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- 1 *“When you think of exercising, you don’t really want to think of puking, tears, and pain”:*
- 2 **Young adolescents’ understanding of fitness and #fitspiration.**

Abstract

Adolescents access information about fitness, including content labelled as *#fitspiration*, through social media. Seventy-seven adolescents ($M\ age = 12.49; SD = 0.55; Girls = 27$) participated in semi-structured focus groups to explore their perspectives on *#fitspiration* and fitness more broadly. Through inductive thematic analysis, four themes were developed: (1) Fitness enhances physical function and appearance, but these are not always linked, (2) Fitness is transformative but requires hard work, (3) Fitness should be an intrinsically motivated personal choice, (4) Pain in the pursuit of fitness. Findings highlight young adolescents' complex understandings of fitness negotiated through their critical interpretation of *#fitspiration*.

15 ***“When you think of exercising, you don’t really want to think of puking, tears and pain”:***

16 **Young Adolescents’ Understanding of Fitness and #Fitspiration**

17 *#Fitspiration* (a literal amalgamation of the words fitness and inspiration) is used to
18 label social media content that ostensibly promotes physical fitness through diet and exercise
19 (e.g., Deighton-Smith & Bell, 2017). It can be found in abundance across social media
20 channels, though is particularly common on image-focused site Instagram (Tiggemann,
21 Churches, Mitchell, & Brown, 2018). Despite the seemingly positive façade of *#fitspiration*,
22 concerns have been raised about the high levels of appearance-ideal imagery found within, as
23 well as the problematic diet and exercise messages it proliferates (Boepple, Ata, Rum, &
24 Thompson, 2016; Boepple & Thompson, 2016; Deighton-Smith & Bell, 2017; Tiggemann &
25 Zaccardo, 2018). Adolescents are responsive to sociocultural norms, including those
26 surrounding health behaviour (Berzonsky, 1990; Blakemore & Mills, 2014) and increasingly
27 use social media as a source of health and fitness information (Beck et al., 2014; Jong &
28 Drummond, 2016; Vaterlaus, Patten, Roche, & Young, 2015). While research has started to
29 consider how older adolescents and young adults understand and interpret *#fitspiration* content,
30 none has considered the views of young adolescents. Yet, as heavy users of image-based sites
31 such as Instagram (Anderson & Jiang, 2018; Ofcom, 2019), it is likely they will regularly
32 encounter *#fitspiration* content. The present study uses focus groups to facilitate young
33 adolescents’ discussions of *#fitspiration*, in order to examine their perspectives on *#fitspiration*
34 and fitness more broadly.

35 **Adolescent Health and Fitness**

36 Adolescence (age 10-19 years) is a critical period for health development (Patton et
37 al., 2016). The biological processes of puberty can trigger dramatic physical changes over a
38 short period; adolescents experience substantial growth spurts, accrue bone mass, and reach

39 their peak cardiovascular fitness levels (Patton et al., 2016; Spear, 2002). The benefits of
40 positive health behaviour engagement during this time are both immediate and long-lasting,
41 as health behaviour adopted during adolescence likely persists into the adult years (Currie et
42 al., 2012; Patton et al., 2016). Behaviours conducive to physical fitness, such as physical
43 activity, have implications for adolescents' current and future health. That said, although
44 qualitative research suggests adolescents understand the importance of health and fitness
45 (Wang et al., 2014; Woodgate & Leach, 2010), many do not engage in healthful practices. A
46 recent report indicates that less than 8% of UK adolescents meet the recommended
47 government guidelines for physical activity (Youth Sport Trust, 2019).

48 From a health perspective, adolescents' understandings of diet and exercise may be
49 problematic. Qualitative research suggests both adolescents and young adults inextricably
50 intertwine physical fitness and health with physical appearance; valuing health behaviours for
51 their appearance-enhancement qualities rather than their health benefits (Beltrán-Carrillo,
52 Devís-Devís, & Peiró-Velert, 2018; Wright, O'Flynn, & Macdonald, 2006). Exercising for
53 appearance goals, over health and fitness goals, is associated with lower levels of physical
54 activity (Sebire, Standage, & Vansteenkiste, 2011), and more negative body image (Hurst,
55 Dittmar, Banerjee, & Bond, 2017). It is likely that adolescents' perspectives are largely
56 shaped by the sociocultural environment; analyses of health and fitness magazines suggest
57 these texts position healthy eating and physical activity as means of achieving an ideal and
58 attractive body, while placing less emphasis on health benefits (Bazzini, Pepper, Swofford, &
59 Cochran, 2015; Willis & Knobloch-Westerwick, 2014). Multiple approaches to the study of
60 adolescence suggest that adolescents may be particularly responsive to sociocultural
61 messages, from perspectives as diverse as neuroscience (Blakemore & Mills, 2014) and
62 identity formation (Berzonsky, 1990). Therefore, understanding how adolescents interact
63 with media information about health and fitness is important.

64 **Social Media and #Fitspiration**

65 Most UK adolescents (69%) report using social media sites, with visual media
66 focused sites, such as YouTube, Instagram and Snapchat, being the most popular (Ofcom,
67 2019). This is a trend mirrored across the Western world, with, similar levels of use being
68 reported in the USA for example (Anderson & Jiang, 2018). Increasingly, adolescents use
69 social media for health and fitness information (Beck et al., 2014; Jong & Drummond, 2016;
70 Vaterlaus et al., 2015). However, the unregulated and user-generated nature of social media
71 content means that it may be inaccurate, misleading, or dangerous (Boepple & Thompson,
72 2016; Deighton-Smith & Bell, 2017). Despite this, almost 40% of young people report
73 engaging with some form of potentially problematic health and fitness material on social
74 media, with #fitspiration being the most popular (Carrotte, Vella, & Lim, 2015).

75 Content analyses of #fitspiration content found that *#Fitspiration* idealises a
76 muscular body ideal, with very low body fat, for both men and women, which has clear skin,
77 white teeth, and other visible markers of traditional Western beauty (e.g., Boepple et al.,
78 2016; Deighton-Smith & Bell, 2017; Tiggemann & Zaccardo, 2018). Body ideal models
79 within #fitspiration are presented in objectified ways; typically adopting static poses rather
80 than exercising, wearing sexualised clothing, displaying large proportions of body flesh or
81 concealing their face (Deighton-Smith & Bell, 2017; Tiggemann & Zaccardo, 2018).
82 Consistent with research involving mass media (e.g., Grabe, Ward, & Hyde, 2008), exposure
83 to models who adhere to the #fitspiration body ideal has been found to cause body
84 dissatisfaction among young women (Prichard, McLachlan, Lavis, & Tiggemann, 2017;
85 Tiggemann & Zaccardo, 2015). Such imagery also appears to fail in its stated aim of
86 motivating women to engage in exercise behaviour (Robinson et al., 2017).

87 Furthermore, text-based messages within #fitspiration bear similarities to content
88 typically found in eating disorder communities (Boepple & Thompson, 2016). Messages that
89 promote dietary guilt, weight-stigma, and restraint, complemented by extreme depictions of
90 thinness, have been found to be commonplace. Perhaps unsurprisingly, research has found
91 women who post #fitspiration content were at increased risk of disordered eating and
92 compulsive exercise (Holland & Tiggemann, 2017). A more exploratory thematic analysis of
93 #fitspiration posts found this text sexually objectifies the fit body, encourages self-regulation
94 and personal responsibility for health and fitness, and normalises pain in physical activity
95 contexts (Deighton-Smith & Bell, 2017). Furthermore, these messages were interwoven with
96 ostensibly positive messages that offer social support in achieving fitness goals and foster a
97 sense of community (Deighton-Smith & Bell, 2017; Santarossa, Coyne, Lisinski, &
98 Woodruff, 2019). Such mixed messages may explain why young adults are said to be
99 ambivalent towards social media health and fitness information, recognising both its
100 inspirational and de-motivational qualities (Ragnatt et al., 2018; Vaterlaus et al., 2015).
101 However, research has yet to examine how younger adolescents understand and relate to this
102 content. Yet young adolescents (age 10-14), are also heavy social media users (Ofcom, 2019)
103 who are likely to encounter #fitspiration content as part of their everyday use of these sites.
104 Young adolescents are an important group to consider, as they are at the start of puberty-
105 related physical development and so are more biologically and cognitively immature (Patton
106 et al., 2016). As such, they are likely to show increased sensitivity to social information
107 (Patton et al., 2016) and interpret health and fitness messages differently,

108 **The Present Study: Aims and Research Questions**

109 Given the importance of physical activity and fitness for adolescents' current and future
110 health, and the rise of social media fitness content, the present study aims to understand 1)
111 young adolescents' perspectives on fitspiration content on social media and 2) how young

112 adolescents, growing up in an appearance-focused culture that has created #fitspiration, relate
113 to this content and conceptualise fitness more broadly. More specifically, the study focuses on
114 affluent youth, who are more likely to use Instagram (Lenhart, 2015), where #fitspiration
115 content is most prevalent (Tiggemann et al., 2018). We use focus groups with photo-elicitation,
116 the practice of incorporating visual stimuli within a qualitative interview setting (Bates,
117 McCann, Kaye, & Taylor, 2017), to facilitate the exploration of social norms and prompt
118 discussion of #fitspiration posts. Photo-elicitation is widely used in focus groups with young
119 people as a way of involving participants in shared discussions about their emotions, feelings,
120 or perceptions on a particular topic, and steering such discussions without limiting responses
121 (Bates et al., 2017). The research seeks to address the following research questions:

122 RQ₁. How do young adolescents understand and relate to fitspiration messages?

123 RQ₂. How do young adolescents understand fitness, within the cultural context of
124 #fitspiration?

125

126

Method

127 **Participants**

128 Seventy-seven participants (*M age* = 12.49; *SD* = 0.55; *Range* = 12-13; *Girls* = 27)
129 took part in the study as part of “Body Image and Eating Disorders Awareness Day” at a
130 local university campus. All participants attended the same fee-paying, co-educational school
131 in Northern England, where some also resided. The school provides an extensive range of
132 sports and exercise opportunities for participants. Though parental income was not captured,
133 the cost of tuition fees (£15,000 per/annum non-residential, £26,500 per/annum residential)
134 would indicate that the majority of participants were from affluent backgrounds. All
135 participants invited to participate in the study did so, representing the whole school year
136 group (except those absent from school). Participants self-identified as regular Instagram
137 users, though no detailed social media usage data was collected.

138 **Focus Group Design**

139 As understandings of fitness and social media content are co-constructed amongst
140 peers, focus groups were used to collect data, since they facilitate collaborative discussions of
141 social norms (Uhls & Greenfield, 2012) by stimulating peer-led responses and debate
142 (Kitzinger, 1995). Discussions were semi-structured with facilitators using both physical
143 stimuli (i.e., publicly available #fitspiration images) and a questioning schedule to allow
144 research questions to be addressed, while retaining flexibility to explore unexpected topics of
145 interest. Physical stimuli have been widely used in focus group research with adolescents to
146 elicit discussion (Peterson-Sweeney, 2005), particularly where they may be less familiar with
147 the health messages in question (e.g., Ashikali, Dittmar, & Ayers, 2016).

148 *Physical Stimuli.* In a previous analysis of #fitspiration content on Instagram,
149 Deighton-Smith and Bell (2017) generated six pertinent themes in #fitspiration content; (1)

150 Fit is sexy, (2) A fit physique requires commitment and self-regulation, 3) Your choices
151 define you, (4) Pleasure and perseverance through pain, (5) Battle of the selves: You vs. You,
152 and (6) Here's to Us! A celebration of a community. Due to time constraints imposed on
153 focus groups, images were chosen to represent four of the six themes only (Themes 1, 4, 5
154 and 6 were selected as they were the most conceptually distinct themes). The images
155 representing each theme were selected by the first and second author and checked to ensure
156 that the text/slogans were appropriate for young adolescents (i.e., not too sexualised). See
157 Table 1 for a list of #fitspiration themes explored in the focus groups and descriptions of the
158 images chosen to represent these.

159 *Questioning Schedule.* The schedule had three parts. The first section included
160 introductory questions that explored adolescents' knowledge and understanding of fitness and
161 #fitspiration more broadly (e.g., "What does fitness mean to you?"). The second section
162 contained prompts to explore participants' thoughts and feelings towards each set of
163 #fitspiration images (e.g. "Would these images motivate you to exercise?"). The third and
164 final section focused on any lasting reflections on #fitspiration and fitness (e.g., "What are
165 your thoughts about the people who create #fitspiration?").

166 **Procedure & Ethics**

167 The study received full ethical approval from the first author's institutional ethics
168 committee and adhered to British Psychological Society Code of Human Research Ethics
169 (BPS, 2014). Gatekeeper approval to recruit pupils was granted by the school head-teacher
170 and informed consent was obtained from both parents and participants in advance. Focus
171 groups took place on University campus. Adolescents chose who they were grouped with;
172 thus, discussions were held in naturally-occurring friendship groups. Before each focus group
173 commenced, participants were reminded of their right to withdraw and assured of anonymity.

174 The facilitator (one of three young, white women trained in focus group facilitation) used the
175 questioning schedule and images to assist discussions. At the end of each group, participants
176 were thanked and debriefed. A more in-depth debrief took place in an assembly on the school
177 premises one week later. In total, 12 focus groups were conducted; four with male
178 participants, two with female participants, and six with mixed-gender composition. Each
179 focus group comprised of 5-7 participants and lasted between 20.23 and 28.26 minutes. Focus
180 groups were audio-recorded and transcribed verbatim.

181 **Analytic Procedure**

182 Reflexive thematic analysis was used to analyse the dataset, adopting the six-step
183 process outlined by Braun & Clarke (2006; 2019a). The process involved engaging in
184 familiarisation with the dataset (Step 1), by reading transcripts and listening to recordings
185 several times. Initial semantic codes (Step 2) were then assigned to the data. A combination
186 of semantic coding (explicit and surface meanings within the data) and latent coding
187 (underlying conceptualisations) was employed. Step 1 and 2 were initially performed by all
188 three authors on a subset of three focus groups. Then, the authors met to discuss their coding
189 and engage in a collaborative process of coding refinement, where each initial code and the
190 corresponding data were examined to ensure codes were unique and analytically relevant to
191 the research questions. Having collaboratively developed principles of confirmable coding
192 practice, the authors independently coded the remaining focus group scripts. To create initial
193 themes (Step 3), the authors met to group related codes and identify patterns of meaning
194 across the dataset. They reviewed the content of themes against the coded extracts and entire
195 dataset (Step 4) with the aim of producing clearly defined and distinct themes (Step 5).

196 Throughout the analysis, the researchers adopted an inductive approach, allowing
197 themes to be data-driven rather than guided by existing literature. Themes however, were

198 interpreted and contextualised according to existing research examining adolescents' attitudes
199 to physical fitness, as well as the literature surrounding #fitspiration. Once the final report
200 was produced (Step 6), the authors verified the analysis by collaboratively checking themes
201 against the original recordings and transcripts. Inter-rater reliability was not considered
202 appropriate since it is not consistent with Braun and Clarke's (2006) approach to thematic
203 analysis, and therefore any disagreements between the authors were resolved through active
204 and reflexive discussion as recommended by Braun and Clarke (2019b).

205

206

Findings

207 The majority of adolescents described engaging in some form of sport or exercise,
208 both in and out of school. Many were familiar with #fitspiration content, having seen images
209 in places such as the gym and in sports stores (*“So saying strong is the new sexy, buy our*
210 *stuff.”* [M5: Male, focus group 5]). They also reported seeing them in traditional media such
211 as TV and digital media (including Instagram e.g., in sponsored ads or the search page -
212 *“Every single day they’re on my Explore page [Instagram].”* [F3: Female, focus group 3]).
213 But many did not recognise the label #fitspiration per se. Using reflexive thematic analysis,
214 four themes were developed that encapsulate adolescents’ understandings of fitness and
215 #fitspiration.

216 **Theme 1: Fitness enhances physical function and appearance, but these are not always** 217 **linked**

218 Adolescents overwhelmingly positioned fitness as an important and worthwhile
219 pursuit, primarily because of the enhanced body functionality being fit brings. They described
220 fitness as beneficial to their everyday activity, overall health, and longevity (*“It means you*
221 *can do more stuff...and ...you can live longer.”* [M12]). Moreover, adolescents discussed
222 how their competitive sport performance would improve as a consequence of being
223 physically fit, especially among adolescent boys.

224 *“Well, you want to be better than everyone else, that’s the reason you do the sport.*
225 *So, in order to be better than everyone else, you have to stay fit and be able to equal*
226 *what everybody else is doing, and better it.”* [M4].

227 Fitness was also positioned as being externally visible. Slimness and visible muscle
228 tone were perceived as a desirable consequence of fitness-promoting activities (*“...the person*
229 *is really strong so, and quite good looking, so it makes you think that if you be, if you ,*

230 *become strong then you'll look like that*" [M5]), however, as the following extract shows, the
231 view that fitness equates to attractiveness was not endorsed by all:

232 *"People who just judge other people and the way they look, "oh, this guy's buff, he's,*
233 *he's really, he's really fit, he can run long distances, he can do what he likes", but*
234 *some people might look different, maybe they're not buff, they haven't got muscles*
235 *and that, but they can run long distances, and they can maybe do stuff better than the*
236 *person that actually looks good."* [M2].

237 Adolescents recognised that #fitspiration messages explicitly promoted the view that
238 being fit will make you more attractive (*"They're saying if you, if you work out then you'll be*
239 *fitter and be sexier"* [M12]) and did not dispute these messages. However, they were critical
240 of the hyper-muscular models in the #fitspiration extracts.. Hyper-muscularity was positioned
241 as unhealthy (*"Looking at that guy that's absolutely massive, I don't think that's healthy,*
242 *that's abnormal."* [M12]) and unattractive in men (*"I think that's unrealistic and kind of*
243 *gross."* [F10]), and unfeminine and threatening in women (*"ooh he's scary...wait is that a*
244 *woman?...oh yeah it is."* [F9]). In many instances, images of models were regarded to have
245 been digitally-altered and unrealistic (*"I don't think that's real...I think it's photo shopped."*
246 [M12]).

247 Many evaluated the character of #fitspiration models negatively, for various reasons:
248 as being arrogant (*"this person's just like, "oh I'm muscly, look at me, be jealous"*). [M2]), or
249 obsessive (*"It's only a small percentage workout that much...and it's not, probably that good*
250 *for you, to work out that much."* [M7]). They suggested that #fitspiration posts would be more
251 motivational if greater emphasis was placed on physical achievements.

252 P: *These two, these two they're not really persuading you to get fitter, to have good*
253 *stamina or to be able to do more stuff in the world, they're persuading you to get fitter*
254 *just so you can look more attractive. [Male 1 – Focus Group 3]*

255 Facilitator: *So, if that's the case then what would persuade you to maybe do exercise*
256 *in order to be fit?*

257 P: *Maybe, I don't know [if I saw] a picture of someone at the top of a mountain- [M1-*
258 *3]*

259 P: *Achieved something – [M2-3]*

260 P: *Yeah – [M3-3]*

261 P: *Yeah, you'll kind of feel like I wish I could achieve something like that. [M1-3]*

262 **Theme 2: Fitness is transformative, but requires hard work**

263 Adolescents agreed with #fitspiration posts that the body could be transformed by
264 exercise. In this way, the body was constructed as malleable, with fitness positioned as a
265 means of transforming both the function and appearance of the body. However, adolescents
266 suggested that transforming the body through fitness was a laborious and demanding process,
267 requiring hard work and dedication:

268 P: *I mean, you can't... You can't be good if you don't try it. I mean, you can't just*
269 *turn up one day and be absolutely amazing. You have to— [M2-4]*

270 P: *- Have a go at it [M1-4]*

271 P: *—work at it, put the effort in [M3-4]*

272 P: *Yeah, you got to put the effort in. [M1-4]*

273 P: *You get the reward out of it [M3-4]*

274 Consistent with adolescents' preference for slim and toned bodies (Theme 1),
275 adolescents universally constructed fatness as something to be avoided ("*It's good to be fit,*
276 *because when you're older, you don't want to be fat and things*". [M4]). Adolescents equated
277 slimness with fitness and discussed how fitness-related activities were more important for
278 individuals living in larger bodies, than "slim" people:

279 "*If you're, like, quite fat, then you might have to go through that... if, yeah, if you're*
280 *overweight. It's trying to inspire fat people to get like that.*" [M5].

281 Though adolescents interpreted #fitspiration slogans as endorsing the notion of hard
282 work, they argued that #fitspiration images were inconsistent with this message. They
283 suggested hyper-muscular #fitspiration ideals only showed the 'end result' of the fitness
284 process. Hence, adolescents were critical of #fitspiration images because these implied that
285 fitness-induced bodily changes would be instantaneous:

286 "*Because I think that you both, with both images, you have to put a lot of work into it*
287 *and it makes it look like you don't have to do huge training sessions to get to that*
288 *point.*" [F3].

289 "*It's too much like 'oh I'll do that and I'll automatically become this'.*" [M11].

290 Adolescents also described how #fitspiration posts only showing the end result (i.e.,
291 an idealised fitness model) might be demotivating for some (e.g., "*Yeah if you're fat then you*
292 *look in the mirror and you're like oh...then there's no point of me like getting up to do*
293 *it...exercise.*" [F3]). They suggested that #fitspiration would be more motivational if more
294 diverse bodies, showing the starting point of the fitness process, were represented ("*yep... if*
295 *they put an average person in, it might actually inspire you to do something.*" [M11]).

296 Alternatively, posts that told the story of a person's fitness journey were described as more
297 motivational, especially if that person was a famous sports star who they admired:

298 *“Sometimes I’ll see a post on Instagram that tell maybe a backstory or how they, or*
299 *how a famous person’s done it. Like, a famous footballer, maybe like Lionel Messi,*
300 *how he’s done it or maybe his backstory. You can see that more as motivation, but we*
301 *don’t know these two people [models].” [M2].*

302 **Theme 3: Fitness should be an intrinsically-motivated personal choice**

303 This theme encapsulates the tensions between adolescents’ understandings of exercise
304 motivations and their interpretation of those contained in #fitspiration messages. When
305 adolescents described their own fitness-related physical activities, they cited intrinsic factors
306 such as enjoyment, competition, and spending time with friends as their main reasons for
307 participation:

308 *“I [...] well most of my family rides and [...] well I live next door to my cousin and*
309 *she has a pony too so we go riding together and it’s really social ‘cause I have loads*
310 *of friends outside school who ride also and we go riding together so...as well as it*
311 *being really fun competitively, it’s really fun, kind of like social side.” [F9].*

312 Furthermore, adolescents described how the decision to engage in physical activity is
313 a personal and free choice made by individuals:

314 *“At the end of the day, it’s down to whether you think you want to do it and whether*
315 *you’re motivated to do it. I don’t think these sort of motivational things really help [...*
316 *] and people can say them all the time but they don’t really get it done like you will if*
317 *you just, if you want to do it for yourself. [M2]*

318 In contrast, adolescents described how #fitspiration messages were pressurising
319 people to engage in physical activity for extrinsic reasons. For example, they expressed
320 dislike that #fitspiration messages sought to motivate the achievement of what they
321 perceived to be an unattractive and unrealistic appearance ideal (Theme 1). Thus, while they

322 expressed approval of #fitspiration text that encouraged self-improvement and
323 transformation (Theme 2), they were critical of the way #fitspiration dictated that this self-
324 improvement should entail the achievement #fitspiration body ideals.

325 P: *Yeah, I think without the picture it'll be good (-) 'cause saying you gotta, if you*
326 *want to you can try and do better for yourself [F1- 11]*

327 P: *... it's just trying to motivate you, to do it, but [M1-11]*

328 P: *Yeah, it's trying to force you, make you look like that... [M2-11]*

329 P: *... in one way its good saying you can do that but in another way its saying you*
330 *have to... [M3-11]*

331 By focusing on unrealistic self-improvement appearance goals, adolescents discussed
332 how #fitspiration content might induce low self-esteem or guilt. Hence #fitspiration was
333 positioned as demotivating and likely to reduce exercise participation, since it belittled any
334 sense of achievement derived from exercise unless unrealistic or extreme standards were
335 attained.

336 *"...and you could have done a really long run or some really hard exercise and then*
337 *you're proud cause you've done exercise and then you see that picture that absolutely*
338 *ripped guy and you just think...feel really bad, give up."* [M8].

339 *"Because like, then they're not happy because, they want to be better, they wanna be*
340 *more than that, they wanna be like, if you're looking at yourself in the mirror and*
341 *being, you know 'I wanna be better than this', it's like, I'm not, and you might get like*
342 *really depressed because you're like really stressed because you're trying so hard to*
343 *make yourself better than you already am. And thinking like 'oh my gosh' you know,*
344 *'I'm, I'm like really not in a good shape'."* [F6]

345 **Theme 4: Pain in the pursuit of fitness**

346 The final theme describes adolescents' understandings of perseverance and pain as
347 characteristics of fitness-related behaviours and consequences for health outcomes.

348 Adolescents discussed reasons why a person might endure through pain in exercise contexts
349 and acknowledged that pain might occasionally feature as part of a fitness regime. They
350 argued that individuals need valid reasons for experiencing pain (e.g., goal attainment):

351 *“I don't think it's a bad thing. Say if you were to do like, I don't know, a run and it*
352 *was like an hour, but then you'd got to 45 minutes and it started to hurt, I'd probably*
353 *try to carry on...[...] it's like, to build up your stamina.” [F1].*

354 Pain was also understood to be an acceptable outcome if an athlete was proficient in
355 their sport (*“Rugby players they get nervous that they vomit don't they?”* [M10]) or if a
356 person felt passionate about the sport they played (*“If it's [pain] for something that you don't*
357 *like, then quit. But if it's for something that you love and want to kind of keep on going, then*
358 *those things are alright.”* [M4]). These conceptualisation of acceptable pain in sports contexts
359 were particularly common among adolescent boys. Pain was also deemed more acceptable in
360 exercise contexts where it was perceived to be a personal choice (linking back to theme 3):

361 *“Well, if you enjoy doing something, then you're not gonna stop (because of the pain)*
362 *...but if you don't enjoy doing it, then you'll just stop really quickly.” [F2].*

363 Thus, participants could understand and relate to the messages contained in
364 #fitspiration posts promoting perseverance through pain. However, in contrast to such
365 extreme representations of pain, they argued there were limits to the amount of pain that
366 should be experienced during fitness-related behaviours. They also recognised that pain
367 experienced during exercise could be detrimental to physical health:

368 *“I don’t think this is actually correct where it says, ‘Don’t stop when it hurts’, you*
369 *are going to seriously injure yourself, you’ll have to stop, and it says, ‘stop when*
370 *you’re done’. You might not be done but you might be seriously injured and might not*
371 *make, and it, just make it worse if you keep going.” [M7].*

372 *“...and if you carry on, like if you’ve got a pulled muscle and you’re carrying on it*
373 *can really damage your body.” [F6].*

374 Furthermore, they were critical of the way in which #fitspiration messages seemingly
375 endorsed the experience of pain during exercise for aesthetic purposes *“I mean it’s obvious*
376 *that they’re putting themselves through a lot, but in the end, it’s just to make themselves look*
377 *good.” [M4].* Experiencing pain or injury in the pursuit of the unrealistic #fitspiration body
378 ideal was positioned as pointless and potentially problematic. Adolescents expressed
379 concerns with the implications of such messages for physical and mental health:

380 *“Yeah, some pictures you can never naturally get your body like it. You have to take*
381 *steroids and stuff.” [M10]*

382 *“I think this one could promote anorexia.” [F10]*

383 *“The last two don’t [promote a healthy lifestyle], they, they can promote like addictive*
384 *lifestyles, where you push yourself too much.” [M11]*

385 Furthermore, #fitspiration messages focusing on the negative extremes of exercise
386 engagement (e.g., vomiting) were argued to be de-motivating or to contradict exercise as an
387 activity to be enjoyed (*“When you think of exercising, you don’t really want to think of*
388 *puking, tears and pain.” [M12]).* There was real consensus that exercise does not have to be
389 as extreme as it is represented in #fitspiration:

390 P: *-That’s really really extre-extreme, if you were to get to the point where-[M1-5]*

391 P: *-You puke* [M2-5]

392 P: *Yeah then you-* [M1-5]

393 P: *(You puke)* [M2-5]

394 P: *Yeah when you-* [M1-5]

395 P: *(Should probably stop).* [M2-5]

396 Facilitator: *Yeah*

397 P: *Probably be better for you to stop yeah (*laughs*).* [M1-5]

398 P: *Same with this one, don't stop when it hurts, 'cos if you're hurt and you're in the*
399 *gym or something, you probably pulled a muscle or something.* [M2-5]

400

Discussion

401

402 Four themes were developed that captured adolescents' understandings of fitness and
403 #fitspiration. Adolescents in our sample positioned fitness as being important to physical
404 function and physical appearance, but challenged the link between these (Theme 1), a
405 transformative process that requires hard-work (Theme 2), and an intrinsically-motivated
406 personal choice (Theme 3), and finally, discussed how pain might be negotiated in fitness
407 contexts (Theme 4). While their conceptualisations of fitness bore similarities to #fitspiration
408 content, there was general consensus that #fitspiration represented an extreme version of
409 fitness that is overly-focused on the achievement of unrealistic appearance ideals and has the
410 potential to adversely affect both physical and mental health. Importantly, themes reflect
411 adolescents' active interpretation of #fitspiration messages and emerged primarily through
412 adolescents' negative reactions to the #fitspiration content and attempts to articulate reasons
413 behind these.

414 Consistent with previous qualitative research conducted outside of the UK,
415 adolescents offered complex and fragmented conceptualisations of fitness, focused on the
416 enhancement of physical function through physical activity (Wang et al., 2014; Woodgate &
417 Leach, 2010). Furthermore, they placed importance on a sense of autonomy, choice, and
418 agency in physical activity settings, again echoing previous research (Woodgate & Leach,
419 2010). Adolescents reflected on how their own high levels of physical activity were driven by
420 intrinsic motivations, such as social, competitive, and enjoyment factors, and were critical of
421 fitness pursued purely for aesthetic purposes, as they saw depicted in #fitspiration content.
422 Thus, messages linking fitness to physical attractiveness, which are an integral part of
423 #fitspiration content, may not resonate as much with younger adolescents as with older
424 populations (e.g., Raggatt et al., 2018). Understanding how intrinsic motivations for physical
425 activity can be sustained during adolescence, when faced with cultural messages like

426 #fitspiration that promote extrinsic aesthetic motivations, may be an important avenue for
427 future research. Dominant theories of exercise motivation purport that engagement in
428 physical activity for intrinsic reasons is more conducive to long-term adherence (Teixeira,
429 Carraça, Markland, Silva, & Ryan, 2012), therefore sustaining intrinsic motivations may help
430 reduce decline in physical activity that is typically reported over adolescence (Currie et al.,
431 2012).

432 Despite adolescents' criticism of #fitspiration posts linking fitness to attractiveness,
433 they still endorsed the dominant and longstanding cultural view that slim bodies are more
434 attractive (Thompson & Stice, 2001). Physical activity was positioned as a means of reducing
435 undesirable fatness, reflecting adolescents' reproduction of common public health discourses
436 which equate fitness and health with the absence of fatness (Thing & Ottesen, 2013; Wardle,
437 Rapoport, Miles, Afuape, & Duman, 2001). This weight bias may have potential negative
438 implications for health behaviour. For example, weight bias among peer groups may lead
439 to increased victimisation of adolescents living in larger bodies, particularly in physical
440 activity settings (Puhl, Luedicke, & Heuer, 2011). Furthermore, many adolescents suggested,
441 explicitly or implicitly, that exercise is more important for those living in larger bodies, again
442 reflecting broader societal discourses that position fatness as a personal deficiency that
443 individuals should overcome (Brownell et al., 2010). It is unclear how endorsement of such
444 attitudes relates to physical activity participation over the course of adolescence, and future
445 research should explore this further.

446 Research has highlighted how #fitspiration glorifies and normalises pain in physical
447 activity settings (Deighton-Smith & Bell, 2017). Our findings suggest that young adolescents
448 may be somewhat resistant to these messages, and actively interpret and critique #fitspiration
449 content within the context of their pre-existing beliefs around fitness. While adolescents
450 understood pain as a justifiable consequence of physical activity in some circumstances (e.g.,

451 sporting contexts), they expressed concerns about the extreme representation of pain present
452 in #fitspiration content for physical and mental health. This is an important contribution to
453 the literature, as previous research on how adolescents understand pain and overtraining is
454 limited, focusing primarily on young athletes in youth sports environments (e.g., Gomes,
455 Faria, & Vilela, 2017). The rising prominence of #fitspiration content on social media may
456 suggest a need to research adolescents' understanding of pain, overtraining, and burnout in
457 physical activity contexts more broadly, given that the majority are unlikely to have access to
458 specialist coaching or be knowledgeable about growth-related injuries.

459 Gender differences were noted in adolescents' discussion of fitness and #fitspiration.
460 Boys were more likely to suggest athlete role models as motivational; interestingly, every
461 example given in group discussion was male (e.g., Lionel Messi). The theme of pain in the
462 pursuit of fitness was also driven more strongly by the boys' responses. In particular, battling
463 through pain was positioned as more understandable and acceptable by the boys (although
464 only in sports contexts) than the girls. This emphasis on valuing fitness because of its link to
465 sports, and on interpreting #fitspiration in the context of sports, that was present among boys,
466 is likely to be the product of living in a sociocultural environment where male sporting
467 prowess is more celebrated (e.g., Cooky, Messner, & Hextrum, 2013). Furthermore, both
468 boys and girls expressed more negative opinions of hyper-muscular women than men,
469 indicating that new female body ideals emerging among young adult populations (e.g., Betz
470 & Ramsey, 2017), are not openly endorsed by our young adolescent sample.

471 Importantly, the findings highlight how young adolescents actively interpret
472 #fitspiration in the context of their existing knowledge of fitness and physical activity,
473 supporting active models of media engagement (e.g., uses and gratification model, Ruggiero,
474 2000). Our findings demonstrate the ability of young adolescents to critically engage with
475 appearance-focused social media content, supporting recent intervention work in this field

476 (McLean, Wertheim, Masters, & Paxton, 2017). The use of photo-elicitation helped to
477 stimulate dialogue within groups and enabled shared understandings and interpretations to
478 emerge from participants (Bates et al., 2017). Future research into young adolescents'
479 understandings of health, or responses to health-related media messages, may benefit from
480 using similar techniques. The findings also have important implications for public health
481 agendas aiming to increase young adolescents' physical activity. Participants offered
482 suggestions for motivational messages, including a desire to see the fitness process (i.e., an
483 athlete's journey) and for it to be presented as their choice. These suggestions could be used
484 in public health campaigns for this demographic or provided as guidelines for socially
485 responsible social media content.

486 Though the purpose of qualitative research is not to generalise findings to other
487 populations, we acknowledge the understandings of fitness and #fitspiration described by
488 participants may not be shared by other young adolescents. Our sample comprised
489 predominantly white, physically active, middle- to upper-class, adolescents, attending the
490 same fee-paying school in Northern England. Attending a fee-paying school may shape
491 adolescents' attitudes towards health and fitness, due to the strong emphasis placed on sport
492 in such schools in the UK (Swain, 2006). Furthermore, adolescents from higher socio-
493 economic status (SES) backgrounds have demonstrated greater ability to critically interpret
494 media content related to health behaviours than their low SES counterparts (Levin-Zamir,
495 Lemish, & Gofin, 2011). Thus, the participants may have been particularly likely to respond
496 critically to #fitspiration content. Future research should focus on the experiences of more
497 diverse groups of young people, including those from ethnic minority and less privileged
498 social class or SES groups.

499 Features of our data collection may also have influenced the nature of discussions. All
500 groups were facilitated by female researchers, and this may have resulted in reticence from

501 male participants, particularly regarding discussions of gender differences (Allen, 2005). In
502 contrast, female participants who typically prefer female facilitators in discussions about
503 appearance and health (Yager, Diedrichs, & Drummond, 2013), may have been more
504 expressive. The use of focus groups may also have shaped the responses from participants.
505 There may be social norms that mean body-related concerns are less likely to be disclosed in
506 group contexts, particularly for boys (Allen, 2005; Hargreaves & Tiggemann, 2006; Yager et
507 al., 2013). As such, the group context may have been more likely to elicit rejections of
508 appearance-related fitness media and agreement with more ‘masculine’ perspectives.

509 **Conclusion**

510 Previous work examining how individuals interpret #fitspiration content has focused
511 on young female university students, including those who regularly engage with #fitspiration
512 content. In contrast, the present study focused on young, affluent, and physically active
513 adolescents, who regularly use social media sites where #fitspiration is commonplace.
514 Adolescents engaged in active interpretations of #fitspiration content, drawing on their
515 existing knowledge and experiences of fitness to critically decipher messages. Through these
516 critical discussions of #fitspiration content, we elucidated adolescents’ complex and
517 fragmented understandings of fitness focused on functionality, transformation, hard-work,
518 choice, and pain. Though #fitspiration messages resonate with these conceptualisations of
519 fitness, #fitspiration was positioned as an extreme version that is overly focused on
520 attractiveness.

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524 **Declaration of Conflicting Interests**

The authors declare that there are no conflicts of interest.

526 *Table 1: List of #fitspiration themes explored in focus groups and description of images*
 527 *chosen to represent each theme.*

Theme (taken from Deighton-Smith & Bell, 2017)	Description of Representative Images
(1) Fit is Sexy	(1) Thin woman in athletic clothing doing a complex yoga pose with the words “Train like a beauty, look like a beast”; (2) Thin muscular woman wearing sports bra and pants, chain around neck, facing the camera with the words “strong is the new sexy”
(2) Pleasure and perseverance through pain	(1) Muscular tattooed man wearing sports shorts sat with face obscured on gym equipment with the words “Crawling is acceptable. Puking is acceptable. Tears are acceptable. Pain is acceptable. Quitting is unacceptable.” (2) Woman in sports bra and shorts engaging in exercise appears with faded in the background with the words “Don’t stop when it hurts, stop when you’re done” emblazoned on top.
(3) Battle of the selves: You vs. you	(1) Muscular woman wearing sports crop top and shorts, face cropped out and overlaid with the text “Be stronger than your excuses”; (2) Muscular man looking at self in mirror revealing his abs and pectoral muscles with the words “Look in the mirror... that’s your competition”.
(4) Here’s to us! a celebration of community	(1) Muscular man focused on his face and abs in a gym with the words “Surround yourself with people who are only going to lift you higher”; (2) Muscular woman wearing crop top and shorts, face cropped out overlaid with the words “Make your supporters proud and your haters jealous”.

529

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