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Job Stressors, Strain, and Psychological Wellbeing Among Women Sports Coaches

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26 **Abstract**

27 Despite a globally recognised need for inclusive diversity among sport workforces,
28 women are underrepresented in the inherently stressful profession of sports coaching. This
29 study aimed to work with women sport coaches to answer the following research questions:
30 1) What demographic and contract-related factors are associated with job stressors? 2) What
31 associations exist between job stressors, strain, and psychological wellbeing (PWB) at work?
32 Women coaches (n=217) volunteered to complete the revised version of An Organizational
33 Stress Screening Tool (ASSET) [1-2]. Path analyses identified several groups of coaches
34 (head coaches, “other” coaches, disabled coaches) who experienced more job stressors
35 related to their coaching work. They also highlighted the importance of workload stressors
36 and their detrimental relationship with psychological and physical strain but positive
37 relationship with sense of purpose (i.e., eudaimonic wellbeing). Collectively these findings
38 offer the first assessment of women coaches’ job stressors, strain, and PWB, and offer insight
39 to factors that may influence coaches’ engagement with the profession. They also highlight
40 intervention foci for national governing bodies that are seeking to protect the health and
41 wellbeing of the women coaches within their workforce.

42 *Keywords:* disability, diversity, equality, female coaches, strain, stressors, wellbeing

43 **Job Stressors, Strain, and Psychological Wellbeing Among Women Sports Coaches**

44 It is widely acknowledged that work-related stress has implications for individuals'
45 psychological wellbeing (PWB). Stressors, which can be defined as environmental demands
46 and are often encountered at work, are the starting point of stress interactions [see e.g., 1].
47 Strain can be considered an outcome of such interactions that is characterised by physical
48 (e.g., headaches) and psychological (e.g., indecisiveness) health symptoms [1-3]. In the
49 current study, PWB is conceptualised as a construct that is distinct from but related to strain
50 because it is more than simply an absence of psychological ill-health. PWB is seen here to
51 include both hedonic (i.e., subjective feelings of happiness, positive affect) and eudaimonic
52 (i.e., sense of purpose, meaning) components [2, 4].

53 Based on interactional perspectives of stress [e.g., 5], Cartwright and Cooper [1]
54 proposed the ASSET model of work-related stress to understand relationships between job
55 stressors, health, PWB, and job outcomes. This model proposes that job stressors directly
56 influence health, PWB, and strain and those who have used the model in empirical research
57 [e.g., 6] have demonstrated that academic and non-academic higher education employees, for
58 example, experience poorer PWB as a result of job stressors and that enhanced PWB is
59 associated with greater physical wellbeing. The findings of other research in non-sport
60 domains suggest that contract-related factors (e.g., perceived job insecurity) contribute to
61 unfavourable health outcomes (e.g., anxiety, emotional exhaustion) for women in retail [7],
62 that high demands at work are positively related to poor general health for part-time but not
63 full-time women workers in various labour markets [8], and that roles and contractual status
64 (i.e., part- versus full-time) influence EU-27 employees' experiences at work [9].

65 Despite its importance for PWB and productivity at work, work-related stress has
66 been afforded minimal academic attention in the context of sports coaching. This is surprising
67 given the high labour turnover in the coaching profession, the often temporary and irregular

68 nature of coaching work, and the plethora of stressors that coaches may experience [e.g., 10-
69 11]. Work-related stress may be particularly relevant to women coaches because these
70 individuals can encounter unique stressors relating to work-family conflict [12-13];
71 undervaluation, exclusion, and increased scrutiny [e.g., 14]; and lack of job security [15].

72 The impact of job stressors on women coaches' strain and PWB is yet to be explored.
73 This is despite calls for research on women coaches' PWB [e.g., 16], and widespread sample
74 biases in sport and coaching psychology that favour elite male coaches. This project was
75 designed to address these voids by studying job stressors, physical and psychological strain,
76 and PWB among women coaches in the United Kingdom (UK). Specifically, this study
77 answered the following two research questions: 1) What demographic and contract-related
78 factors are associated with job stressors among women sport coaches? 2) What associations
79 exist between job stressors, strain, and PWB at work among women sports coaches? The
80 findings will enhance understanding of women coaches' experiences at work and will offer
81 insight to factors that could influence their engagement with the profession.

82 Method

83 Participants

84 The sample consisted of 217 coaches aged between 18 and 65+ years ($M_{\text{age}} = 36.69$,
85 $SD = 11.99$) who had a range of coaching experience (0-2 – 20+ years; $M_{\text{experience}} = 9.21$, SD
86 $= 6.36$)¹. Coaches represented 45 different individual and team sports and many worked in
87 more than one sport. They were employed on either a full-time (n = 71), part-time (n = 114),
88 or temporary contract (n = 20) basis (12 coaches did not report their employment status). The
89 sample included 109 head coaches, 54 assistant coaches, 19 player-coaches, and 35 “other”
90 coaches who occupied different roles (e.g., “school coach,” “multiple coaching roles”). Most

¹ Estimated means and standard deviations from age ranges (18-25, 26-35, 36-45, 46-55, 56-64, 65+), years of experience (0-2, 3-5, 6-10, 10-15, 15-20, 20+), and hours of coaching per week (0-15, 16-30, 31-40, 41+).

91 coaches ($n = 118$, 51.4%) reported that they were contracted to work less than 16 hours per
92 week ($M_{\text{hours}} = 22.44$, $SD = 14.36$).

93 **Procedures**

94 Following approval from a University research ethics committee, details of this study
95 were disseminated to women coaches working in the UK via National Governing Bodies
96 (NGBs) and social media. This initial contact included full information relating to the nature
97 and purpose of the study. Women coaches subsequently volunteered to take part and
98 completed a multi-section online questionnaire that took approximately 30 minutes.

99 **Questionnaire: The Revised ASSET**

100 Due to the focus of this study on coaches' job stressors, strain, and PWB at work, and
101 the lack of a sport specific measure of such, the revised version of the ASSET was used [1-2].
102 The original ASSET has been validated in empirical literature [e.g., 17] and has been shown
103 to have good predictive validity [18]. The revised ASSET has the added benefit of measuring
104 PWB in a way that more accurately reflects contemporary conceptualisations [e.g., 19-20].

105 **Demographic and contract-related information.** This section of the revised ASSET
106 was customised to collect demographic (e.g., age, disability) and contract-related information
107 (e.g., coaching role, contractual status) relevant to the research questions. All of the
108 demographic data were self-reported in absence of definitions for each response category.
109 This means that the data reflect coaches' own perceptions of whether they were employed on
110 a full- or part-time basis, for example, and whether they considered themselves to be a head
111 or assistant coach. At the beginning of the questionnaire, coaches were asked to respond
112 honestly to each of the questions.

113 **Job stressors.** The revised ASSET includes 37 items relating to six subscales of
114 stressors that participants may experience at work (workload, control, work relationships, job
115 security and change, resources and communication, job conditions). The commercial nature

116 of the revised ASSET prevents disclosure of the full list of items. However, the workload
117 subscale, for example, included items relating to work-life balance and overload while items
118 in the job conditions subscale referred to performance monitoring, risk of physical violence,
119 and working conditions. The six job stressor subscales are refined from, but very similar to,
120 previous iterations of the ASSET [e.g., 1] that have been validated in occupational stress
121 research [6,17-18]. Each item is measured on a six-point scale (*strongly disagree* to *strongly*
122 *agree*); higher scores indicate more experiences related to that type of stressor.

123 **Strain.** This section of the revised ASSET asks participants about symptoms of
124 physical and psychological strain and their frequency over a three-month period. The two
125 subscales assess physical (e.g., headaches; six items) and psychological (e.g., difficulty
126 making decisions; 11 items) symptoms of strain. Both subscales used a four-point scale
127 (*never* to *often*); higher scores indicate greater levels of symptoms. These subscales appear in
128 the original ASSET [1] and have typically been referred to as ‘physical health’ and ‘PWB’ in
129 previous research [e.g., 6]. The revised ASSET’s relabelling of these subscales to physical
130 and psychological *strain* is consistent with contemporary understanding of wellbeing [e.g.,
131 20] and with face validity of the items themselves.

132 **Psychological wellbeing at work.** This section of the revised ASSET measures
133 coaches’ experiences of positive affect (i.e., hedonic wellbeing) and sense of purpose (i.e.,
134 eudaimonic wellbeing). Seven adjective items (e.g., alert, inspired, happy) assessed positive
135 affect at work over the last three months and were measured on a five-point scale (*very*
136 *slightly or not at all* to *very much*). Four items related to sense of purpose (e.g., “My job
137 goals and objectives are clear”) were scored on a six-point scale (*strongly disagree* to
138 *strongly agree*). Higher scores represent greater PWB at work. Conceptualising and
139 measuring PWB as distinct from a lack of psychological symptoms of strain is supported by
140 empirical literature and theory [see, for a review, 19].

141 Data Analyses

142 **Reliabilities of and correlations between revised ASSET subscales.** Cronbach's α
143 was computed for each component of the revised ASSET (i.e., job stressors, strain, and
144 PWB) to ensure that these were reliable in our sample of women sports coaches. We also
145 examined zero-order correlations between these variables to ensure they functioned as
146 intended and to confirm that there was sufficient differentiation between the PWB and strain
147 subscales (i.e., no correlations above .9, which would indicate over 80% shared variance).
148 High inter-correlations would indicate that these subscales were likely measuring the same
149 underlying construct and thus offered no unique value [21].

150 **Associations between demographic factors, contract-related factors, and job**
151 **stressors.** To examine associations between demographic factors, contract-related factors,
152 and job stressors, we constructed a simple path analysis model using MPlus (version 7.4)
153 [22]. We modelled demographic (i.e., age, disability, dependents, relationship status,
154 ethnicity) and contract-related factors (i.e., coaching role [e.g., assistant coach], contractual
155 status [i.e., full-time]) as simultaneous predictors of all job stressors; the error terms of the
156 job stressor subscales were permitted to covary. Multicategorical predictors were dummy
157 coded (see Table 2 for details of reference categories). Modelling the job stressors as
158 dependent variables allowed the removal of their associations with one another from the
159 analysis. In addition, modelling the demographic and contract-related factors as independent
160 variables simultaneously allowed consideration of the unique contribution of each factor to
161 women's experiences of job stressors, which is important given the likely overlap between
162 different contract-related variables (e.g., women who are head coaches are also more likely to
163 be employed on a full-time basis). The model made no assumptions about the distribution of
164 independent variables [22] and was estimated using full information maximum likelihood

188 communication, control, and work relationships ($r_s = .76-.81$).

189 Among the strain and PWB subscales, physical and psychological strain were more
190 strongly correlated with one another ($r = .65$) than with the PWB subscales. The same was
191 true for positive affect and sense of purpose ($r = .51$). Psychological strain was modestly to
192 moderately correlated with the two PWB subscales (positive affect $r = -.36$; sense of purpose
193 $r = -.16$), indicating that these are indeed related but distinct constructs that should be treated
194 as such in subsequent analyses.

195 [Table 1 near here]

196 **Associations Between Demographic Factors, Contract-Related Factors, and Job** 197 **Stressors**

198 Standardised estimates and 95% bias-corrected confidence intervals can be seen for
199 all paths in Table 2. Head coaches and “other” coaches experienced more stressors related to
200 workload than assistant coaches. Disabled coaches ($n = 16$) experienced more stressors
201 related to control, resources and communication, and work relationships. “Other” coaches
202 experienced more stressors relating to job security when compared to the reference category
203 of assistant coach. Demographic and contract-related factors explained between 6.6% and
204 10.6% of the variance in the job stressor subscales; these factors explained a significant
205 portion of variance for workload (10.3%) and job security stressors (10.6%).

206 [Table 2 near here]

207 **Associations Between Job Stressors, Strain, and Psychological Wellbeing**

208 Standardised estimates and 95% bias-corrected confidence intervals can be seen for
209 all paths in Table 3. Workload stressors were positively associated with physical and
210 psychological strain; women who reported more workload stressors also reported greater
211 strain. However, being a head or “other” coach (versus an assistant coach) was associated
212 with less psychological strain. None of the demographic, contractual, or stressor variables

213 were associated with positive affect at work. Workload stressors were *positively* associated
214 with sense of purpose at work; women who experienced more workload stressors also
215 reported greater sense of purpose. Being a player coach (versus an assistant coach) was also
216 associated with greater sense of purpose.

217 **Discussion and Conclusion**

218 The findings of this project offer enhanced understanding of the demographic and
219 contract-related factors that are associated with job stressors among women sport coaches,
220 and of the associations between job stressors, strain, and PWB at work. Head coaches,
221 “other” coaches, and disabled coaches experienced more job stressors than assistant coaches.
222 This highlights the influential role of contract-related factors on coaches’ experiences at work
223 and suggests a need for NGBs to tailor stress management interventions for subgroups of
224 their workforces. NGBs could, for example, focus on cognitive-behavioural based stress
225 management interventions (e.g., cognitive restructuring; see e.g., 25) with head coaches,
226 “other” coaches, and disabled coaches to *enhance* PWB and on psychoeducational activities
227 with assistant coaches to *maintain* PWB. Workload stressors seem particularly important
228 from the findings presented here, both in terms of the volume of these stressors experienced
229 by coaches and their impact on strain and PWB. Collectively, the findings illuminate some of
230 the factors (e.g., stressors, degrees of physical and psychological strain) that could influence
231 women coaches’ engagement with, and dropout from, the coaching profession.

232 One noteworthy finding is that disabled coaches were more likely to experience
233 stressors relating to work relationships, control, and resources and communication. This
234 cluster of closely related stressors may signify, for these women, experiences of isolation.
235 This is noteworthy because other researchers [e.g., 26] have highlighted the importance of
236 work relationships for PWB and because effective relationships in sport can facilitate
237 processes (e.g., dyadic coping) that buffer the negative outcomes of stressors [e.g., 27]. Our

238 findings extend previous research that has shown opportunities for women coaches to build
239 work relationships to be limited [e.g., 14], and highlight the need for NGBs to consider ways
240 to optimise work relationships among coaches. This could be achieved via formal mentoring
241 and sponsorship systems [28]. We note that our sample included relatively few coaches who
242 reported a disability ($n = 16$); future research with this group of coaches will be necessary to
243 further explore how these stressors are experienced and how they can be mitigated.

244 With reference to associations between job stressors, strain, and PWB, workload
245 stressors were associated with greater physical and psychological strain but also with greater
246 sense of purpose. The first part of this finding is noteworthy when considered alongside
247 documented links between strain and burnout [29] and known associations between burnout
248 and dropout from coaching [30]. Taken together, these findings may help to explain why
249 women are underrepresented in senior coaching positions [e.g., 31]. If women coaches do not
250 have a manageable workload and, therefore, cannot achieve a balance between work and
251 personal commitments, they are likely to experience feelings of guilt [e.g., 13], emotional
252 exhaustion [12], and anxiety [7]. Given that these feelings are not conducive to success at
253 home or at work, it is plausible that workload stressors go some way toward explaining why
254 women may cease to engage with coaching and, thus, not reach senior levels of the
255 profession. This suggestion does, however, raise the question of why more men than women
256 do reach senior coaching positions [31] despite also having commitments both at work and
257 home, and arguably contributing to domestic responsibilities more now than ever before.
258 Some researchers have suggested that the gender differences in dropout from or progression
259 in coaching may be due to sport's society of hegemonic masculinity [32] and or the structural
260 factors of opportunity, power, and proportion that women are particularly susceptible to [see
261 e.g., 33].

262 Our findings also highlight a positive association between workload stressors and

263 sense of purpose (i.e., eudaimonic wellbeing), which brings to the fore one reason why
264 women should strive to reach head coaching positions. Despite the apparent presence of
265 increased workload stressors in head coach roles, it is possible based on our findings that an
266 optimal level of workload stressors in head coach roles could enhance eudaimonic wellbeing.
267 Caution must, however, be exercised to avoid overload that results in strain and burnout.
268 Indeed, women coaches may be enticed into taking on additional workload in pursuit of an
269 enhanced sense of purpose at work but are at risk of experiencing physical and psychological
270 strain as a result of doing so. To mitigate this risk, NGBs and policy makers should consider
271 interventions that focus directly on optimising coach workload [34] and on educating coaches
272 about both the risks and benefits of workload stressors. Of particular note here is the duty of
273 care that NGBs have for coaches, and the joint responsibility of both organizations and
274 coaches to effectively manage stressors that can be experienced in the workplace. Primary
275 level stress management interventions that aim to adapt the environment to reduce stressors
276 (e.g., via review of working conditions) are primarily the responsibility of NGBs whilst
277 secondary level stress management (e.g., one-to-one sport psychology support) can be driven
278 by coaches themselves. Coaches and employers can also work together to facilitate candid
279 discussions about workload, particularly when an individual is moving up from an assistant to
280 a head coach role. From research and practical perspectives, the findings relating to strain and
281 PWB emphasise the importance of conceptualising these constructs as distinct but related.

282 When interpreting the findings of this study, it should be noted that our data offers
283 insight to an underexplored sample (i.e., women coaches working at all levels of the UK
284 workforce) but that the cross-sectional study design captured a snapshot of women's
285 experiences. Researchers would do well to address this limitation by using prospective and
286 longitudinal study designs in future research. Qualitative research methods will also be useful
287 to gather more in-depth information and to answer questions about how and why the findings

288 presented here may occur. It is notable, for example, that demographic and contractual factors
289 explain only a small proportion of the variance in job-related stressors (6-11%). As such,
290 qualitative work may be able to identify and explain other factors that influence coaches'
291 experiences. In addition, while our focus on women coaches offers unique insight to an
292 underrepresented group, researchers should consider replicating this study with male coaches
293 to facilitate balanced understanding of the target phenomena.

294 Our findings identify several groups of coaches (head coaches, “other” coaches, and
295 disabled coaches) who may experience more job stressors in their coaching work.
296 Additionally, the findings identify the importance of workload stressors and their detrimental
297 relationship with psychological and physical strain but helpful relationship with sense of
298 purpose. Collectively, these findings suggest areas of intervention for NGBs seeking to
299 protect the health and wellbeing of the women coaches within their workforce.

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374 **Table 1**375 *Zero-Order Correlation Matrix plus Reliabilities for Stressors, Strain and Wellbeing*

	α	1	2	3	4	5	6	7	8
1. Stressor: Workload	.83	-							
2. Stressor: Control	.85	.50**	-						
3. Stressor: Resources & Comms	.79	.42**	.81**	-					
4. Stressor: Work Relationships	.86	.54**	.76**	.77**	-				
5. Stressor: Job Security	.75	.53**	.57**	.56**	.57**	-			
6. Physical strain	.72	.46**	.30**	.28**	.28**	.31**	-		
7. Psychological strain	.92	.48**	.35**	.31**	.39**	.39**	.65**	-	
8. Positive affect	.90	-.19**	-.36**	-.34**	-.36**	-.29**	-.21**	-.36**	-
9. Sense of purpose	.88	-.01	-.37**	-.34**	-.29**	-.12	.03	-.16*	.51**

376 *Note.* * $p < .05$. ** $p < .01$. N = 217.

377 **Table 2**
 378 *Relationships of Demographic and Contract-Related Factors to Work-Related Stressors*

Predictor	Work-related stressors: Dependent variables														
	Workload			Control			Resources & Comms			Work Relationships			Job Security		
	95% bc CI			95% bc CI			95% bc CI			95% bc CI			95% bc CI		
	β	LB	UB	β	LB	UB	β	LB	UB	β	LB	UB	β	LB	UB
Ethnicity: White Non-British ^a	.02	-.15	.15	.02	-.14	.21	-.06	-.19	.10	-.05	-.20	.10	-.10	-.24	.05
Ethnicity: Non-white Minority ^a	.04	-.04	.15	.09	-.06	.22	.05	-.05	.17	.03	-.06	.15	.09	.04	.22
Relationship status: Married ^b	.06	-.09	.22	.02	-.17	.18	.03	-.16	.20	-.03	-.22	.16	.10	-.06	.24
Dependents Under 18	.07	-.08	.22	-.08	-.24	.09	-.07	-.22	.11	-.01	-.16	.15	.01	-.15	.17
Disability	.02	-.15	.19	.20*	.04	.37	.20*	.02	.38	.17*	.01	.36	.17	-.02	.37
Age (over 35)	.09	-.08	.26	.04	-.16	.25	.01	-.19	.19	.09	-.10	.27	-.02	-.22	.17
Coaching role: Head coach ^c	.22*	.06	.38	-.03	-.22	.15	.03	-.16	.22	.10	-.09	.29	.14	-.04	.30
Coaching role: Player coach ^c	.01	-.13	.16	-.13	-.26	.00	.02	-.14	.20	.09	-.10	.28	.02	-.12	.17
Coaching role: Other ^c	.19*	.02	.34	-.05	-.23	.13	.04	-.13	.22	-.06	-.18	.09	.19*	.04	.35
Contractual status: Full-time ^d	.12	-.02	.28	-.04	-.19	.10	-.11	-.25	.03	-.07	-.20	.08	-.12	-.27	.04
Contractual status: Temporary ^d	-.06	-.22	.12	-.02	-.17	.13	.02	-.12	.17	.02	-.12	.18	.11	-.02	.25
Education (degree-level)	.02	-.11	.15	.03	-.12	.17	-.02	-.16	.13	.03	-.11	.17	-.00	-.15	.12
R Square	.103*			.065			.066			.066			.106*		

379 *Note.* All figures are from the same path analysis model. 95% bc CI: 95% bias-corrected confidence interval. ^aReference category: White
 380 British. ^bReference category: Single (single includes single, divorced, separated, widowed; married includes married and co-habiting with
 381 partner). ^cReference category: Assistant coach. ^dReference category: Part-time. * $p < .05$, as judged by 95% bc CI.

382 **Table 3**

383 *Relationships of Demographic Factors, Contract-Related Factors and Work-Related Stressors to Strain and Psychological Wellbeing*

	Wellbeing and strain: Dependent variables											
	Psychological Strain			Physical Strain			Positive Affect			Sense of Purpose		
	95% bc CI			95% bc CI			95% bc CI			95% bc CI		
	β	LB	UB	β	LB	UB	β	LB	UB	β	LB	UB
Workload	.36*	.19	.53	.39*	.21	.56	.03	-.19	.24	.22*	.02	.40
Control	.00	-.22	.23	-.05	-.34	.23	-.18	-.46	.10	-.24	-.51	.03
Resources and Comms	-.09	-.39	.15	.13	-.19	.38	.07	-.29	.43	-.17	-.43	.06
Work Relationships	.18	-.04	.42	-.05	-.28	.19	-.22	-.49	.05	-.11	-.36	.15
Job Security	.17	-.01	.35	.11	-.07	.30	-.14	-.34	.07	.02	-.15	.23
Ethnicity: White Non-British ^a	-.01	-.11	.09	.01	-.11	.10	.06	-.08	.19	-.08	-.24	.08
Ethnicity: Non-white Minority ^a	.03	-.12	.17	.03	-.11	.18	.01	-.13	.15	-.03	-.14	.06
Relationship status: Married ^b	-.01	-.14	.13	.07	-.10	.20	-.07	-.25	.08	.03	-.11	.18
Dependents Under 18	.06	-.08	.18	.01	-.15	.14	.08	-.08	.24	.03	-.14	.18
Disability	.06	-.11	.23	.07	-.10	.24	-.05	-.21	.10	.04	-.09	.18
Age (over 35)	.08	-.07	.22	.09	-.07	.23	.07	-.10	.25	.05	-.11	.21
Coaching role: Head coach ^c	-.17*	-.34	-.01	-.07	-.25	.09	.10	-.08	.29	.05	-.12	.23
Coaching role: Player coach ^c	.00	-.14	.13	.01	-.11	.15	.04	-.12	.20	.12*	.00	.25

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Coaching role: Other ^c	-.18*	-.35	-.02	-.14	-.32	.04	-.02	-.24	.16	.10	-.07	.27
Contractual status: Full-time ^d	.00	-.12	.13	.09	-.04	.22	-.05	-.20	.10	.13	-.01	.27
Contractual status: Temporary ^d	.01	-.13	.14	.04	-.08	.19	.05	-.12	.20	.14	-.02	.29
Education (degree-level)	.05	-.08	.19	.06	-.09	.19	.02	-.12	.18	.11	-.03	.25
R Square	.319*		.265*		.196*		.240*					

384 *Note.* All figures are from the same path analysis model. 95% bc CI: 95% bias-corrected confidence interval. ^a Reference category: White
 385 British. ^b Reference category: Single (single includes single, divorced, separated, widowed; married includes married and co-habiting with
 386 partner). ^c Reference category: Assistant coach. ^d Reference category: Part-time. * $p < .05$, as judged by 95% bc CI.