



Mental health resources and initiatives from European national cycling federations: Insights on policy and practice

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Abstract: *Introduction:* Cycling can confer public mental health advantages for diverse populations, attenuating stressors and strengthening prosocial engagement. Conversely, competitive conditions in high-performance domains may entail prominent psychiatric risk factors that require bespoke interventions. In other sports, certain national federations have introduced mental health schemes for various target populations. However, the extent to which comparable approaches have been adopted across cycling remains unclear. *Methods:* We sought to gain broader insights into whether European cycling federations (ECFs) have implemented dedicated programmes around mental health, focussing on N=51 ECFs affiliated with the international regulator, the Union Cycliste Internationale. Initially, a search was conducted of ECF websites. Where appropriate materials were unavailable, ECFs were contacted via email and phone. *Results:* 62% of total ECFs (N=32) were captured in the results. Findings were analysed and coded to three categories, namely: “ECF-level literature or initiatives”, “No ECF-level literature or initiatives”, and “No response”. Based on our interpretation, of these N=32 ECFs, n=7 (22%) highlighted literature and strategies either on their website or during contact phases. The remaining n=25 (78%) ECFs noted no official policies or initiatives. *Conclusion:* Across included ECFs, there appears to be limited consideration about developing mental health schemes, potentially conditioned by resource constraints or disparate organisational priorities and regulations. For those ECFs with relevant programmes, the majority focussed on high-performance contexts, with less attention towards the relationship between cycling and mental health in broader demographics. Accordingly, evidence from different associations and sports could guide effective, tailored approaches.

Keywords: Public mental health, cycling, sports psychiatry, prevention, promotion

Introduction

Offering various benefits for overall health and wellbeing, exercise can improve metabolism, bone and muscle strength, allay weight-related issues, and lower risks for strokes, type 2 diabetes, dementia, osteoarthritis, and depression, amongst many other morbidities [1]. With broader implications, regular exercise can also augment quality of life, brain health, memory skills, and cognitive and social functioning [2]. Specifically, the latter considerations mean that physical activity can be a useful and cost-effective intervention for individuals with severe or complex psychopathology (e.g., [3,4]).

As one form of exercise and with approximately one billion bicycles worldwide, cycling entails numerous public health advantages, decreasing all-cause mortality and mitigating vulnerabilities for cardiovascular diseases and types of cancer [5,6]. Likewise, from a psychiatric perspective,

this type of physical activity can facilitate the release of mood-enhancing endorphins and improve cognitive processes, especially for interventions in selective groups (e.g., [7]). In addition, cycling has been shown to engender positive psychosocial outcomes, reducing stress and increasing prosocial behaviours, subjective mood, and self-esteem [8]. For some individuals, cycling may constitute an effective coping strategy for extant mental health issues [9] and an indicated therapeutic aid for several psychiatric conditions [10,11]. Therefore, akin to the “Exercise is Medicine” initiative in the United States recommending the adoption of physical activity assessments and promotion as clinical standards (e.g., [12]), physicians in the United Kingdom have formally prescribed cycling in patient treatment plans [13]. Analogously, local government entities in countries like Australia have accentuated its potential for strengthening mental wellbeing at universal levels [14].

Conversely, the interconnections between cycling and mental health can be increasingly composite in elite and high-performance contexts. In these domains, athletes may derive an improved sense of wellbeing from elements of competition [15], yet riders can also experience psychopathological symptoms, shaped by socioenvironmental determinants and sport-specific risk factors [16]. This is demonstrated by results from the 2022 Cycling Alliance Survey in women's cycling, where 22% of respondents identified deteriorating mental health as a consideration for early retirement [17]. Significantly, eating disorders can be a substantial issue for male and female riders, exacerbated by entrenched weight and body composition pressures, which can culminate in pathological behaviours (e.g., [18]). Additionally, symptoms of anxiety, depression, and substance use disorder can be apparent [16]. These academic findings are reinforced by primary narratives from high-performance cyclists discussing psychosocial concerns and psychopathological vulnerabilities (e.g., [10, 17]). Nevertheless, at the time of writing, interventions and mental health care pathways in elite cycling remain largely underreported in scholarly literature [16].

With these contrasting paradigms, there appear to be prominent disparities between the positive aspects of cycling in the general population and the risk factors that may be prevalent for high-performance riders. Consequently, as accentuated within sports psychiatry [19], multi-tiered prevention and promotion interventions might be valuable and could engender positive mental health outcomes amongst these diverse target populations. For instance, an evidence review by Public Health England found that increasing the rates of cycling can "lead to important health gains at the population level, and thus benefit [...] the wider health and care system" [20]. Equally, researchers have contended that cycling should be extensively encouraged since it can augment life satisfaction and reduce psychological distress (e.g., [8]). Separately, in high-performance competitions, certain riders will likely require tailored psychiatric interventions, which have not been adequately documented in scientific publications [16, 21]. Nonetheless, in first-hand accounts, elite cyclists have attested to the efficacy of specialist therapeutic provisions and support [16, 22].

In various sporting areas, relevant interventions and policies around mental health have been facilitated through partnerships and across responsibility domains. Globally, bodies such as the World Health Organization (WHO) have emphasised the role of recreational sports and exercise in boosting mental wellbeing; WHO have co-launched a wide-ranging mental health literacy campaign with the Fédération Internationale de Football Association [23] and published guidelines for how national sporting federations can advance health promotion [24]. Correspondingly,

the International Olympic Committee (IOC) formulated a consensus statement and created a working group for the promotion, protection, and treatment of elite athlete mental health [25]. Elsewhere, national federations from different sports have contributed to promotion and prevention goals. For example, organisations like the English Football Association [26], Swiss Rugby [27], Tennis Canada [28], and Cricket Australia [29], have engaged in mental health activities for distinct target groups, including the general population, recreational competitors, and high-performance athletes.

Notably, in cycling, the worldwide governance body, the Union Cycliste Internationale (UCI), has launched several salient projects with analogous objectives, recently sharing documentation around optimal methods for psychiatric screening in elite riders [30], which is strongly influenced by endeavours stemming from the IOC consensus statement and the IOC working group [25]. This guidance aligns with larger institutional commitments from the UCI, evidenced by their "Cycling for All" plan, which aims to promote general mental wellbeing through cycling [31]. Within its administrative framework, the UCI incorporates continent-wide and local federation members. The former coordinate between the UCI and national-level entities, whereas the latter aid with the development, advancement, and governance of cycling in their respective countries and oversee high-performance athlete teams at international events (e.g., [32]).

Throughout Europe, the UCI encompasses one continental representative, the Union Européenne de Cyclisme (UEC), and fifty-one European cycling federations (ECFs) who are affiliated with the UCI and the UEC [33]. Yet, despite the UCI's global agenda and precedents in other sports, there is limited knowledge about whether these ECFs have deployed mental health schemes for any target populations. Gaining preliminary insights into the breadth and scope of extant measures could inform ongoing practices and identify areas for possible improvement and collaboration.

Methods

We sought to gather organisational perspectives on whether the N=51 UCI-affiliated ECFs had produced or supported policies and initiatives for mental health across cycling. To synthesise evidence about applicable approaches from these federations, a multi-phase data gathering process was enacted between 1st May and 19th July 2023. The first stage entailed a detailed search of ECF websites, which are publicly accessible and listed by the UCI [33].

In cases where an ECF did not exhibit apposite literature on their website or materials were not in English, individual

ECFs were contacted directly; this was initially done via email. To that end, ECF contact information was again obtained from publicly-available listings on the UCI's website [33]. Email correspondence was sent in English and ECFs were asked to indicate whether they had any policies, guidelines, initiatives, or formal strategies around mental health. ECFs were informed that their responses would be used for the purposes of this research project. ECFs who did not respond to these first mailings were sent two reminder emails and were contacted by phone, again using details from the UCI website [33].

Throughout this study, information was derived from publicly-accessible websites or given voluntarily and therefore no incentive was provided for participation. Although the data gathering process involved some human participation in providing responses from certain ECFs, the objective of the study was to collate organisational positions and approaches. Thus, due to the nature of this information either being publicly-available or voluntarily shared by ECFs, coupled with the absence of personal or sensitive data collection, no formal ethical approval was sought. Nevertheless, care was taken to ensure accuracy, integrity, and respect in relevant interactions, in line with established research standards.

At the end of this multi-phase procedure, two members of the authorship team interpreted the findings from web resources or the responses of ECFs and coded them into three broad categories, namely: "ECF-level literature or initiative", "No ECF-level literature or initiative", and "No response". Where cases of disagreement arose during this categorisation process, consensus was sought and agreement was reached.

Results

This methodology yielded an inclusion rate of 62% from the total N=51 UCI-affiliated ECFs, with N=32 exhibiting materials on their website or responding to our enquiries. Based on the coding process described above, from this final sample of N=32 ECFs, n=7 (22%) noted relevant policies and schemes either on their website or during contact phases. The remaining n=25 ECFs (78%) did not highlight strategies or programmes either through their website or within the correspondence (Figure 1).

ECF-level literature or initiatives (n=7)

Responses within this category were heterogenous and showed variance in both scale and target population, ranging from high-performance domains to general settings. An overview of these approaches is displayed in the Table 1 and an in-depth discursive summary is presented below.

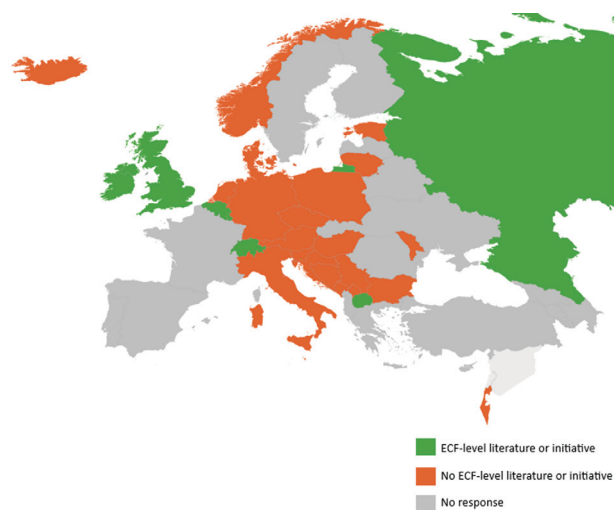


Figure 1. ECFs and their responses per our interpretation and categorisation.

British Cycling has developed and endorsed several schemes associated with mental health promotion, engaging in advocacy (e.g., [34]) and publicising dedicated resources and literature [35]. Additionally, through its Scottish body, British Cycling has assisted with awareness campaigns [36] and created a tailored mental wellbeing project [37]. In collaboration with the Scottish Association for Mental Health, this latter programme entails training volunteers to facilitate conversations about mental health, stigma reduction, and bespoke rides dedicated to mental wellbeing [37]. For the elite level, British Cycling published its own official "Mental Health Strategy" in 2019, aimed at high-performance athletes, which incorporates preventive approaches [38]. Specifically, these comprise of uniform policies for concussion and cardiac screening, the inauguration of a "Clinical Governance Committee", enhanced support provisions through on-hand psychologists, routine mental health evaluations, advertising available care pathways, and psychoeducation for athletes, coaches, and support staff.

Elsewhere, the Cycling Federation of Macedonia stated that they offer financial assistance to the cycling clubs they represent for contracting with mental health specialists, alongside promoting the latest guidelines from sporting institutions. Like British Cycling [39], Cycling Ireland has published safeguarding policies to protect vulnerable members across various age groups, explicitly mentioning those with mental disorders or mental health considerations [40]. Cycling Ireland has also participated in advocacy and sharing evidence on how cycling can promote mental wellbeing (e.g., [41]).

The remaining ECFs highlighted measures solely within high-performance settings. For example, in collaboration with the Luxembourg Institute for High Performance in

Table 1. An overview of mental health resources and initiatives from ECFs

ECF Name	Policies, materials, or activities highlighted through web resources or ECF responses
Belgian Cycling Federation	Mental health support provisions for high-performance athletes and related stakeholders
British Cycling	Advocacy and/or evidence sharing around cycling and mental health Mental health support provisions for high-performance athletes and related stakeholders Psychoeducation for high-performance athletes and/or related stakeholders Safeguarding policies
Cycling Federation of Macedonia	Advocacy and/or evidence sharing around cycling and mental health Mental health support provisions for cycling clubs
Cycling Ireland	Advocacy and/or evidence sharing around cycling and mental health Safeguarding policies
Luxembourg Cycling Federation	Advocacy and/or evidence sharing around cycling and mental health Mental health support provisions for high-performance athletes and related stakeholders Psychoeducation for high-performance athletes and/or related stakeholders
Russian Cycling Federation	Mental health support provisions for high-performance athletes
Swiss Cycling	Mental health support provisions for high-performance athletes

Sport and the Sportlycée, the Luxembourg Cycling Federation described a comprehensive programme targeted at different stakeholders and age groups. This includes youth-level and established athletes, families, teachers, coaches, and staff and encompasses psychoeducation, psychosocial assistance, factsheets around mental health, and connections to specialised services involving on-hand psychologists.

Similarly, the Belgian Cycling Federation discussed how they have a dedicated mental health team consisting of five psychologists who assist high-performance athletes, coaches, and staff. Furthermore, the Russian Cycling Federation employs a psychologist to conduct testing and consult with their riders. Swiss Cycling specified that riders could access psychologists from the Federal Office of Sport during sports recruit school. All other high-performance cyclists with squad status can engage with this resource via Swiss Cycling as required.

No ECF-level literature or initiatives (n=25)

n=25 ECFs included in our findings did not show apposite literature or outline any activities in their responses. Within this subgroup, the Bulgarian Cycling Federation indicated that whilst their riders may work with mental health practitioners on an ad-hoc basis, this was not administered institutionally. This was echoed by the Israel Cycling Federation and the Polish Cycling Federation, who did not organise their own policies or initiatives, but did suggest that high-performance athletes may be supported independently by experts.

Separately, the Norwegian Cycling Federation affirmed that they had no bespoke materials and instead followed approaches from the Norwegian Olympic and Paralympic

Committee and Confederation of Sports. Moreover, the Estonian Cyclists Union stated that they refer all athletes to the UCI and Estonian Center for Integrity in Sports. Finally, although they did not delineate any guidelines or measures, the Federation Monegasque de Cyclisme and the Hungarian Cycling Federation underlined their interest in the topic of mental health. Notably, the latter cited budgetary constraints as one reason for not developing apposite resources.

Discussion

The results from ECFs in our study show inconsistent approaches, with only n=7 federations in the total sample of N=32 (22%) citing applicable mental health programmes or policies. Significantly, where resources and initiatives were identified, these were predominantly geared towards elite or high-performance riders (for 57% of ECFs who had relevant policies or initiatives (i.e., 4/7 ECFs), these were applicable for elite or high-performance contexts). Focussing on these target populations may be more viable owing to the psychiatric risk factors associated with high-performance cycling and the function of ECFs in supporting inter-competition athletes at international events [16, 17, 18].

Although dedicated funds for cycling have been announced by the European Union and national governments (e.g., [42, 43]), expertise or resource disparities may condition the availability of mental health schemes, as was explicitly illustrated by certain ECFs; this may be evident for those ECFs in lower-income countries or with smaller membership levels, where such models may be difficult to deploy and sustain. Likewise, the absence of initiatives may reflect disparate operational and financial commitments and the influence of bodies like National Olympic

Committees (NOCs), governments, and supra-national entities in promoting cycling (e.g., [42, 43, 44]). This is an important consideration, as contingent on the jurisdiction and regulatory procedures, different governmental entities and sporting agencies can have disparate organisational responsibilities for distinct rules and policies, which could impinge upon activities related to mental health. As one example of this, anti-doping enforcement can vary between National Anti-Doping Organizations or NOCs, depending on the country [45]. Furthermore, in the authors' opinion, it is conceivable that the persistence of mental health stigma in sporting frameworks and across certain European societies [46, 47] could also have impinged upon organisational priorities.

ECFs and elite-level and high-performance environments

For ECFs who have explicitly highlighted their own interventions aimed at high-performance and elite settings in correspondence or through web resources, this largely involved making mental health support available via in-house practitioners or directing financial assistance for this purpose. Although other ECFs indicated that riders may consult specialists on a case-by-case basis, those ECFs providing dedicated support would appear to broadly conform to optimised models from sports psychiatry, which emphasise the importance of institutional engagement in promoting accessible care pathways (e.g., [48]). Specifically, ECFs offering literature, psychoeducation, and on-hand expertise for diagnosis and treatment appear to be following the more holistic aspects of best-practice in this area [48].

Based on the interpretation of our results, British Cycling had one of the most comprehensive support structures for elite riders, encompassing a range of psychiatric and somatic interventions [38]. Analogously, despite having a proportionately smaller membership, the Luxembourg Cycling Federation shared information as part of this study on schemes with an extensive scope for high-performance riders, geared towards various life stages and risk factors and guided by partnerships with external associations. Such approaches underline the value of evidence-based knowledge exchanges to enhance preventive and mental health promotion initiatives.

Accordingly, it could be a useful endeavour for the UEC, the UCI, or NOCs (as appropriate) to facilitate intra-federation working groups or collaborations around mental health to share insights on the feasibility, cost-effectiveness, and sustainability of relevant policies and actions; these should be informed by needs-assessments in elite environments at an individual ECF-level. Again, this could be valuable for ECFs who expressed interest in mental health but are impeded by financial and expertise constraints. Sports

psychiatrists and allied practitioners could enrich these dialogues, providing perspectives on the latest developments across scientific literature and other sporting disciplines, alongside highlighting the potential of preventive and health promotion interventions [19, 49].

Separately, our results do not provide any indications as to whether recommendations from the UCI on psychiatric screening based on previous IOC proposals for high-performance riders have been facilitated or endorsed by ECFs [30]. The recent release of these guidelines in March 2023 (two months prior to the commencement of this study), likely explains why no signs of early adoption were identified. Nevertheless, it is hoped that this documentation is thoroughly disseminated and communicated to inform current or future organisational planning around the mental health of high-performance riders.

ECFs and broader populations

Our analysis suggests there is currently limited consideration from ECFs about the intersections between cycling and public mental health in wider demographics beyond elite contexts. This aligns with findings from other work examining national sporting federations and health promotion objectives [50]. Notably, insights from our study suggest that only $n=2$ ECFs had actively championed cycling for improved mental wellbeing in the general population. This finding is particularly pertinent in light of the UCI's "Cycling for All" manifesto, which aims to advance mental wellbeing through cycling across diverse populations [31]. Again, we did not obtain evidence of any ECFs explicitly referring to this UCI programme, but several did note that they follow the latest guidance from sporting entities, such as NOCs.

As exercise and recreational cycling has correlations with public mental health benefits [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11], encouraging ECFs to participate in these goals may be an untapped avenue for boosting mental health on a community-wide scale. Although administrative structures and funding streams are typically undisclosed and inevitably differ across ECFs, it is reasonable to assume that the majority of these organisations will receive some public funding provisions. Consequently, local and national governmental agencies could leverage the networks and profile of ECFs for accentuating cycling in broader mental health prevention based around exercise or initiatives to promote physical activity and mental wellbeing within the general population. Again, country-based or community-based needs-analyses created in conjunction with policymakers and public mental health specialists would be required to inform apposite interventions [51], ensuring that cycling-specific schemes are adapted to sociocultural frameworks and populational requirements.

Akin to high-performance environments, monetary considerations may be an inhibiting factor for these endeavours. Yet, this does not necessarily preclude the adoption of less resource-intensive measures, especially for universal promotion and prevention. Specifically, advocacy, awareness campaigns, press releases, and disseminating educational resources may be worthwhile activities. For example, both British Cycling and Cycling Ireland have engaged in advocacy efforts that accentuate the mental health benefits of cycling [34, 35, 36, 37,41]. Equally, findings from different sports where national federations have participated in relevant projects could help refine approaches to furthering cycling as a public mental health promotion tool amongst ECFs. In this regard, resources from WHO and conceptual models from public health research can provide critical foundations for these intentions [24, 50], as can learnings taken from ongoing projects (e.g., [23, 26, 27, 28, 29]). Elsewhere in academic literature, there have been proposals for enhancing the general appeal and popularity of cycling [52]. This could concomitantly yield societal benefits for mental wellbeing and might be enacted by ECFs together with public bodies or NOCs as part of larger physical activity campaigns.

Limitations and future research directions

With a multi-phase design and a non-systematic approach, this study used email and phone contact when resources were not available from ECF websites. Thus, although contact details were collated from the UCI website [33], certain ECF representatives were unreachable and were not incorporated in the overview. No financial incentives were provided for ECFs for being included in the study. Moreover, to maintain clarity in our enquiries and simplify interpretation and coding, we conducted our investigation in English and did not contact ECFs prior to the study. Acknowledging that English is not the primary language of many ECFs, this conceivably could have engendered misunderstandings or misconceptions about the study objectives, garnered inaccurate responses, discouraged participation, or meant that the entire scope of ECF campaigns may not have been expressly indicated. Taken together, these factors could have affected our inclusion rate and the information in our results. Specifically, our findings encompassed 62% of all ECFs, meaning that some national federations are not represented. Nevertheless, this is higher than inclusion rates typically found in survey-based methodologies [53, 54].

For ECFs displaying online content or those who participated during outreach phases, two members of the research team analysed and classified responses. Consensus was established when disagreements arose during this process. Resultantly, we recognise that issues of reproducibility and

the potential for misinterpreting findings about ECFs cannot be discounted entirely. Separately, as this research was conducted during a single time period and gathered contemporaneous information, ECF positions or initiatives could evolve. However, despite these limitations, due to the heterogeneity between of the ECFs, we deemed our methodology to be appropriate for gathering preliminary, continent-wide insights from multiple federations.

Additionally, in solely focussing on ECF approaches, we may have overlooked support structures or applicable schemes coordinated by national sports federations, government agencies, or NOCs, particularly when these were not explicitly demarcated in responses or through web materials. As outlined above and reflected by ECF responses (e.g., from the Norwegian Cycling Federation), these organisations can also address various target populations across sporting disciplines, including cycling. Although scrutinising the regulatory frameworks and organisational structures surrounding sports in each European country would be highly complex, this could form the basis for prospective projects, especially as relevant initiatives could act as templates or case studies for more specialised or sport-specific federations, like ECFs.

Furthermore, per our findings, other future research projects could focus on those ECFs who have developed dedicated mental health strategies or initiatives in high-performance or broader contexts, examining the efficacy of relevant prevention and health promotion schemes using measurable outcomes. This may be particularly valuable since detailed literature on successful treatment programmes in elite environments is underreported in scientific literature [21], as more generally is evidence on health promotion from national sporting federations [50]. Finally, global views on this subject could form the basis for prospective work. Notably, the UCI represents a range of national federations worldwide [55], who could offer important perspectives, outline cultural nuances, and help refine actions in this area.

Conclusion

This study provides preliminary insights on mental health resources and initiatives in cycling from a subsection of N=32 ECFs, highlighting a general lack of consideration. Whilst some approaches are comprehensive and adhere to current evidence, specifically for elite and high-performance athletes, there appears to be a lack of consistency and inclusiveness. This is especially pronounced amongst extensive target demographics.

Financial constraints, expertise gaps, responsibility conflicts, and organisational priorities may represent implementation barriers. Consequently, collaborative efforts facilitated by larger entities like the UEC, the UCI, or NOCs

could help harmonise strategies and develop mechanisms for knowledge exchanges and feedback sharing. Public bodies and governmental agencies also have an opportunity to harness the influence of ECFs to make cycling a cornerstone of public mental health models and physical activity programmes with wider societal benefits.

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