 2016. Women’s Football across the national associations 2015-2016 [WWW Document]. URL
412 [https://www.uefa.com/MultimediaFiles/Download/OfficialDocument/uefaorg/Women'sfootball/02/30/](https://www.uefa.com/MultimediaFiles/Download/OfficialDocument/uefaorg/Women'sfootball/02/30/93/30/2309330_DOWNLOAD.pdf)
413 93/30/2309330_DOWNLOAD.pdf (accessed 4.27.20).
- 414 Valenti, M., Scelles, N., Morrow, S., 2018. Women’s football studies: An integrative review. *Sport Bus. Manag.*
415 *Int. J.* 8, 511–528. <https://doi.org/10.1108/SBM-09-2017-0048>
- 416 Viergever, R.F., Olifson, S., Ghaffar, A., Terry, R.F., 2010. A checklist for health research priority setting: nine
417 common themes of good practice. *Health Res. Policy Syst.* 8, 36. [https://doi.org/10.1186/1478-4505-8-](https://doi.org/10.1186/1478-4505-8-36)
418 36
- 419 Welford, J., 2015. Globalising Women’s Football: Europe, Migration and Professionalization. *Int. J. Hist. Sport*
420 32, 726–728.
- 421 Williams, J., 2011. Women’s Football, Europe and Professionalization 1971-2011. UEFA Res. Rep.
- 422 Williams, J., Hess, R., 2015. Women, Football and History: International Perspectives. *Int. J. Hist. Sport* 32,
423 2115–2122.
- 424

425 **FIGURE HEADINGS**

426 **Figure 1.** Flow chart of study inclusion process

427 **Figure 2.** Publications on women's football per publication year (search date: 15/12/2019)

428 **Figure 3.** Publications on women's football per publication year by themes investigated

429 **Figure 4.** Twenty journals with the most published studies on women's football

430 **Figure 5.** Theme of publication

431 **Figure 6A.** Multilevel assessment of women's football studies per theme, population
432 assessed, level of play and age group assessed (1 of 3)

433 **Figure 6B.** Multilevel assessment of women's football studies per theme, population
434 assessed, level of play and age group assessed (2 of 3)

435 **Figure 6C.** Multilevel assessment of women's football studies per theme, population
436 assessed, level of play and age group assessed (3 of 3)