MENTiS

Co-funded by the European Union

# EUROPEAN REPORT:

# MENTAL HEALTH OUTCOMES, LITERACY AND PROMOTION IN ATHLETES AND ENTOURAGE MEMBERS IN HIGH-PERFORMANCE SPORT

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This report is an output of the first work package of the Erasmus+ Sport project

"Promoting Mental health through the ENTourage in high-performance Sport" (MENTiS)

Loughborough University · INSEP · VUB Vrije Universiteit Brussel · NOC*NSF · UAB Universitat Autònoma de Barcelona

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# Consortium

We would like to express our gratitude to all the athletes and entourage members who participated in this study. We thank the entire MENTiS Consortium for their valuable contributions to the current study and report. The MENTiS Consortium:

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# Key findings

- A total of 1574 participants across six European countries completed the MENTiS survey on mental health outcomes, mental health literacy, and mental health promotion. Participants included talented and elite athletes (N = 796; 51%) and entourage members working in high-performance sport (N = 778; 49%) from Belgium, France, Netherlands, Spain, Sweden and the UK.
- The term "entourage" refers to all the people associated with athletes and included entourage from three domains: the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists; N = 511), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors; N = 98), and the personal domain (e.g., parents, partners, friends; N = 196).

Mental health outcomes:

- Athlete sample:
    - Mental health continuum: 48% were categorised as flourishing, 47% with moderate mental health, and 5% as languishing
    - Mental ill-health: 28% reported moderate to severe symptoms of anxiety and 26% reported moderate to severe symptoms of depression.
    - Mental health literacy: 20% of the athlete sample would not know where to look for information about mental health, 44% agree or somewhat agree that they would hide a mental health problem, and only 9% agree that mental health problems are less serious than medical problems.
- Entourage sample
    - Mental health continuum: 54% were categorised as flourishing, 42% with moderate mental health, and 4% as languishing.
    - Mental ill-health: 17% reported moderate to severe symptoms of anxiety and 12% reported moderate to severe symptoms of depression.
    - Mental health literacy: 38% agree or somewhat agree that they would hide a mental health problem, 70% does not agree that seeing a mental health professional means you are not strong enough.

- Overall, athletes reported that they are more likely to receive appropriate mental health support from sport psychologists, parents, mental coaches, partners, and clinical psychologists.
- Entourage members who felt more likely to provide appropriate mental health support were sport and clinical psychologists, parents, technical directors, boarding school tutors, and dual career support providers.
- Main predictors for higher well-being in the total sample were low depression and anxiety, high mental health literacy, younger age, and having experienced mental health problems in the past. The type of participant (athlete vs entourage) was not a significant predictor for well-being, while it was significant for anxiety and depression.
- Main predictors for higher well-being in athletes were lower depression, lower anxiety, higher mental health literacy, and absence of injury.

- Main predictors for higher well-being in entourage members were lower depression, higher mental health literacy, and lower level of competition.
- The vast majority of the participants (97% of athletes and 99% of entourage members) found that mental health promotion and support are part of the entourage's responsibilities.

## Aims of the MENTiS survey

An online survey was developed by the MENTiS consortium (MENTiS, 2023) for athletes and entourage members on mental health outcomes, mental health literacy, and mental health promotion.

The aim of the MENTiS survey was to:

1. Investigate the **prevalence of mental health indicators** (e.g., wellbeing, anxiety, depression) in athletes and entourage members from 6 European countries (i.e., Belgium, France, the Netherlands, Spain, Sweden, UK).
2. Investigate the perceptions about **mental health support** and ideas about how to improve mental health support.
3. Investigate the **role of potential influencing factors on mental health** (e.g., mental health literacy, mental ill-health, gender; for athletes specifically: the presence/absence of injuries; for entourage specifically: domain of support, job characteristics).
4. **Create an evidence base** for the development of workshops and (online) resources targeting entourage members in order to enhance their competencies in mental health promotion (WP2 and WP3 of the MENTiS project).

The results obtained with the survey are displayed in a European report and 6 national reports (i.e. Belgium, France, the Netherlands, Spain, Sweden, UK).

More information on the MENTiS project can be found here: https://spmb.research.vub.be/mentis

## Procedure & instruments

An online survey was administered to athletes and entourage members in the six participating countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.

Before administering the survey, ethical approval was granted by the Ethical Committee of Human Sciences of the Vrije Universiteit Brussel. Parental consent was required before minors could complete the survey.

The survey targeted two different groups:

1. Talented and elite athletes
2. Entourage members belonging to the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors), or the personal domain (e.g., parents, partners, friends).

Data was collected in two phases: the first phase was April – August 2023, and the second phase was September – October 2023. During this 2nd phase, additional data were collected in Belgium and UK. The phase of data collection (i.e. 1 and 2) was included as a variable in the analysis. After collecting the data, data was analysed in SPSS and displayed in PowerBI. All consortium members had access to the PowerBI report, and received their national raw data.

The online survey was developed in Qualtrics and made available in 6 languages (English, French, Dutch, Spanish, Catalan, and Swedish).

The survey is available here: https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

The survey's content differs slightly between athlete and entourage participants. It was divided into five sections:

1. **Demographics**:
   i. **Demographics for athletes**: gender, age, sport characteristics, level of competition, dual career, income, employment, injury.
   ii. **Demographics for entourage members**: gender, age, domain (athletic, educational/vocational, personal), role in the entourage, sport characteristics, athletes' career stage, level of competition, number of athletes they work with, employment status.
2. **Mental health and well-being**
   i. Mental Health Continuum – Short Form (MHC-SF), (Keyes, 2002): 14-item scale that measures participants' perceptions of general well-being, including social, psychological and emotional well-being; 6-point Likert scale from 0 (*never*) to 5 (*everyday*). Scores range from 0 to 70.
   ii. Patient-Health Questionnaire (PHQ-9), (Kroenke et al., 2001): 9-item scale that measures the frequency of symptoms of depression; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 27. Scores can be categorised according to the severity of reported symports as "no depression" (total score ranges from 0 to 4), "mild depression" (score ranges from 5 to 9), "moderate depression" (score ranges from 10 to 14), "moderately severe depression" (score ranges from 15 to 19), and "severe depression" (score ranges from 20 to 27).

iii. Generalised Anxiety Disorder Assessment (GAD-7), (Spitzer et al., 2006): 7-item scale that measures the frequency of symptoms of anxiety; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 21. Scores can be categorised according to the severity of reported symptoms as "no/minimal anxiety" (score ranges from 1 to 4), "mild anxiety" (score ranges from 5 to 9), "moderate anxiety" (score ranges from 10 to 14), and "severe anxiety" (score ranges from 15 to 21).

iv. 1 item about receiving professional psychological help.

v. 2 items about lifetime and point prevalence of mental health problems; 1 item about age of onset of mental health problems (Akesdotter et al., 2020).

**3. Mental health literacy**

i. Mental Health Literacy Questionnaire, developed during the E+ Dual Careers for Mental Health project (DC4MH, 2022; European Commission, 2023), and currently being validated as part of the Olympic Studies Advanced Research Grant: "Measuring and Increasing Athletes' Mental Health Literacy (International Olympic Committee, 2023): 12-item scale that measures mental health literacy; 5-point Likert scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). Scores range from 0 to 48.

**4. Mental health support**

i. **Perceived mental health support (for Athletes)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of receiving appropriate mental health support from different sources. The different sources in this case were an extensive list of roles in the entourage: for the roles that were not indicated, there was the possibility of adding an extra role in a text box. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

ii. **Mental health support provision (for Entourage)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of offering adequate mental health support to athletes facing mental health problems. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

**5. Competencies in mental health support**

i. **Athletes**: 1 item to explore what competencies entourage need to support athletes' mental health; 1 item to explore what competencies athletes' need to support their mental health; 2 open questions to further investigate the abovementioned topics.

ii. **Entourage**: 1 item to explore what competencies they need to support athletes' mental health; 1 item to explore what competencies they need to support their own mental health; 2 open questions to further investigate the abovementioned topics.

## Data collection in Europe

- **Who?** An online survey was administered to athletes and entourage members in the six participating countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.
- **When?** Data was collected between April and August 2023 (phase 1) and between September and October 2023 (phase 2)
- **How?** Participants received an online link by email to fill out the survey and in some countries, group sessions were organized for athletes and entourage members to complete the survey
- **Survey link:** https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

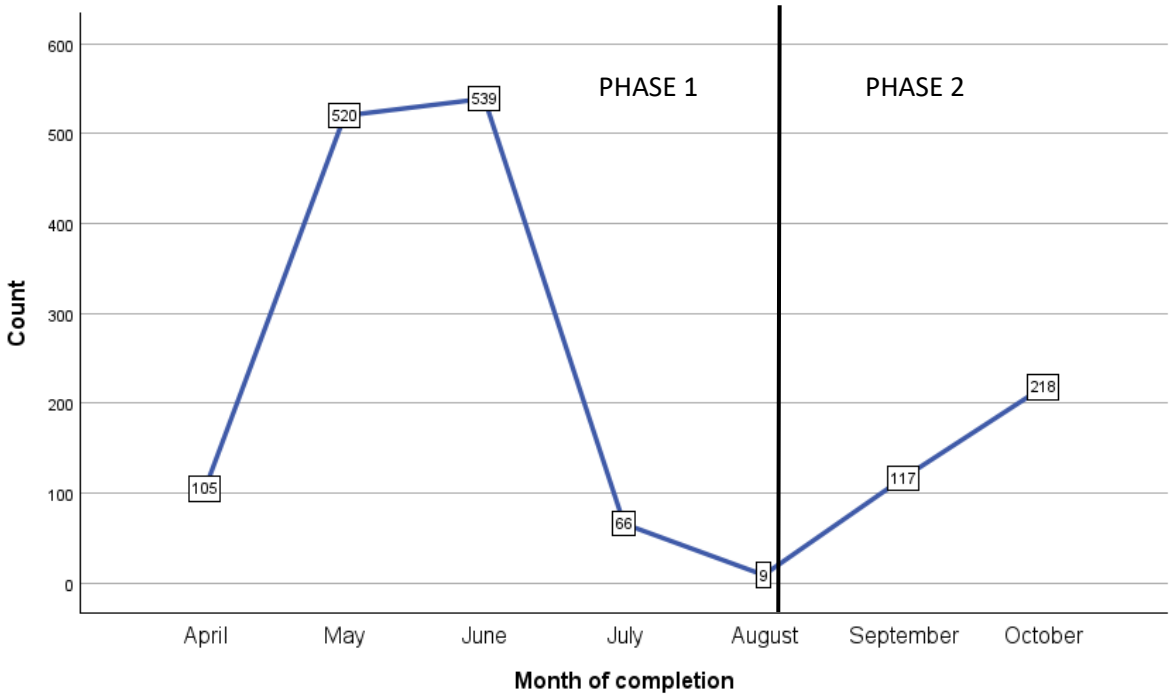


*Figure 1. Complete responses collected (N = 1574) with the MENTiS survey between April and October 2023.*

## Participants

- Figure 2 presents the sample characteristics.
- In total, 1574 participants completed the questionnaire; including 796 athletes (51%) and 778 entourage members (49%).
- The distribution across countries in the two groups varies substantially: the majority of participants were athletes in France, Spain and the UK (respectively, 61%, 63% and 52% of the whole sample), while the majority was entourage members in Belgium, Netherlands and Sweden (respectively, 72%, 91% and 51% of the whole sample). More information on distribution across countries can be found in Figure 2 and Figure 3.
- Spain had the most participants, followed by France, Sweden, UK, Belgium, and the Netherlands.
- Males and females were almost equally distributed in the European sample (48% females vs. 52% males).

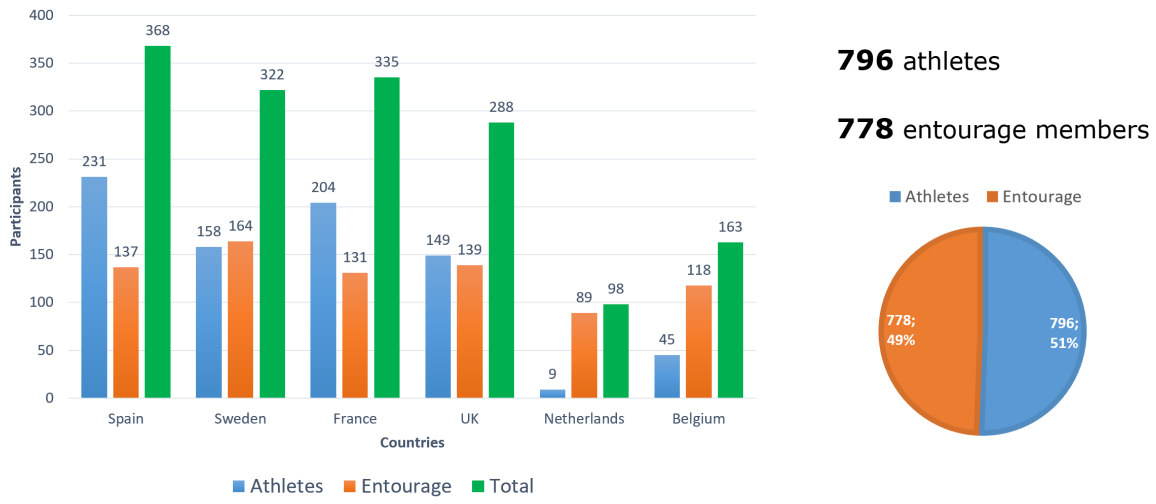


*Figure 2. Characteristics of the European sample.*

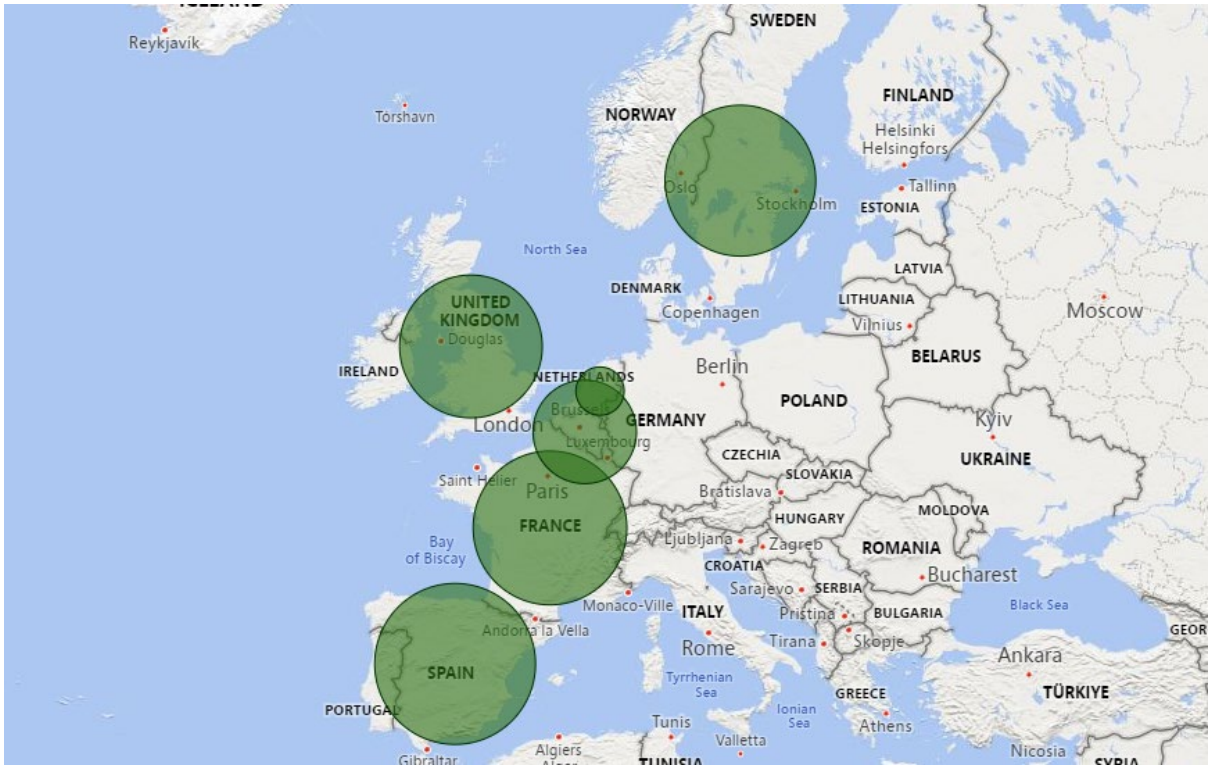


*Figure 3. Distribution of participants across countries.*

## European athlete sample (N = 796; 51% of full sample)

**Key findings athlete sample**

In total, 796 athletes completed the survey. The athlete sample characteristics are displayed in the figures below.

- The sample included N = 422 females (53%), N = 373 males (47%), and N = 1 non-binary (0.1%). The age ranged from 14 to 65, and the mean age was 20.41 y.o.
- The sample included more athletes from individual sports (N = 483; 61%) compared to team sports (39%; N = 313).
- Athletes were mainly active in Olympic summer sports and non-Olympic sports. In total, 24 para-athletes participated in the survey.
- Most athletes competed at national and world level.
- 96% were Dual Career athletes (i.e., combining sport with work and/or education)
- 10% of athletes were currently injured
- Most common sports were athletics (8%), handball (5%), swimming (5%), water polo (4%), and basketball (4%).
- Information about sample characteristics are displayed in Figure 4 and Figure 5.

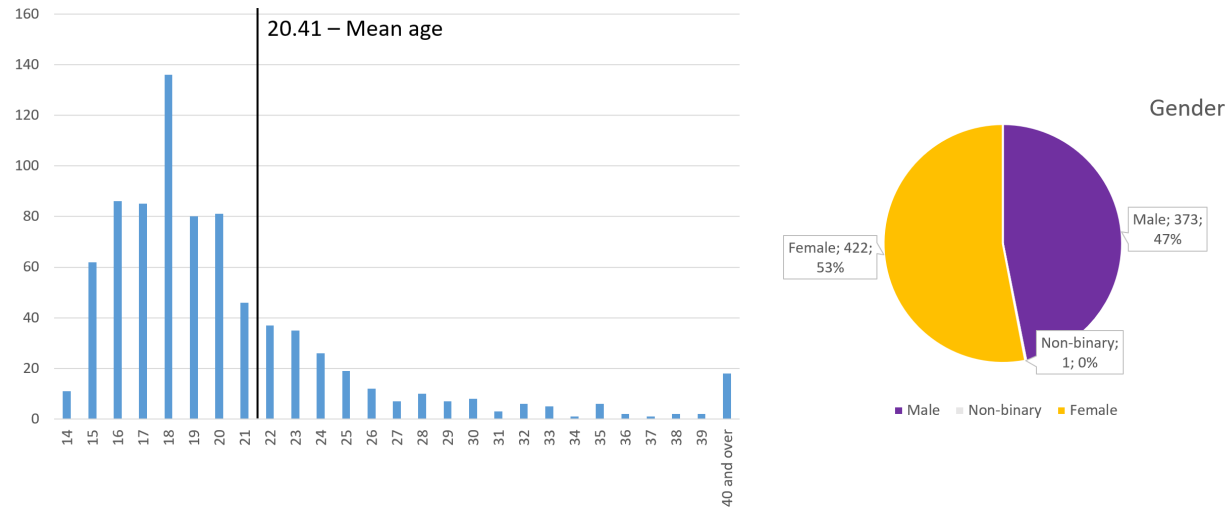


*Figure 4. Athlete sample characteristics (gender and age distribution)*

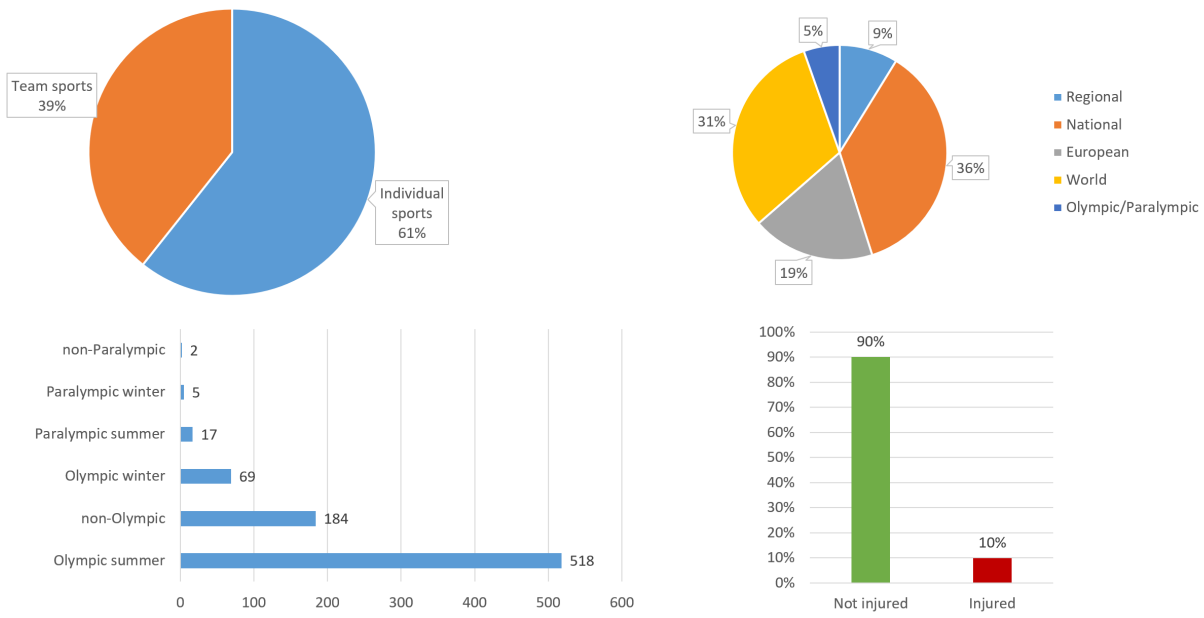


*Figure 5. Sport characteristics of the European athlete sample*

## European entourage members sample (N = 778; 49% of full sample)

- In total, 778 entourage members completed the survey. Of these, 66% (N = 511) belonged to the athletic domain (e.g., coaches, assistant coaches, psychologists, physicians, technical directors, …), 12% (N = 98) belonged to the educational/vocational domain (e.g., teachers, dual career support providers, boarding school tutors, …), and 22% (N = 196) to the personal domain (e.g., parents, partners, housemates, friends, …).
- Age ranged between 18 and 78, and the mean age was 43.21 y.o.

The following sample characteristics refer to participants from the athletic and educational/vocational domains only:

- Of this sample, 42% worked with individual sport athletes, 26% with team sport athletes, and 32% with athletes from different types of sports.
- Regarding the sport disciplines, entourage members mainly worked with athletes from Olympic sports (58%), and 28% worked with athletes from different disciplines.
- Most entourage participants are active on the Olympic/Paralympic level (43%), followed by world level (20%), national level (19%), European level (16%), and regional level (2%).
- Of the 609 entourage members, 29% worked in youth/talented development, and 24% with senior athletes. The majority (47%) worked with athletes in both career stages.
- Our participants had 12 years of experience in their role on average.
- Regarding employment status, 26% were self-employed and 74% were employed; 60% was employed full-time, 33% was employed part-time, and 7% was working on a voluntary basis.
- Sample characteristics are displayed in Figure 6 and Figure 7.

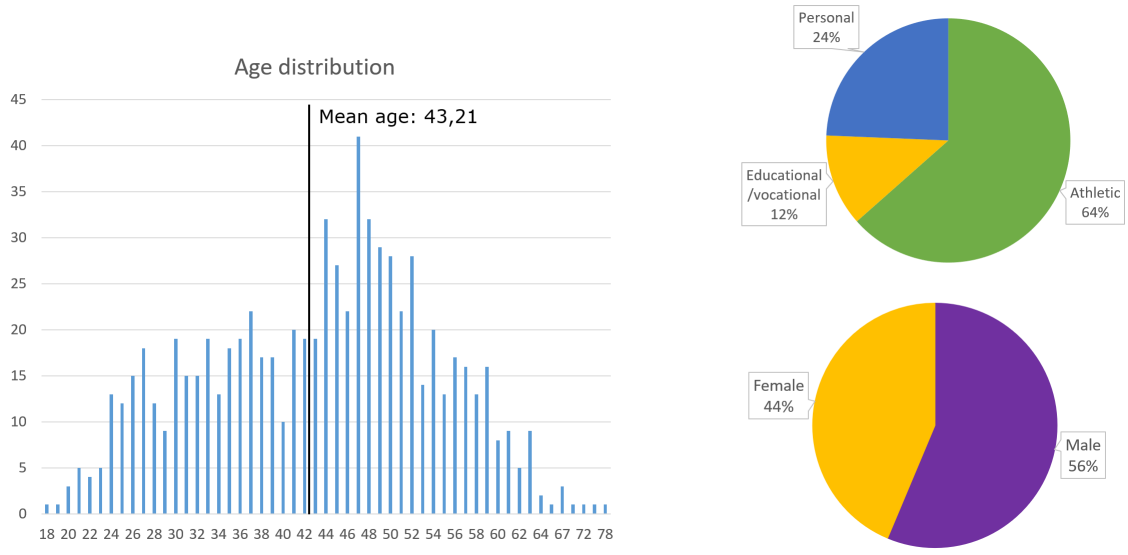


*Figure 6. Entourage sample characteristics (gender, age, domain distribution).*

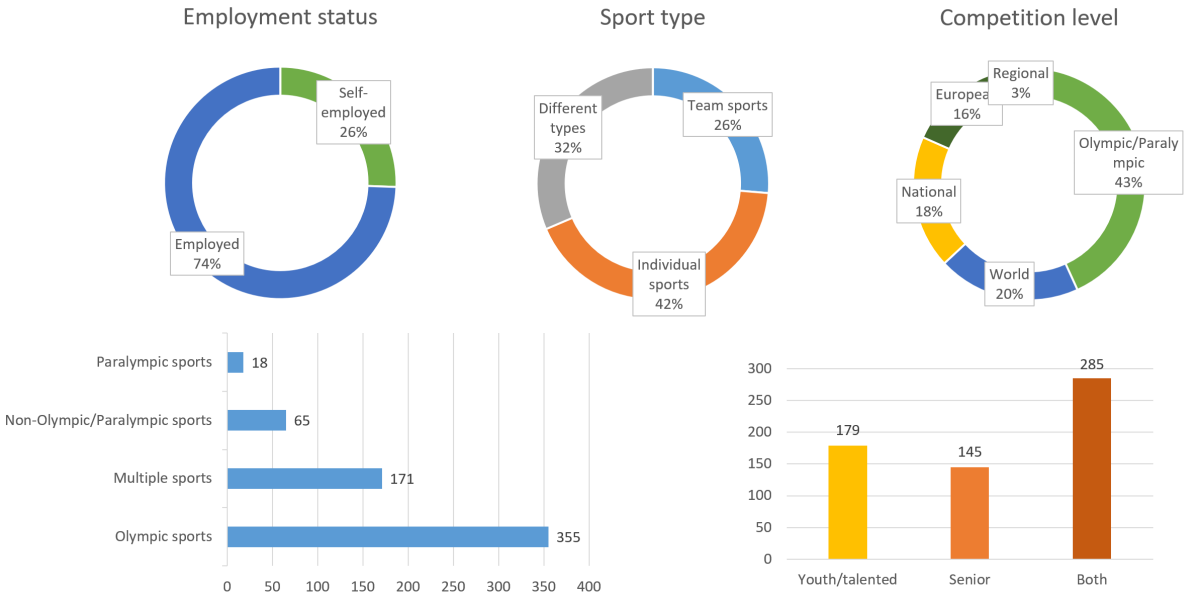


*Figure 7. Sport and contract characteristics of the entourage sample.*

## Results

**Study constructs:**

a. Mental health
b. Mental ill-health
c. Mental health literacy
d. Perceived support (athletes)
e. Provided support (entourage)
f. MH promotion competencies

**Link between study constructs:**

a. Correlation between study constructs
b. Key predictors of MH

***MENTAL HEALTH CONTINUUM – SHORT FORM (MHC-SF).***

Mental health was measured using the Mental Health Continuum Short form (MHC-SF), developed by Keyes (2002).

- The scale has 14 items
- The scores are on a 6-point scale (0 – never; 5 – Every day)
- Three subscales: emotional well-being, social well-being, and psychological well-being
- It can be scored according to the three subscales + the general well-being scale, or according to the Mental Health Continuum (Languishing, moderate MH, Flourishing)

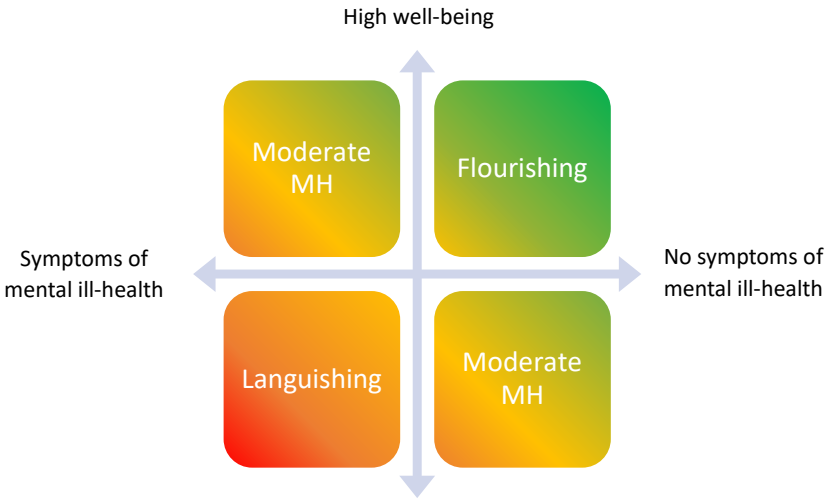


*Figure 8. Mental health dual continuum model (Keyes, 2002)*

**KEY FINDINGS**

Detailed results are displayed in the figures below.

- In total, 1574 participants completed the MHC-SF.
- In the athlete population, 48% were categorised as flourishing, 47% with moderate mental health, and 5% as languishing.
- In the entourage population, 54% were categorised as flourishing, 42% with moderate mental health, and 4% as languishing.
- Both classifications are displayed in Figure 9.
- In both populations, scores on the social well-being subscale were lower compared to the psychological and emotional well-being subscales. Scores in the three subscales are displayed in Figure 10.
- Findings at item level, displayed in Figure 11, show that **athletes** felt less often satisfied with life (item 3) than happy (item 1) or interested in life (item 2).
- In the social well-being subscale, 19% of athletes never felt that society is a good place (item 6), and 10% never felt that they belonged to a community (item 5).
- Additionally, 64% of athletes felt they had trusting and warm relationships (item 11) almost every day, or every day.
- Findings from the **entourage** are displayed in Figure 12. In the entourage sample, 78% of the participants felt to be interested in life (item 2) almost every day or every day.
- The item in which responses were more scattered is the one about feeling that society is a good place: 16% of the entourage sample never felt that, while only 3% always felt it. At the same time, only 3% never felt that people are basically good (item 7).
- Lastly, 69% of the entourage sample always or almost always felt they had trusting and warm relationships (item 11).

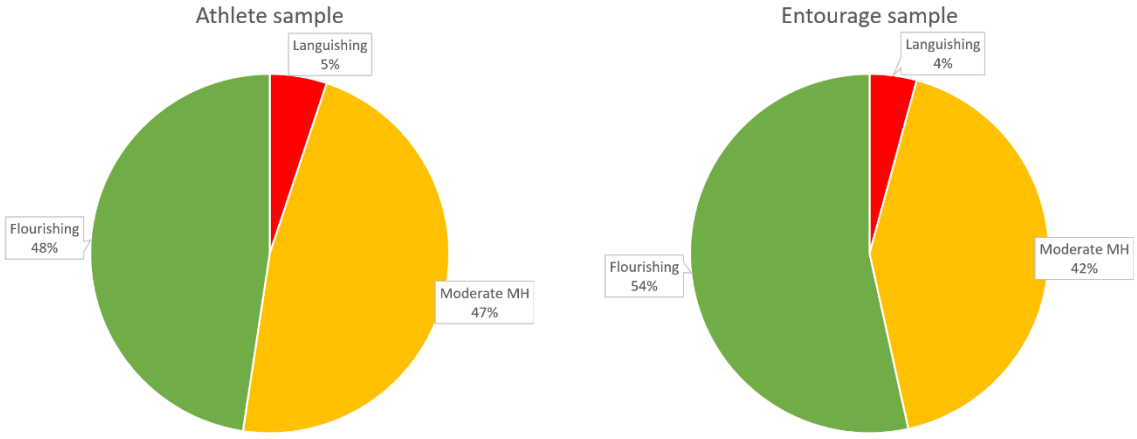


*Figure 9. Mental Health classification for the two different groups in the European sample.*

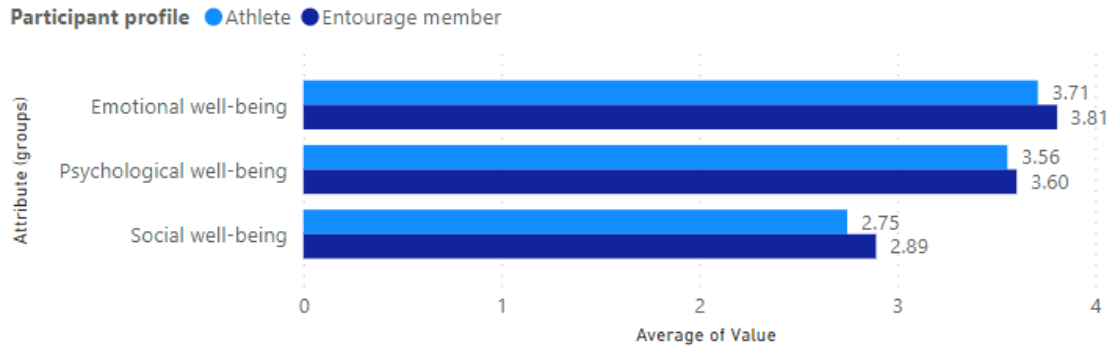


*Figure 10. Average MHC-SF scores for the two different groups in the European sample.*

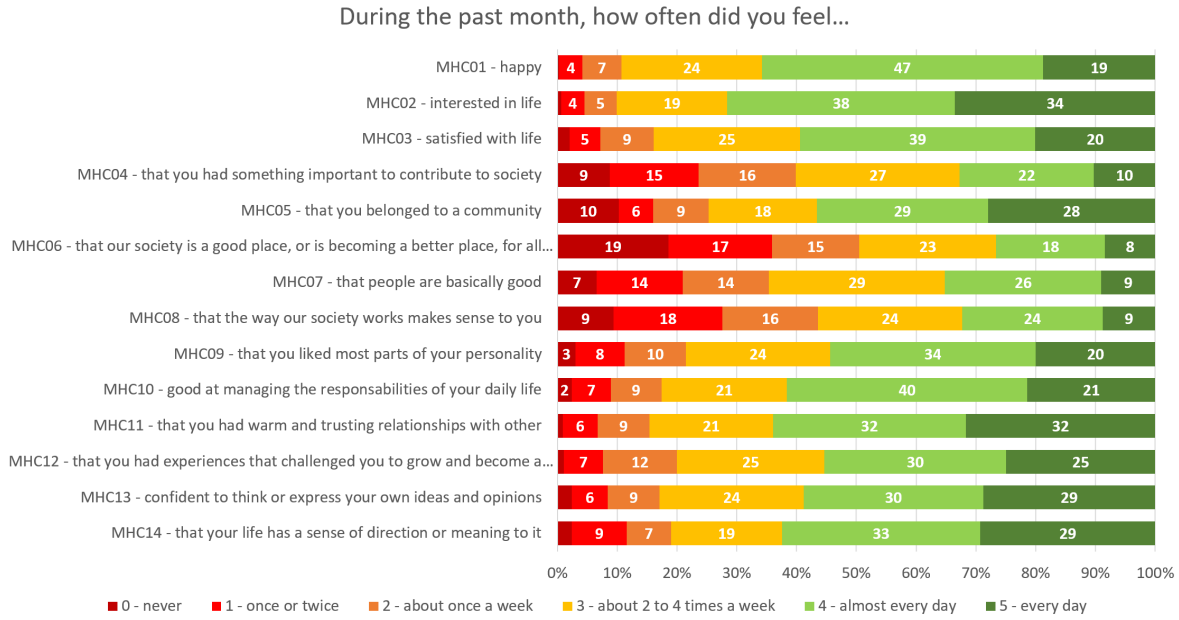


*Figure 11. Frequencies for the 14 MHC-SF items in the athlete sample*

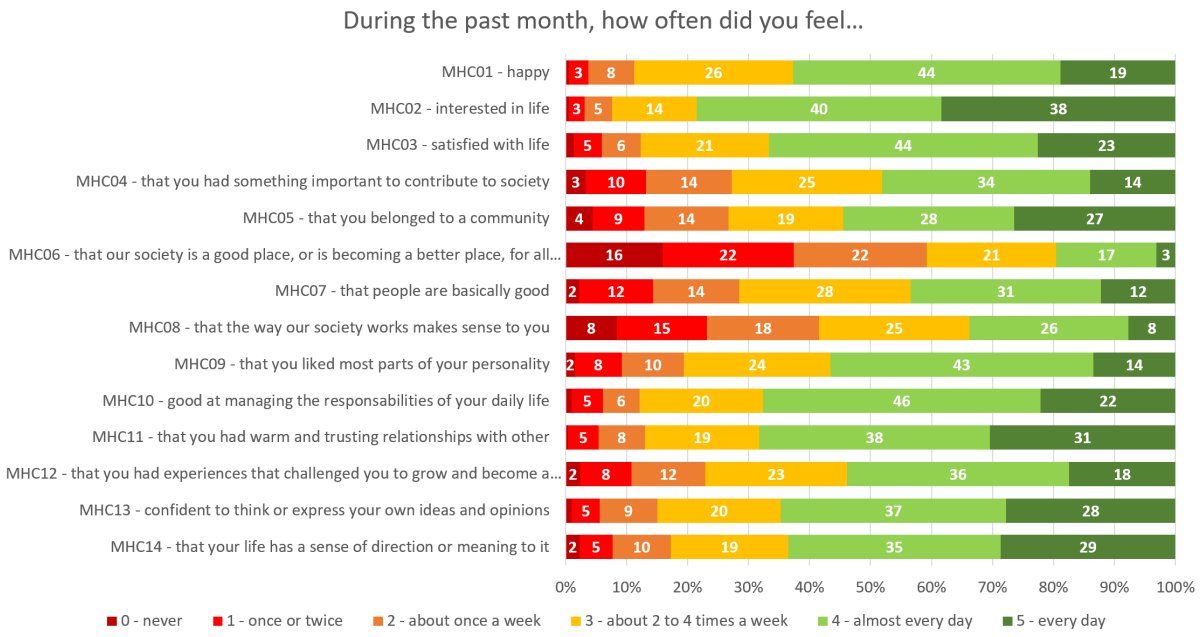


*Figure 12. Frequencies for the 14 MHC-SF items in the entourage sample.*

**Patient-Health Questionnaire (PHQ-9) (Kroenke et al., 2001)**

The PHQ-9 is a 9-item scale that measures symptoms of depression in the last two weeks (e.g., "little interest or pleasure in doing things"). Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 27.

**Generalized Anxiety Disorder Questionnaire (GAD-7) (Spitzer et al., 2006)**

The GAD-7 is a 7-item scale that measures symptoms of generalized anxiety disorder. Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 21.

**ANXIETY AND DEPRESSION:**

- In the **athlete** population, 33% reported no symptoms of anxiety, 39% reported mild symptoms, 17% reported moderate symptoms, and 11% reported severe symptoms. As for depression, 43% reported no symptoms of depression, 31% reported mild symptoms, 16% reported moderate symptoms, 7% reported moderately severe symptoms, and 3% reported severe symptoms.
- These results are displayed in Figure 13.

- In the **entourage** population, 42% reported no symptoms of anxiety, 42% reported mild symptoms, 10% reported moderate symptoms, and 6% reported severe symptoms. As for depression, 61% reported no symptoms of depression, 27% reported mild symptoms, 8% reported moderate symptoms, 3% reported moderately severe symptoms, and 1% reported severe symptoms.
- These results are displayed in Figure 13.

- In both samples, the highest scores in the GAD-7 were reported in item 1 (feeling nervous, anxious, or on edge) and item 3 (worrying too much about different things). The frequencies of scores in each item are displayed in Figure 14 (athletes) and Figure 16 (entourage).
- In both samples, the highest scores in the PHQ-9 were reported in item 4 (feeling tired or having little energy) and item 3 (trouble falling asleep or sleeping too much). While these are symptoms of depression, the high scores can be linked to the intensity of the training and the length of working days/weeks. The frequencies of scores in each item are displayed in Figure 15 (athletes) and Figure 17 (entourage).

**DIAGNOSIS AND HELP-SEEKING**

- Regarding diagnosis, 37% of athletes indicated to have received professional help in relation to their mental health, and 9% reported having received a formal diagnosis of mental health disorder. 8% reported experiencing mental health problems at the time of filling out the survey. 25% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by athletes was 16 years old. The results are displayed in Figure 18.
- In the entourage sample, 37% reported to have received professional help in relation to their mental health, and 11% indicated to have received a formal diagnosis of mental health disorder. 6% reported that they were experiencing mental health problems at the time of filling out the survey. 23% reported having experienced mental health problems in their life, and the average age of onset of mental health problems reported by entourage members was 26 years old. The results are displayed in Figure 19.

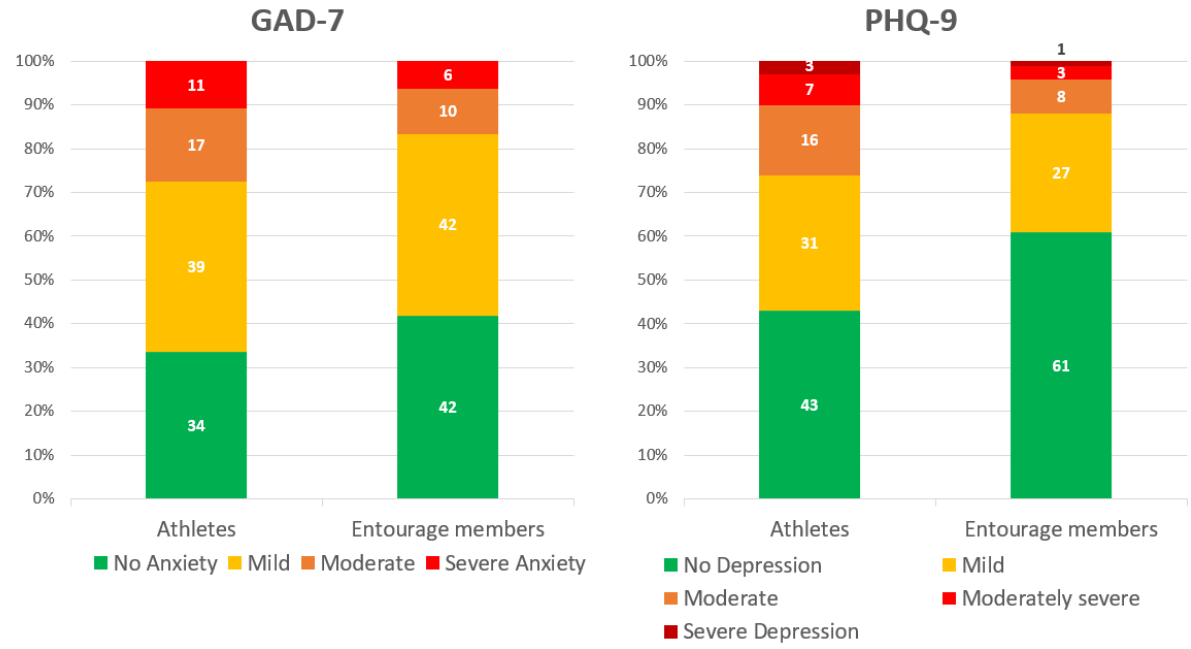


*Figure 13. Anxiety and depression prevalence in the two groups.*

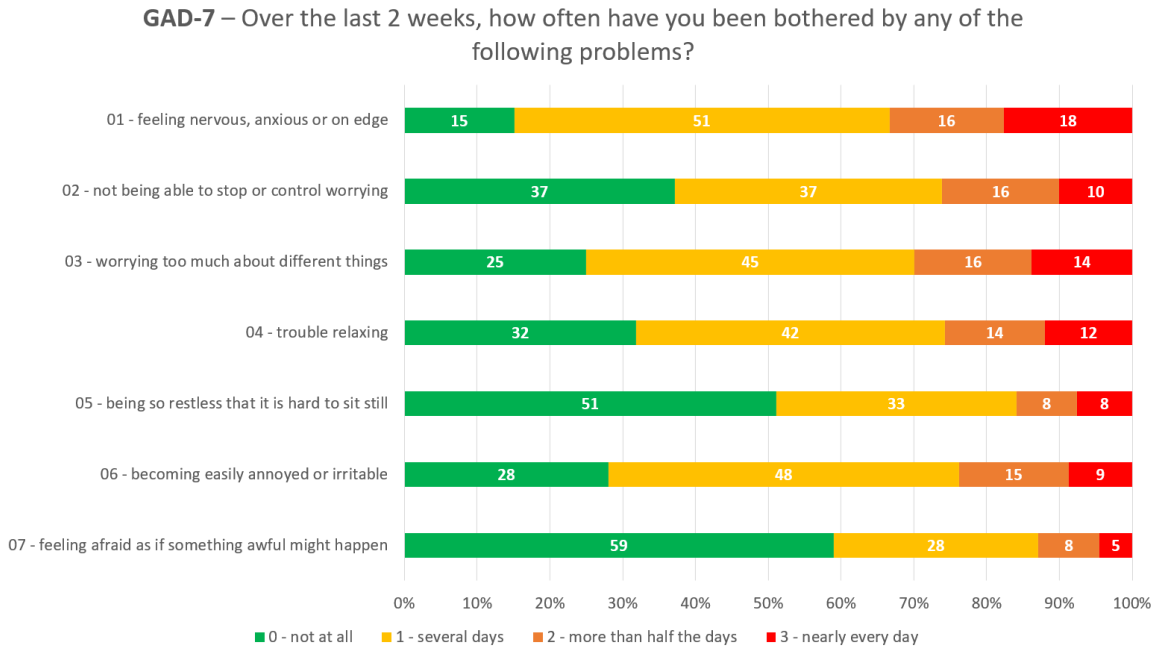


*Figure 14. Frequencies for the GAD-7 items in the **athlete** sample.*

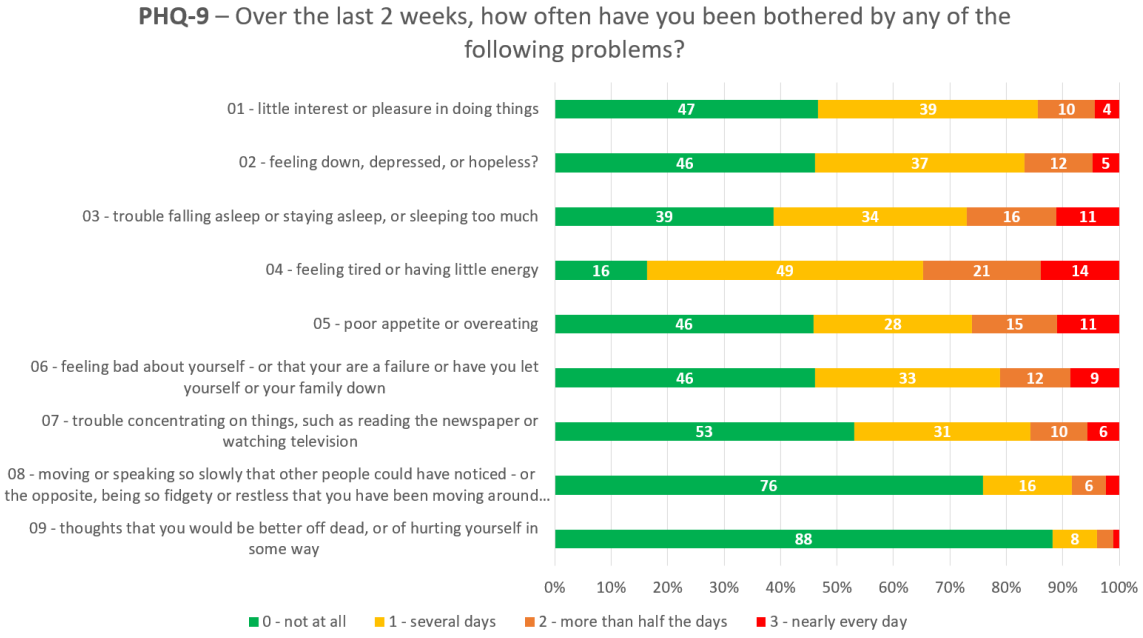


*Figure 15. Frequencies for the PHQ-9 items in the **athlete** sample.*

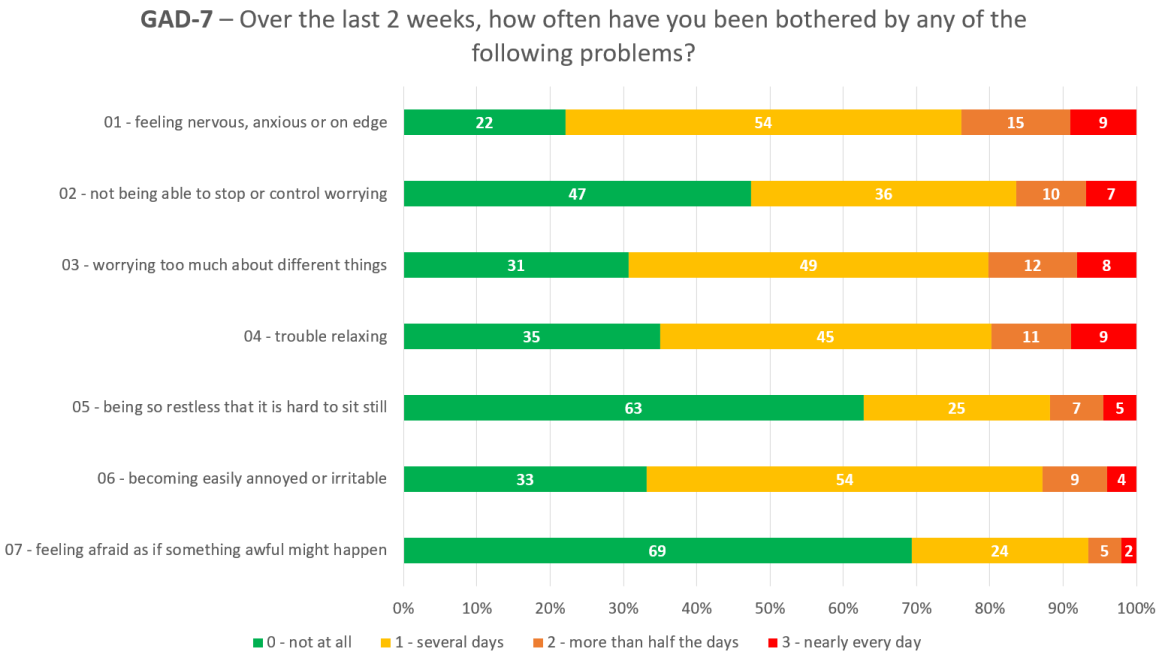


*Figure 16. Frequencies for the GAD-7 items in the **entourage** sample.*

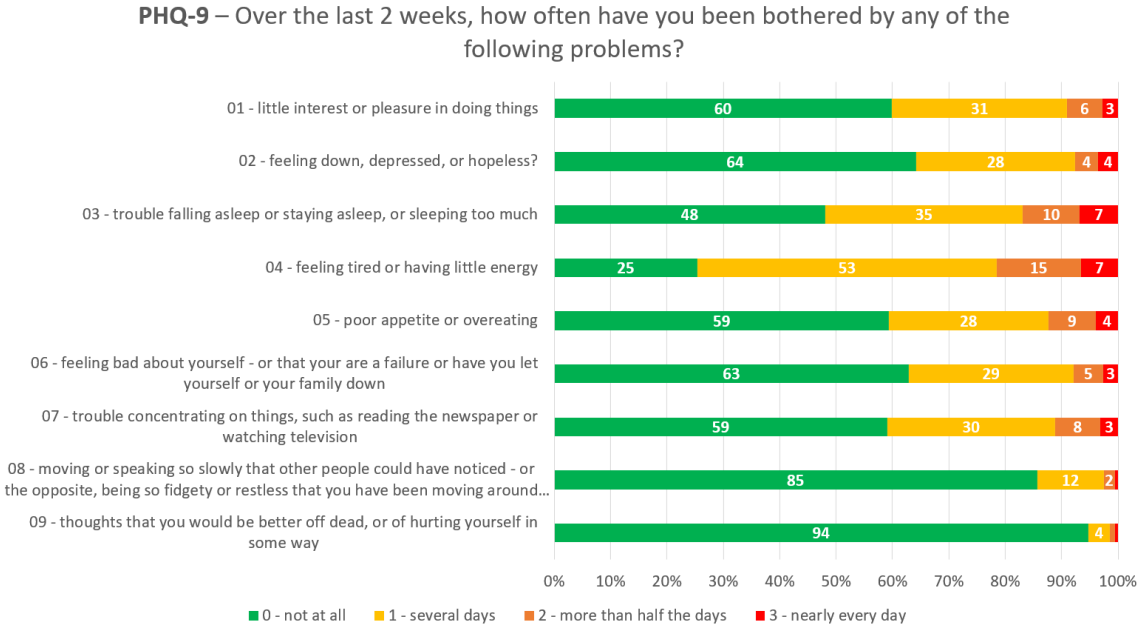


*Figure 17. Frequencies for the PHQ-9 items in the **entourage** sample.*

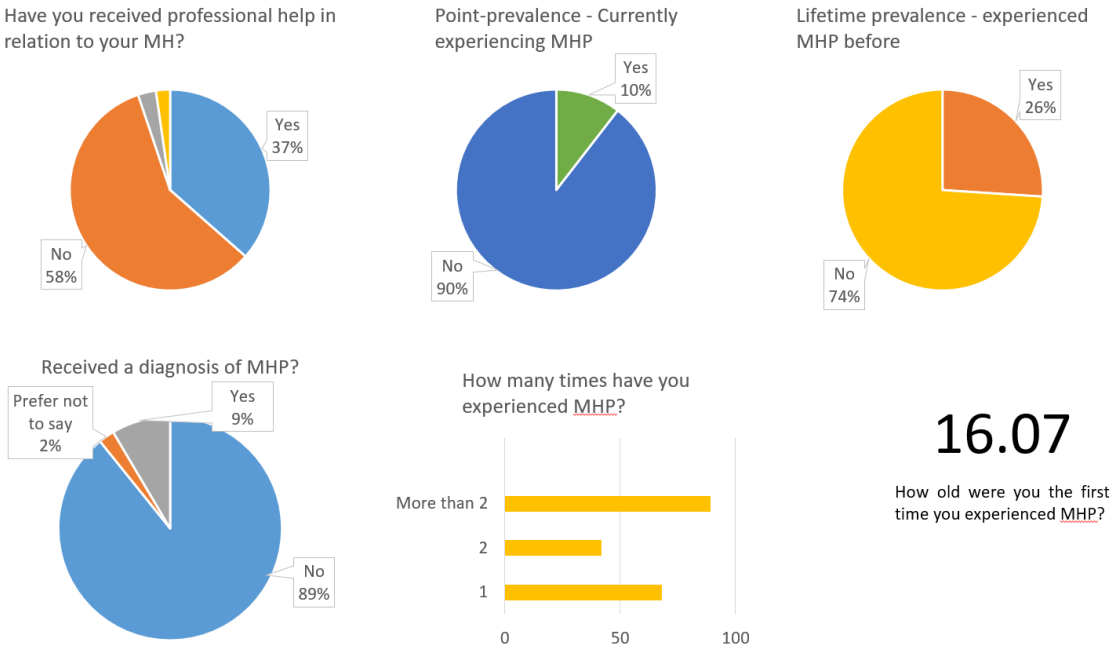


*Figure 18. Diagnosis, professional psychological help, history of mental health problems in the **athlete** population*

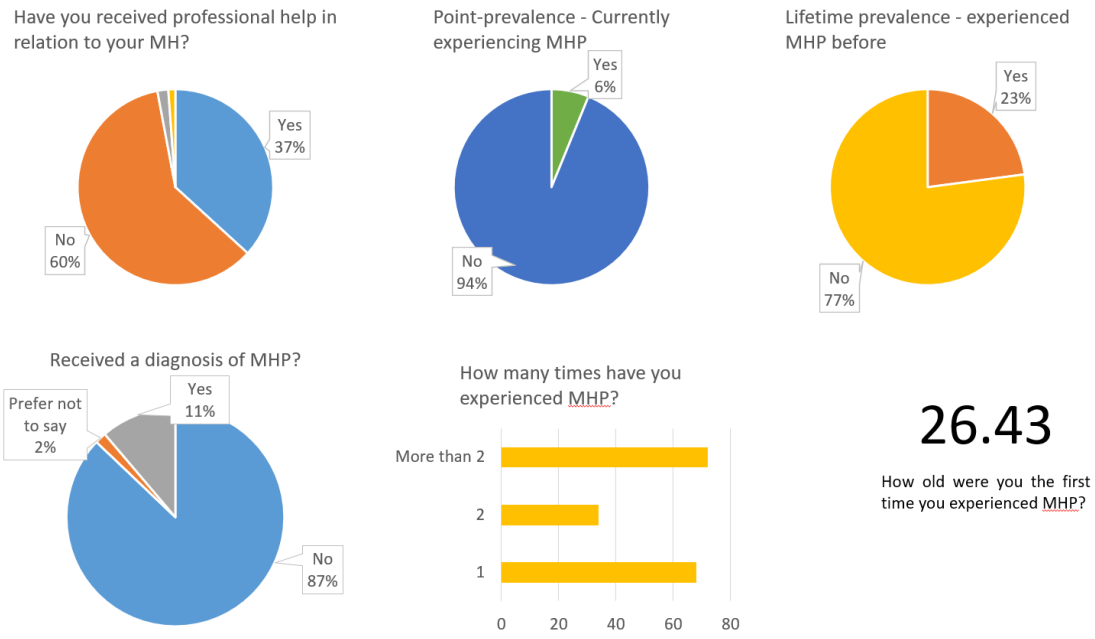


*Figure 19. Diagnosis, professional psychological help, history of mental health problems in the **entourage** population.*

## Mental Health Literacy

**Mental Health Literacy Questionnaire** (European Commission, 2023; International Olympic Committee, 2023)

This scale consists of 12 items and was designed to explore different topics related to mental health, both in a positive (e.g., "doing something meaningful or enjoyable on a regular basis contributed to good mental health") and a negative light (e.g., "if I had a mental health problem I would try to hide it from others"). Respondents rate each item on a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree), the total score representing the level of mental health literacy: the higher the score, the higher the level of mental health literacy. When calculating the total score, the negative items (item 9, 10 and 12) were scored in reverse. The total score ranges from 0 to 48.

**KEY FINDINGS**

Detailed results for the 12 items are shown in the visuals below:

- Mental health literacy of 1496 participants (athletes N = 748; entourage N = 748) was investigated.
- In the athletes' sample, 72% would seek help if they were experiencing mental health problems (item 5). In the entourage sample, 80% agree, or somewhat agree with this statement.
- Around 20% of athletes reported that they would not know where to look for information on mental health (item 7).
- The results on the reversed items are interesting: while 32% of athletes would not hide a mental health problem, 40% agreed with the statement (item 9). On the other hand, 70% of athletes do not (completely) agree with item 10, and 68% do not think that mental health problems are less serious than medical problems (item 12). Scores on the different items are displayed in Figure 20.
- The scores on the reversed items in the entourage sample differ slightly: 38% of the entourage would hide a mental health problem (item 9), and 43% would not. 65% of the entourage disagree completely and 21% somewhat disagree with item 10 about seeing a mental health professional, and 86% of the entourage do not think that mental health problems are less serious than medical problems. Frequencies on the different items are displayed in Figure 21.

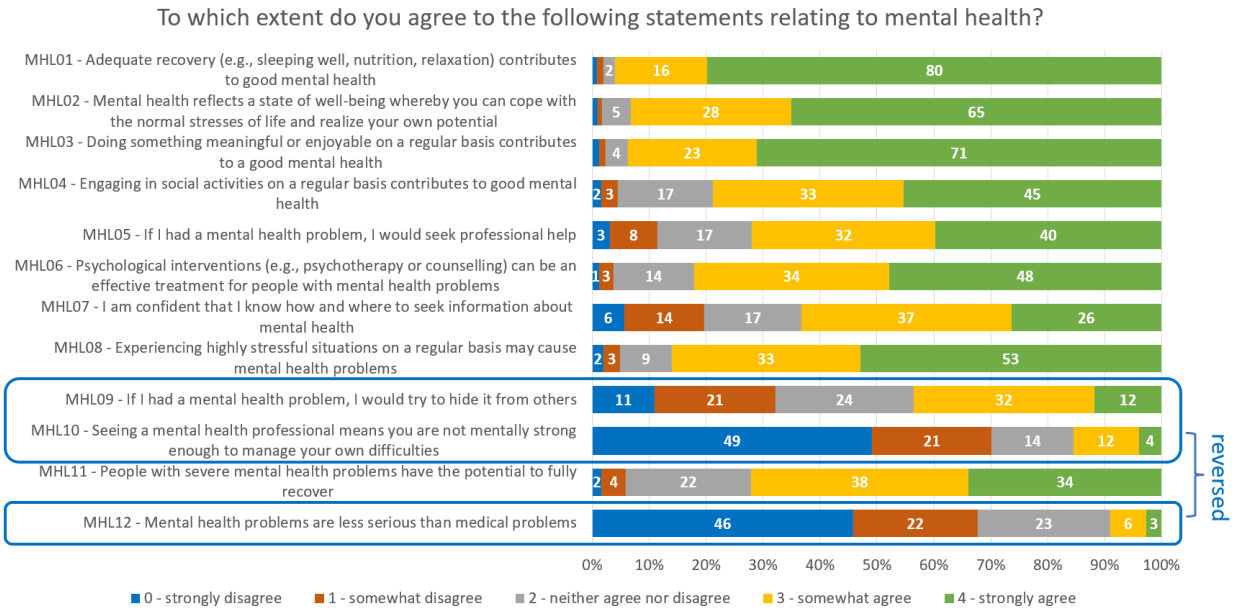


*Figure 20. Frequencies for the MHL questionnaire in the **athlete** sample.*

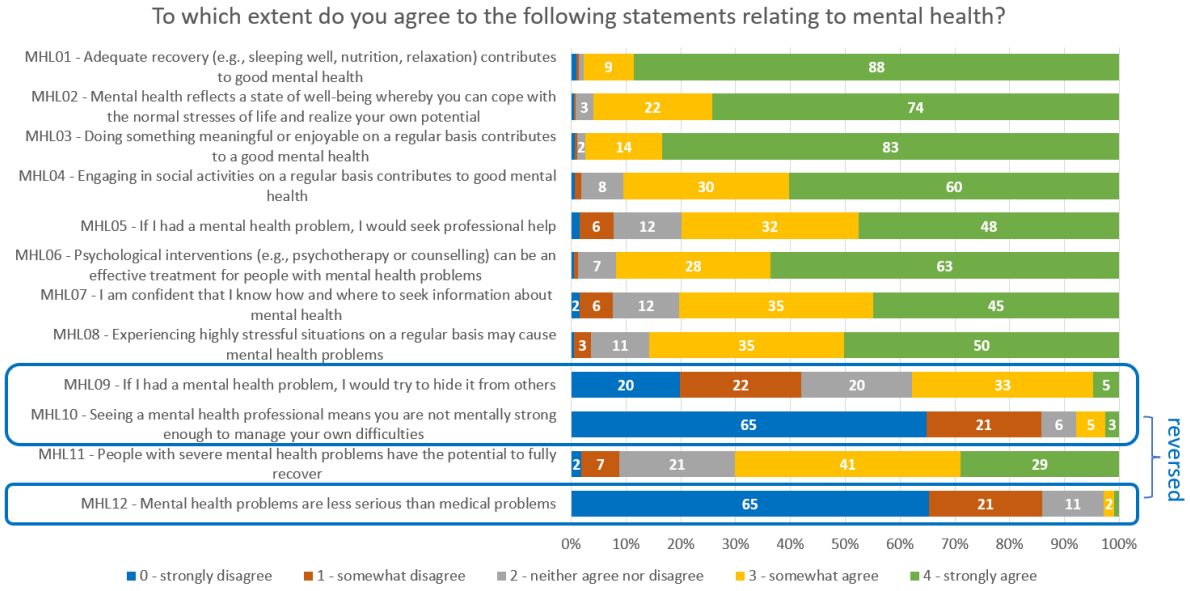


*Figure 21. Frequencies for the MHL questionnaire in the **entourage** sample.*

## Perceived support (athletes)

### Adapted version of the General Help-Seeking Questionnaire (GHSQ)

The GHSQ is a 1-item scale used to investigate how likely it is that athletes would receive appropriate mental health support from different persons in the entourage. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Overall, roles in the personal domain (e.g. parents, partners, friends) obtained the highest scores, meaning that athletes find it very likely to turn to them when facing mental health problems.
- In contrast, roles in the educational/vocational domain scored consistently lower (e.g. school tutors, dual career support providers, teachers, career advisors), meaning that athletes reported finding it less likely to turn to them for mental health support.
- Among the roles in the athletic domain, psychologists and coaches are ranked high, while technical directors, logistic support personnel and data analysts are ranked the lowest.
- Details about how each role ranked can be found in Figure 22.

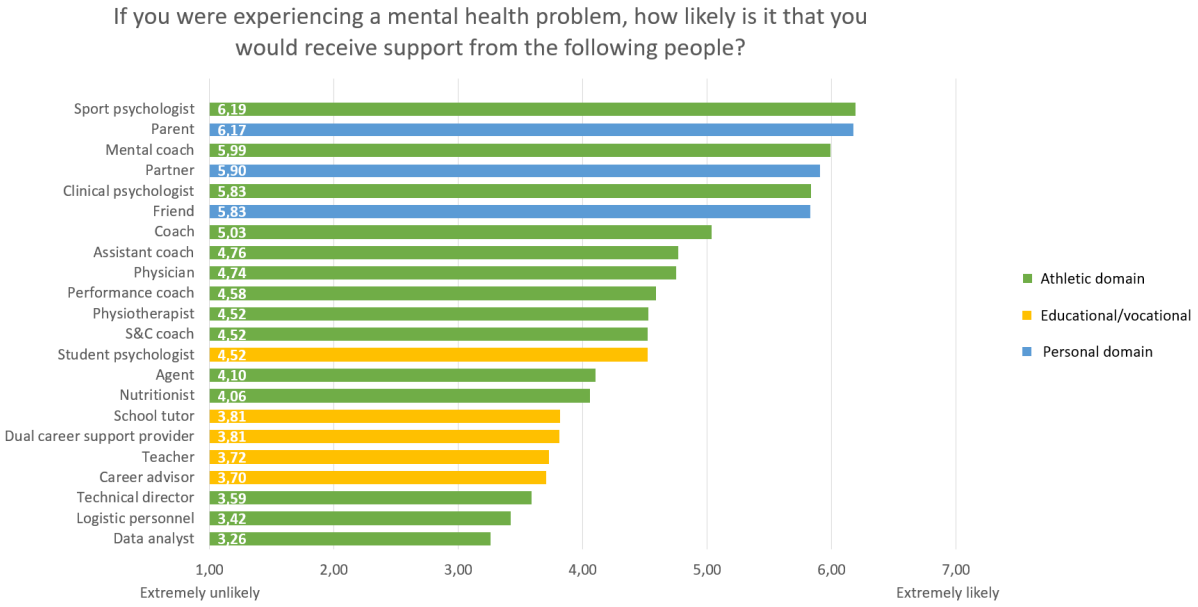


*Figure 22. Scores for the different roles in the entourage on the GHSQ from the **athletes'** perspective.*

## Mental health support provision (entourage)

One question aimed to investigate entourage members' confidence in providing adequate support to athletes dealing with mental health problems. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Entourage members were asked how likely it is that they would be able to offer appropriate mental health support to athletes. The scores are based on the average scores of the survey participants that declared working in each role.
- The members in the entourage that were ranked higher, meaning that those people felt extremely confident in their mental health support competencies, were mental coaches, friends, tutors, clinical and sport psychologists.
- The roles that scored lower, meaning that those entourage members felt less likely to be able to offer appropriate mental health support to athletes, were physiotherapists, teachers, s&c coaches, nutritionists and data analysts.
- Compared to the athletes' perceptions, certain roles scored higher (e.g., tutors, technical directors). This means that, on average, the people belonging to these roles feel more likely to provide appropriate mental health support compared to the athletes' perception of support received by those same roles
- It is important to notice that for some of the highest-scoring roles, only a limited number of participants were present (e.g., mental coach, friend, tutor). Therefore, these scores must be taken carefully.

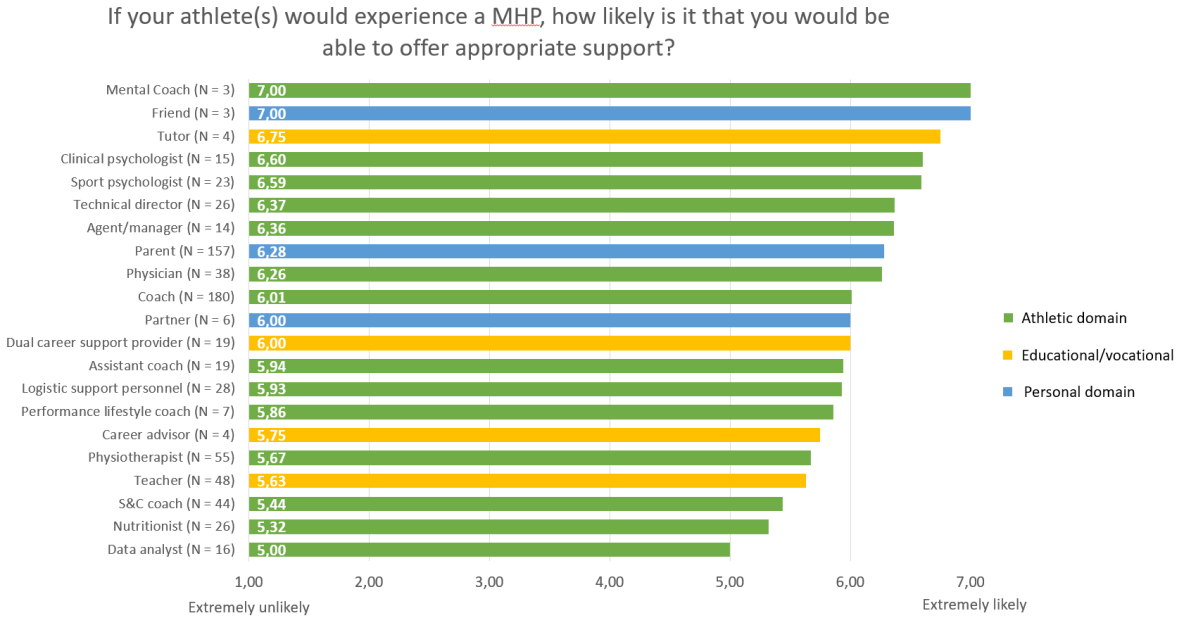


*Figure 23. Scores of the **entourage** sample on the GHSQ.*

**KEY FINDINGS**

- Athletes and entourage members were asked to select the mental health promotion competencies that they felt were important to maintain mental well-being.
- The top three competencies most chosen by **athletes** were: (1) being empathetic and using active listening, (2) understanding mental health, and (3) recognising signs of mental health problems. The full results are shown in Figure 24.
- The top three competencies most chosen by **entourage members** were: (1) recognising signs of mental health problems, (2) being empathetic and using active listening, and (3) knowing when and how to refer athletes to MH professionals. The full results are shown in Figure 25.
- Only 3% of athletes and 1% of entourage members thought that mental health support was not an important mental health support competence.
- Comparisons between the two populations can be found in Figure 26.

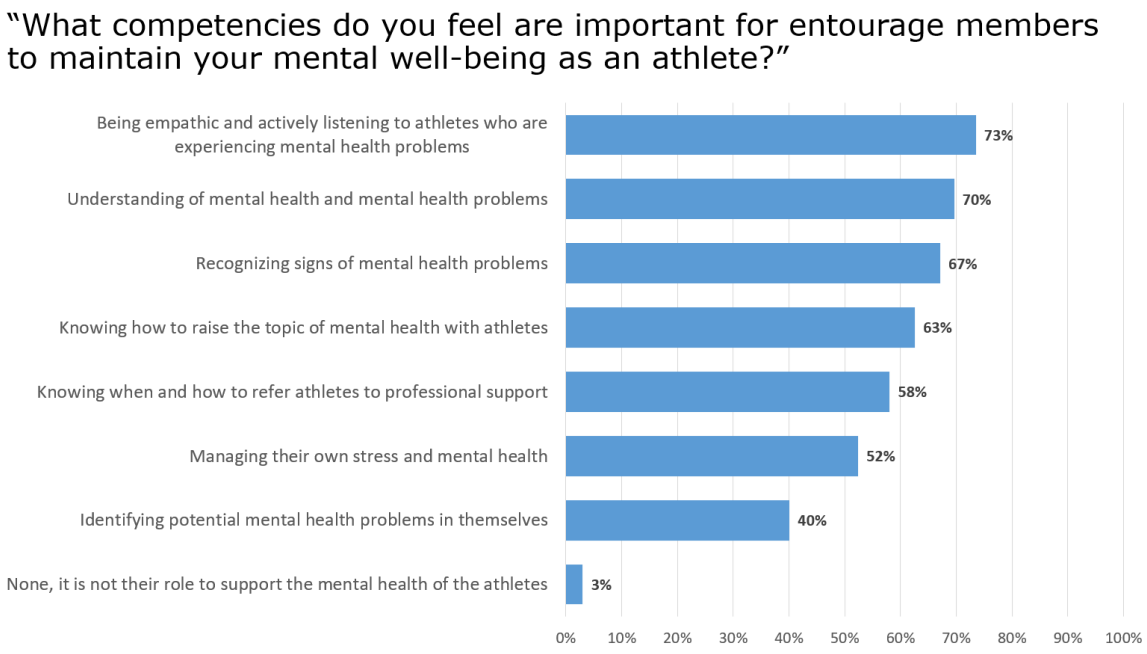


*Figure 24. Percentage of the total **athlete** sample that chose each mental health support competence.*

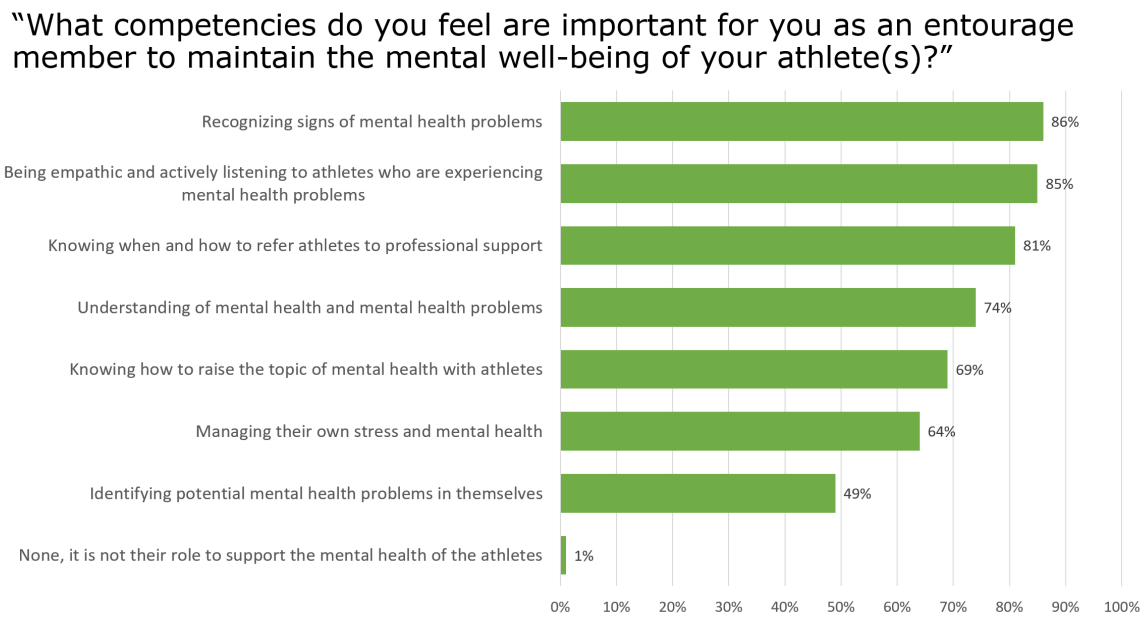


*Figure 25. Percentage of the total **entourage** sample that chose each mental health support competence.*

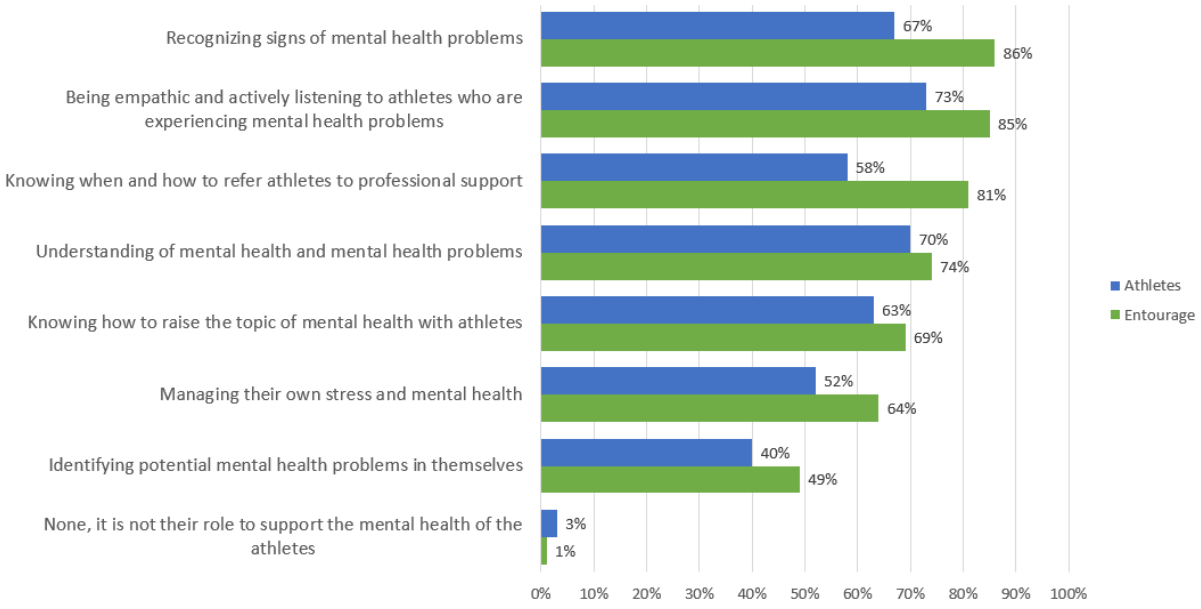


*Figure 26. Comparison between the two populations.*

## Link between study constructs

a. Correlation between study constructs
b. Key predictors of MH

**KEY FINDINGS**

**MENTAL HEALTH AND WELL-BEING – FULL SAMPLE**

- The main predictors for **general well-being in the full sample** were low depression and anxiety, higher mental health literacy, younger age, and having experienced mental health problems (MHP) in the past. Together with type of participants (athlete vs entourage), gender, having received psychological help, currently experiencing MHP, the model predicted 35% of the variance in mental health scores.
- The main predictors for **anxiety in the full sample** were high depression, low well-being, being an athlete, female gender, younger age, and currently experiencing MHP. Together with mental health literacy, having received psychological help, and having experienced MHP in the past, the model predicted 60% of the variance in the anxiety scores.
- The main predictors for **depression in the full sample** were high anxiety, low well0being, high mental health literacy, being an athlete, younger age, currently experiencing MHP, and having experienced MHP in the past. Together with gender and having received psychological help, the model predicted 65% of the variance in the depression scores.

**MENTAL HEALTH & WELL-BEING – ATHLETE SAMPLE**

- Moderate relationships between athletes' general well-being and anxiety scores ($r = .50$) and between general well-being and depression scores ($r = .55$) were observed. Correlation graphs are shown in Figure 27.
- In general, athletes who were flourishing reported higher mental health literacy, and lower depression and anxiety compared to those with moderate mental health or who were languishing.
- Scores for mental health literacy and general well-being differed between countries. Higher scores for both were reported in Sweden, while in the UK athletes scored high in general well-being but low in mental health literacy. Average scores of MHL and general well-being per country can be found in Figure 29.
- The main predictors for **general well-being** in the athlete sample were low depression and anxiety, high mental health literacy, type of sport (individual vs team), and absence of injury. Together with age, gender, and Dual Career status, the model predicted 37% of the variance in mental health scores.
- The main predictors for **anxiety** in the athlete sample were high depression, low well-being, female gender, and younger age. Together with the type of sport, Dual Career status, presence of injuries, and mental health literacy, the model predicted 60% of the variance in anxiety scores.
- The main predictors for **depression** in the athlete sample were high anxiety, low well-being, low mental health literacy, and female gender. Together with age, type of sport, gender, Dual Career status, and presence of injuries, the model predicted 62% of the variance in depression scores.

**MENTAL HEALTH & WELL-BEING – ENTOURAGE SAMPLE**

- Moderate relationships between entourage members' general well-being and anxiety scores (*r = .46*) and between general well-being and depression scores (*r = .55*) were observed. The correlation graphs are displayed in Figure 28.
- In general, entourage members who were flourishing reported higher mental health literacy, and lower depression and anxiety compared to those with moderate mental health or who were languishing.
- Scores for mental health and mental health literacy varied across countries: participants in Spain reported higher scores of MHL, but the scores on general well-being were in line with most of the other countries. Participants in Sweden, however, scored in line with other countries in MHL but scored higher than all the others in general well-being. Average scores of MHL and general well-being per country can be found in Figure 30.
- The main predictors for **general well-being** in the entourage sample were low depression, high mental health literacy, and working at a lower level. Together with anxiety scores, gender, age, employment status, and years of experience in the role, the model predicted 33% of the variance in the mental health scores.
- The main predictors for **anxiety** in the entourage sample were high depression, younger age, less years of experience in the role. Together with general well-being, gender, employment status, and level of competition, the model predicted 58% of the variance observed in the anxiety scores.
- The main predictors for **depression** in the entourage sample were high anxiety and low well-being. Together with gender, age, employment status, years of experience, and level of competition, the model predicted 63% of the variance observed in the depression scores.

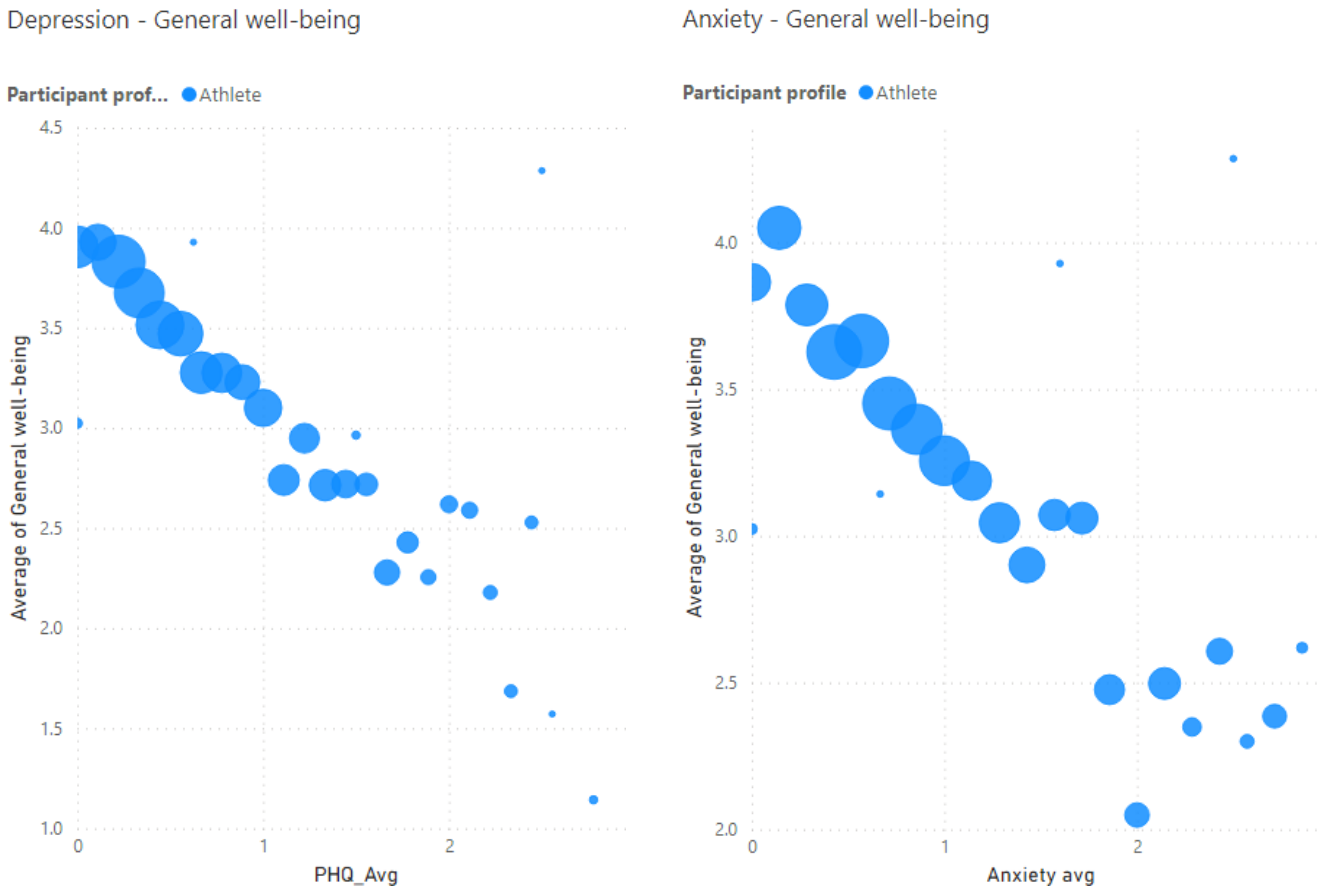


*Figure 27. Correlations between general well-being and mental ill-health in the **athlete sample**.*

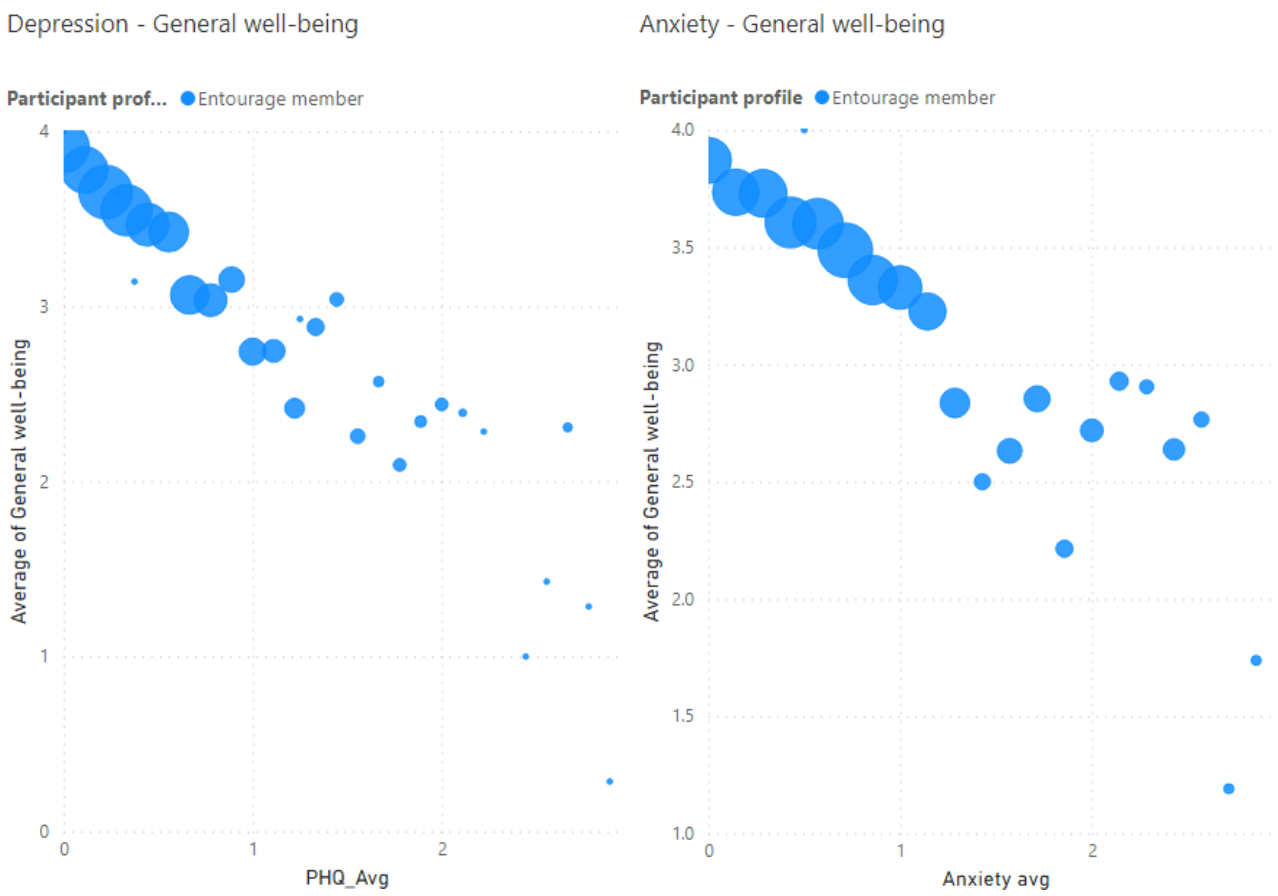


*Figure 28. Correlations between general well-being and mental ill-health in the **entourage sample.***

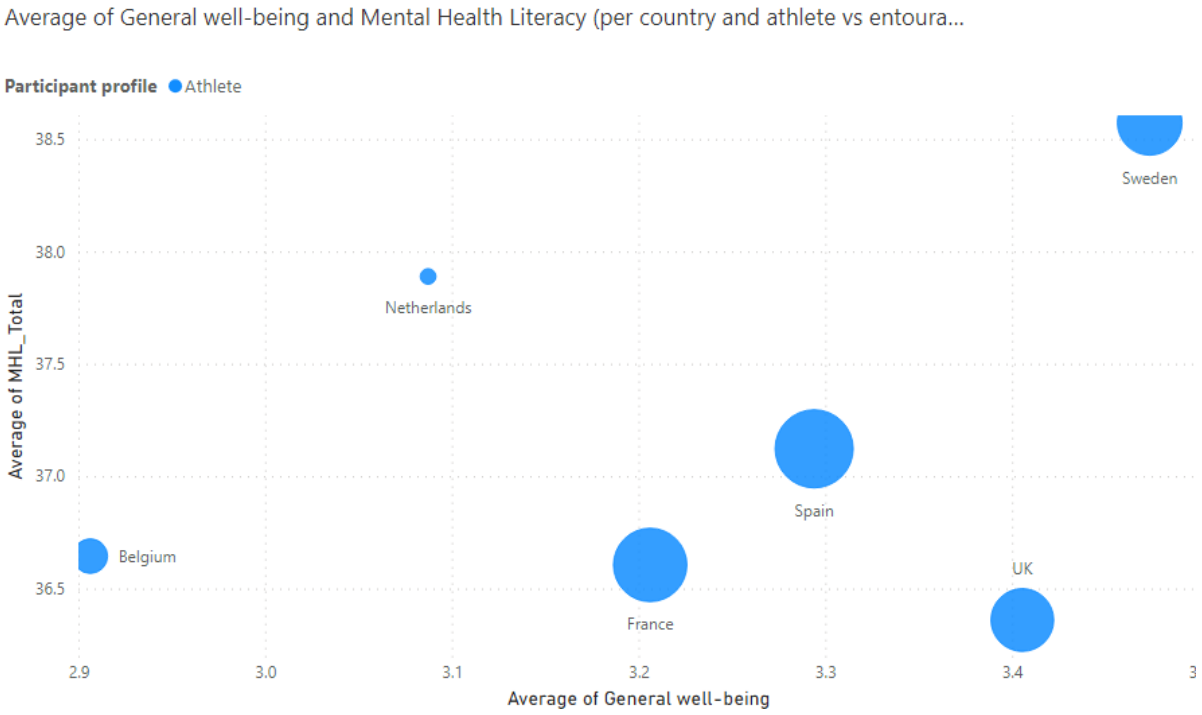


*Figure 29. Average general well-being and MHL scores per country in the **athlete sample**.*

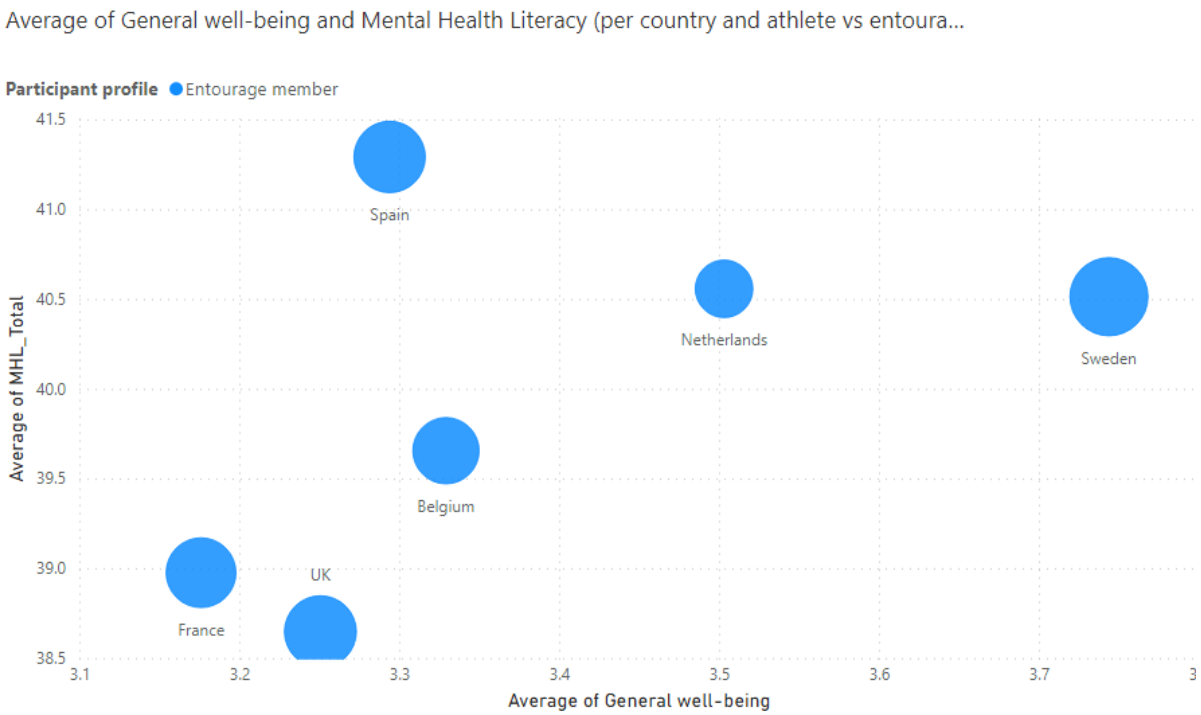


*Figure 30. Average general well-being and MHL scores per country in the **entourage sample**.*

## Qualitative data results

Athletes were asked (1) what skills entourage need to support their mental well-being, and (2) what skills athletes need to promote their own mental health.

Entourage members were asked what skills they need to (1) maintain the mental well-being of their athletes, and (2) maintain their own mental well-being.

**KEY FINDINGS – athlete sample**

A total of 318 athletes (40% of total athlete sample) answered the open questions regarding mental health support and promotion.

- **Entourage members' skills to maintain athletes' mental well-being**: the main themes emerging from the qualitative data collected are:
  - Creating a safe environment
  - Improving education on mental health
  - Know and understand athletes
  - Access to mental health professionals
  - Promoting life balance
  - Regular monitoring of athletes
  - Being surrounded by an empowering entourage

- **Athletes' skills to maintain their own mental well-being:** the main themes emerging from the qualitative data collected are:
  - Developing coping strategies
  - Clear pathways to help-seeking
  - Improving life balance
  - Access to mental health professionals
  - Improving self-care
  - Knowing themselves
  - Supportive environment

**KEY FINDINGS – entourage sample**

A total of 453 entourage members (58% of total entourage sample) answered the open questions regarding mental health support and promotion.

- **Entourage members' skills to maintain athletes' mental well-being**: the main themes emerging from the qualitative data collected are:
  - Regular monitoring and assessment of athletes
  - Improving education on mental health
  - Supportive entourage
  - Holistic view of the athletes
  - First response skills in mental health support
  - Self-care
  - Access to mental health professionals
  - Safe environment

- **Entourage members' skills to maintain their own mental well-being:** the main themes emerging from the qualitative data collected are:
  - Developing coping strategies
  - Support from the organisation
  - Improving life balance
  - Self-care
  - Access to mental health professionals
  - Improving education on mental health
  - Supportive atmosphere within the entourage team

# Next steps

## Recommendations for future research and practice

**RECOMMENDATIONS FOR FUTURE RESEARCH:**

- Further investigation of entourage members' mental health, using the same wide definition of entourage
- Investigating risk and protective factors for entourage members' mental health
- What can be done at the organizational level to promote athletes' and entourage members' mental health?
- Longitudinal study of entourage members' mental health across the athletic season/multiple seasons

**RECOMMENDATIONS FOR PRACTICE:**

- Work towards an improvement of athletes' mental health literacy (e.g., better understanding of mental health and mental health problems, recognizing the signs of mental health problems, better knowledge of the psychological care routes)
- Improve the mental health promotion skills of entourage members, also taking into account the needs of athletes (e.g., improving listening and communication skills, understanding mental health, recognizing signs of mental health problems)
- Raise awareness regarding the importance of managing own stress and mental health both for entourage members and athletes.

## Next steps in the MENTiS project

- In Work Package 2 the consortium will develop a workshop designed to improve the mental health promotion skills of entourage members based on three pillars:
  1. Mental health literacy
  2. Mental health first aid
  3. Mental health self-care
- Together with the workshop, we will also develop some online resources that will remain available for everyone, covering the three previously mentioned topic.
- In Work Package 3 we will deliver and evaluate the workshop to entourage members in all the countries involved in the project.
- The project will conclude in December 2024 with the closing conference hosted be the Belgian partners.

## References

Akesdotter, C., Kentta, G., Eloranta, S., & Franck, J. (2020). The prevalence of mental health problems in elite athletes. *J Sci Med Sport*, *23*(4), 329-335. https://doi.org/10.1016/j.jsams.2019.10.022

DC4MH. (2022). *Dual Careers for Mental Health*. https://spmb.research.vub.be/dual-careers-for-mental-health-dc4mh-0

European Commission. (2023). *Dual Careers for Mental Health*. Retrieved 13/03/2024 from https://erasmus-plus.ec.europa.eu/projects/search/details/622178-EPP-1-2020-1-BE-SPO-SCP

International Olympic Committee. (2023, 12/07/2023). *Measuring and Increasing Athletes' Mental Health Literacy (MHL): Cross-Cultural Validation of MHL Questionnaire and Evaluation of MHL Intervention Implementation*. Retrieved 13/03/2024 from https://olympics.com/ioc/news/2023-2025-advanced-olympic-research-grants-awarded

Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, *43*(2), 16.

Kroenke, K., Spitzer Rl Fau - Williams, J. B., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 8. https://doi.org/https://doi.org/10.1046/j.1525-1497.2001.016009606.x

MENTiS. (2023). *Promoting Mental Health through the Entourage in high-performance Sport*. https://spmb.research.vub.be/mentis

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

MENTiS

Co-funded by the European Union

# NATIONAL REPORT BELGIUM:

# MENTAL HEALTH OUTCOMES, LITERACY AND PROMOTION IN ATHLETES AND ENTOURAGE MEMBERS IN HIGH-PERFORMANCE SPORT

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**April 2024**

This report is an output of the first work package of the Erasmus+ Sport project

"Promoting Mental health through the ENTourage in high-performance Sport" (MENTiS)

# Table of contents

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The entire MENTiS consortium contributed directly to the development of this report:

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## Key findings

- A total of 163 participants completed the survey, representing talented and elite athletes (N = 45; 28%) and entourage members of talented and elite athletes (N = 118; 72%). In particular, the term “entourage” refers to all the people associated with athletes, in particular from the athletic domain (82%), educational/vocational domain (9%), and personal domain (9%).
- In the **athlete** sample, 27% were flourishing (much smaller percentage compared to European data), 62% with moderate mental health, and 11% were languishing. Regarding mental ill-health, 20% reported moderate to severe symptoms of depression; 22% reported moderate to severe symptoms of anxiety. We found a higher lifetime prevalence of mental health problems compared to the European data. The findings in the mental health literacy scale are in line with the European data.
- The roles in the entourage from which athletes felt more likely to receive appropriate mental health support are mental coaches, sport psychologists, parents, clinical psychologists, and partners.
- The main predictor for well-being in athletes was low anxiety, for anxiety were high depression, point prevalence and team sport, and for depression were high anxiety and low well-being.

- In the **entourage** sample, 49% were flourishing, 48% with moderate mental health, and 3% were languishing. Regarding mental ill-health, 10% reported moderate to severe symptoms of depression, 21% reported moderate to severe symptoms of anxiety. We found a higher lifetime and point prevalence of mental health problems compared to European data. The results in the mental health literacy scale are in line with the European data.
- The entourage members who felt more confident in providing appropriate mental health support are from the educational domain, followed by the athletic domain and by the personal domain. It is important to notice that the numbers of participants from the educational and personal domains are much smaller compared to the athletic domain.
- The main predictor for well-being in entourage members were low depression and high mental health literacy, for anxiety was high depression, and for depression were high anxiety and low well-being.

## Aims of the MENTiS survey

An online survey was developed by the MENTiS consortium (MENTiS, 2023) for athletes and entourage members on mental health outcomes, mental health literacy, and mental health promotion.

The aim of the MENTiS survey was to:

1. Investigate the **prevalence of mental health indicators** (e.g., wellbeing, anxiety, depression) in athletes and entourage members from 6 European countries (i.e., Belgium, France, the Netherlands, Spain, Sweden, UK).
2. Investigate the perceptions about **mental health support** and ideas about how to improve mental health support.
3. Investigate the **role of potential influencing factors on mental health** (e.g., mental health literacy, mental ill-health, gender; for athletes specifically: the presence/absence of injuries; for entourage specifically: domain of support, job characteristics).
4. **Create an evidence base** for the development of workshops and (online) resources targeting entourage members in order to enhance their competencies in mental health promotion (WP2 and WP3 of the MENTiS project).

The results obtained with the survey are displayed in a European report and 6 national reports (i.e. Belgium, France, the Netherlands, Spain, Sweden, UK).

More information on the MENTiS project can be found here: https://spmb.research.vub.be/mentis

## Procedure & instruments

An online survey was administered to athletes and entourage members in the six participating countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.

Before administering the survey, ethical approval was granted by the Ethical Committee of Human Sciences of the Vrije Universiteit Brussel. Parental consent was required before minors could complete the survey.

The survey targeted two different groups:

1. Talented and elite athletes
2. Entourage members belonging to the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors), or the personal domain (e.g., parents, partners, friends).

Data was collected in two phases: the first phase was April – August 2023, and the second phase was September – October 2023. During this 2nd phase, additional data were collected in Belgium and UK. The phase of data collection (i.e. 1 and 2) was included as a variable in the analysis. After collecting the data, data was analysed in SPSS and displayed in PowerBI. All consortium members had access to the PowerBI report, and received their national raw data.

The online survey was developed in Qualtrics and made available in 6 languages (English, French, Dutch, Spanish, Catalan, and Swedish).

The survey is available here: https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

The survey's content differs slightly between athlete and entourage participants. It was divided into five sections:

1. **Demographics**:
   i. **Demographics for athletes**: gender, age, sport characteristics, level of competition, dual career, income, employment, injury.
   ii. **Demographics for entourage members**: gender, age, domain (athletic, educational/vocational, personal), role in the entourage, sport characteristics, athletes' career stage, level of competition, number of athletes they work with, employment status.
2. **Mental health and well-being**
   i. Mental Health Continuum – Short Form (MHC-SF), (Keyes, 2002): 14-item scale that measures participants' perceptions of general well-being, including social, psychological and emotional well-being; 6-point Likert scale from 0 (*never*) to 5 (*everyday*). Scores range from 0 to 70.
   ii. Patient-Health Questionnaire (PHQ-9), (Kroenke et al., 2001): 9-item scale that measures the frequency of symptoms of depression; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 27. Scores can be categorised according to the severity of reported symports as "no depression" (total score ranges from 0 to 4), "mild depression" (score ranges from 5 to 9), "moderate depression" (score ranges from 10 to 14), "moderately severe depression" (score ranges from 15 to 19), and "severe depression" (score ranges from 20 to 27).

iii. Generalised Anxiety Disorder Assessment (GAD-7), (Spitzer et al., 2006): 7-item scale that measures the frequency of symptoms of anxiety; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 21. Scores can be categorised according to the severity of reported symptoms as "no/minimal anxiety" (score ranges from 1 to 4), "mild anxiety" (score ranges from 5 to 9), "moderate anxiety" (score ranges from 10 to 14), and "severe anxiety" (score ranges from 15 to 21).

iv. 1 item about receiving professional psychological help.

v. 2 items about lifetime and point prevalence of mental health problems; 1 item about age of onset of mental health problems (Akesdotter et al., 2020).

**3. <u>Mental health literacy</u>**

i. Mental Health Literacy Questionnaire, developed during the E+ Dual Careers for Mental Health project (DC4MH, 2022; European Commission, 2023), and currently being validated as part of the Olympic Studies Advanced Research Grant: "Measuring and Increasing Athletes' Mental Health Literacy (International Olympic Committee, 2023): 12-item scale that measures mental health literacy; 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 12 to 60.

**4. <u>Mental health support</u>**

i. **Perceived mental health support (for Athletes)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of receiving appropriate mental health support from different sources. The different sources in this case were an extensive list of roles in the entourage: for the roles that were not indicated, there was the possibility of adding an extra role in a text box. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

ii. **Mental health support provision (for Entourage)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of offering adequate mental health support to athletes facing mental health problems. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

**5. <u>Competencies in mental health support</u>**

i. **Athletes**: 1 item to explore what competencies entourage need to support athletes' mental health; 1 item to explore what competencies athletes' need to support their mental health; 2 open questions to further investigate the abovementioned topics.

ii. **Entourage**: 1 item to explore what competencies they need to support athletes' mental health; 1 item to explore what competencies they need to support their own mental health; 2 open questions to further investigate the abovementioned topics.

## Data collection in Belgium

- **Who?** An online survey was administered to athletes and entourage members in Belgium.
- **When?** Data was collected between May and October 2023. This was done through the networks of BOIC, Sport Vlaanderen, and the Flemish top sport school. See Figure 1 for the data collection over time.
- **How?** Participants received an online link by email to fill out the survey.
- **Survey link:** https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

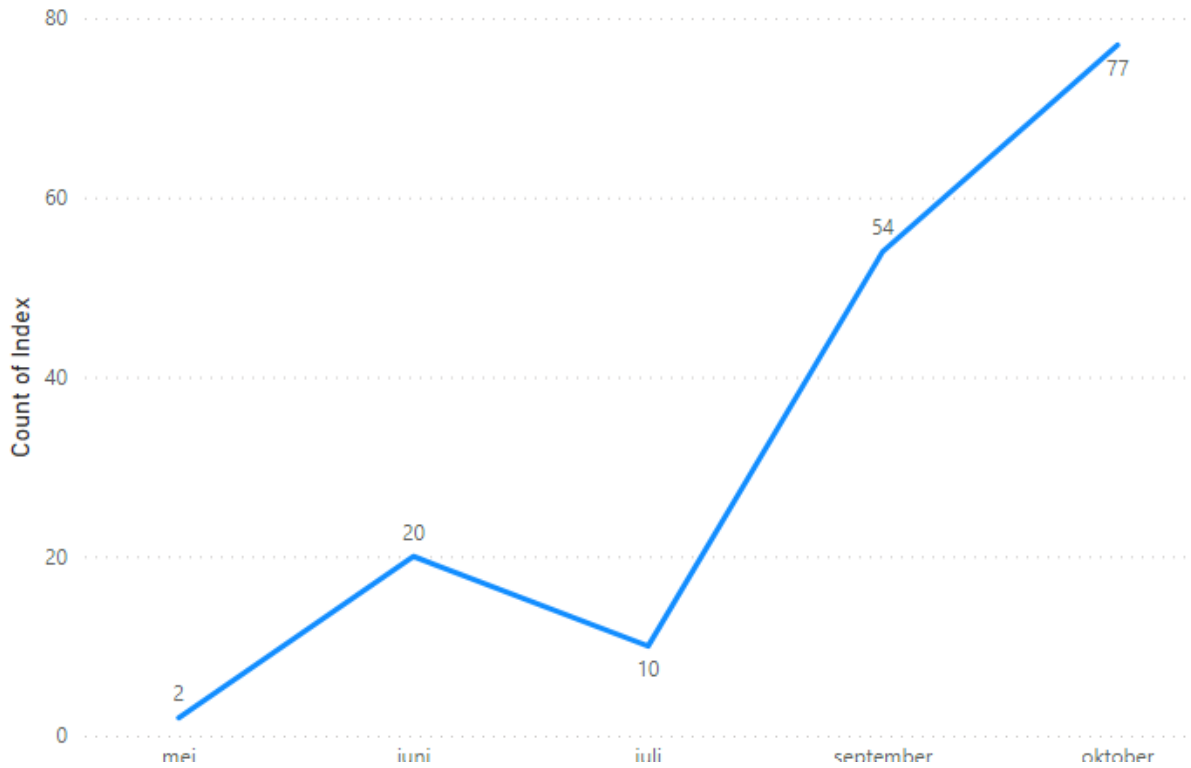


*Figure 1. Complete responses collected (N = 163) in Belgium between May and October 2023.*

## Participants

- The Belgian sample comprises 163 participants in total; 45 athletes (28%) and 118 entourage members (72%).
- In the total sample there is a majority on male participants (N = 113; 69%) compared to the female participants (N = 50; 31%).
- In the Belgian sample the percentage of male participants is higher, as well as the percentage of entourage members.

Figure 2 presents the Belgian sample characteristics.

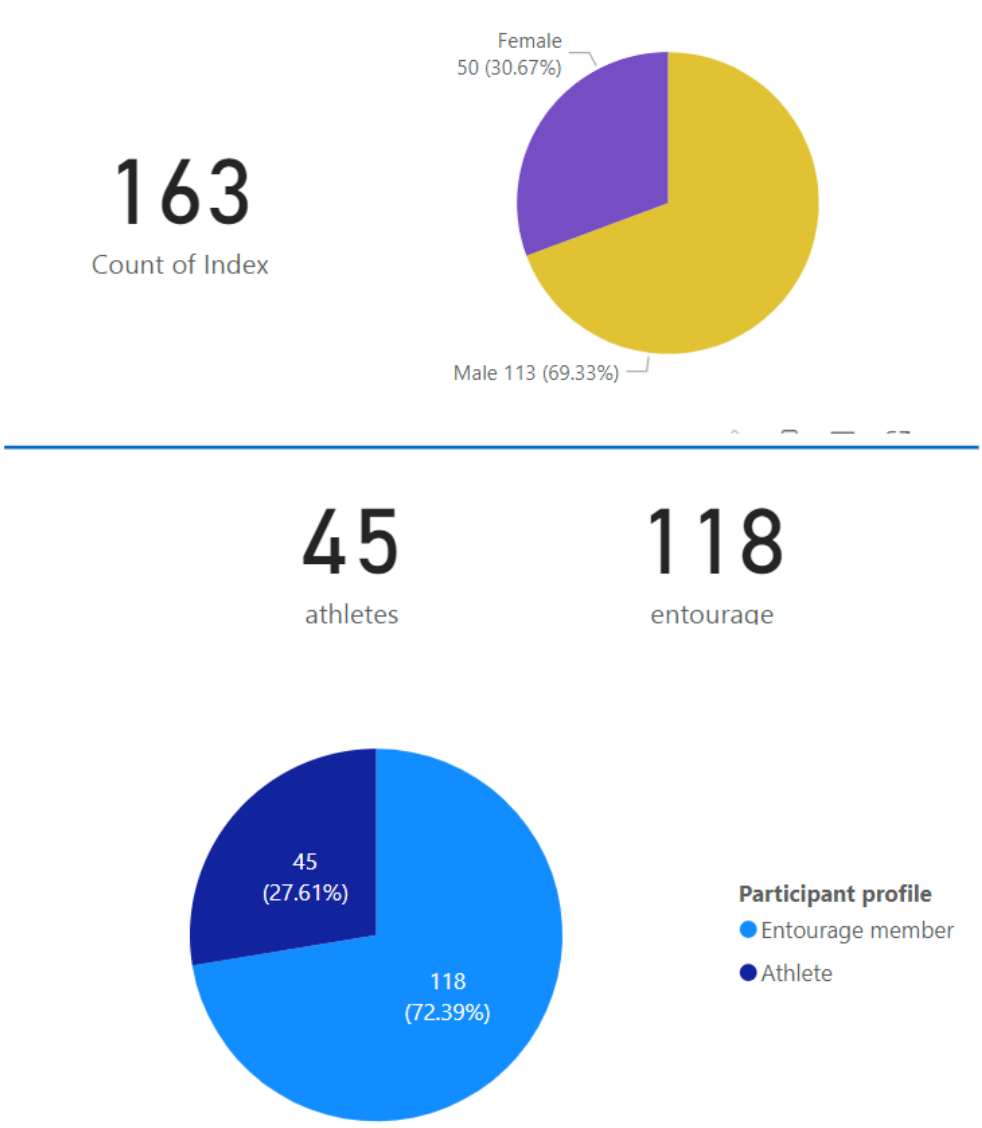


*Figure 2. Characteristics of the Belgian sample.*

## Belgian athlete sample (N = 45; 28% of full sample)

**Key findings athlete sample**

In total, 45 athletes completed the survey. The athlete sample characteristics are displayed in the figures below.

- The Belgian sample included N = 22 females (49%) and N = 23 males (51%).
- The age of the participants ranged from 16 to 36 years old. The majority of participants were 18 or older (N = 41; 91%), and 4 participants were minors (9%).
- The sample included almost the same number of athletes from individual (N = 23; 51%) and team sports (n = 22; 49%). This is different from the European sample, who included more athletes from individual sports (61%).
- Most athletes were active in Olympic summer sports (84%). The remaining athletes were active in non-Olympic sports and Olympic winter sports. This is in line with the European sample, but no Belgian para-athlete completed the survey.
- Most Belgian athletes competed at world and national level.
- The vast majority (98%) of the Belgian athlete sample were Dual Career athletes (i.e., combining sport with work and/or education). This finding is in line with the European sample.
- 87% of Belgian athletes were not injured at the time of completion
- The most common sports among athletes were cycling, judo, basketball, football, and dance.
- Results are shown in Figure 3, Figure 4, and Figure 5.

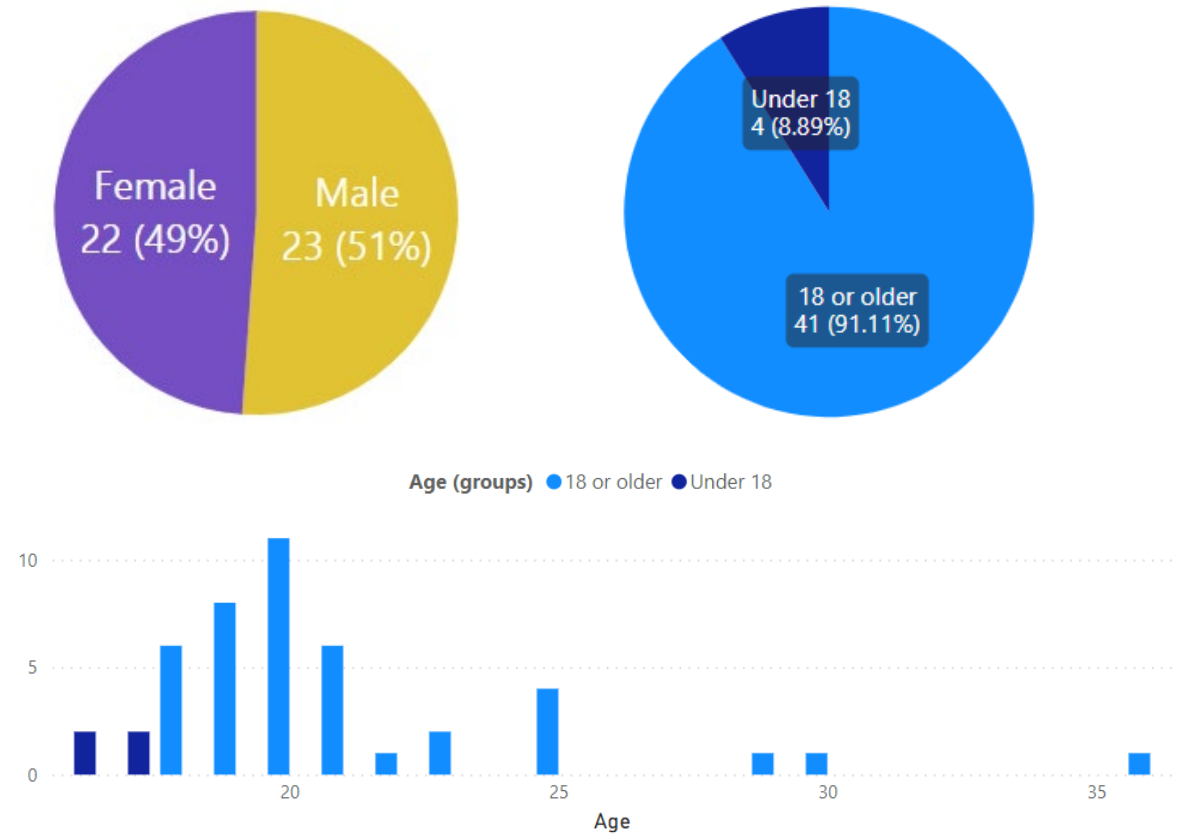


*Figure 3. Athlete sample characteristics (gender and age distribution).*

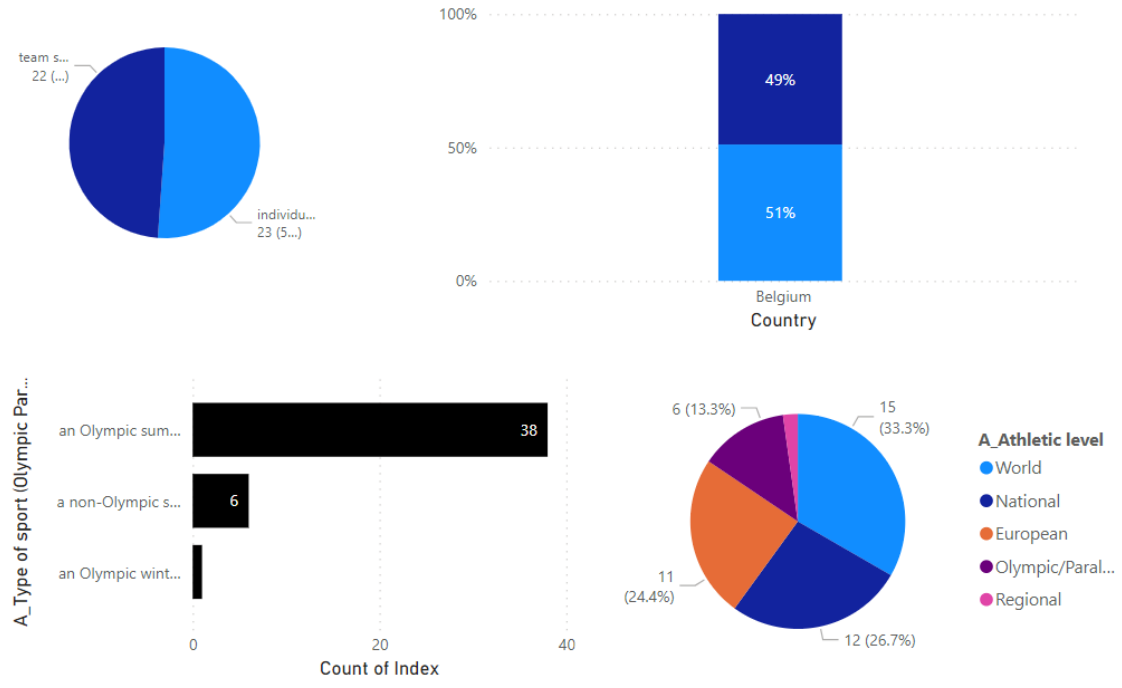


*Figure 4. Sport characteristics of the Belgian athlete sample.*

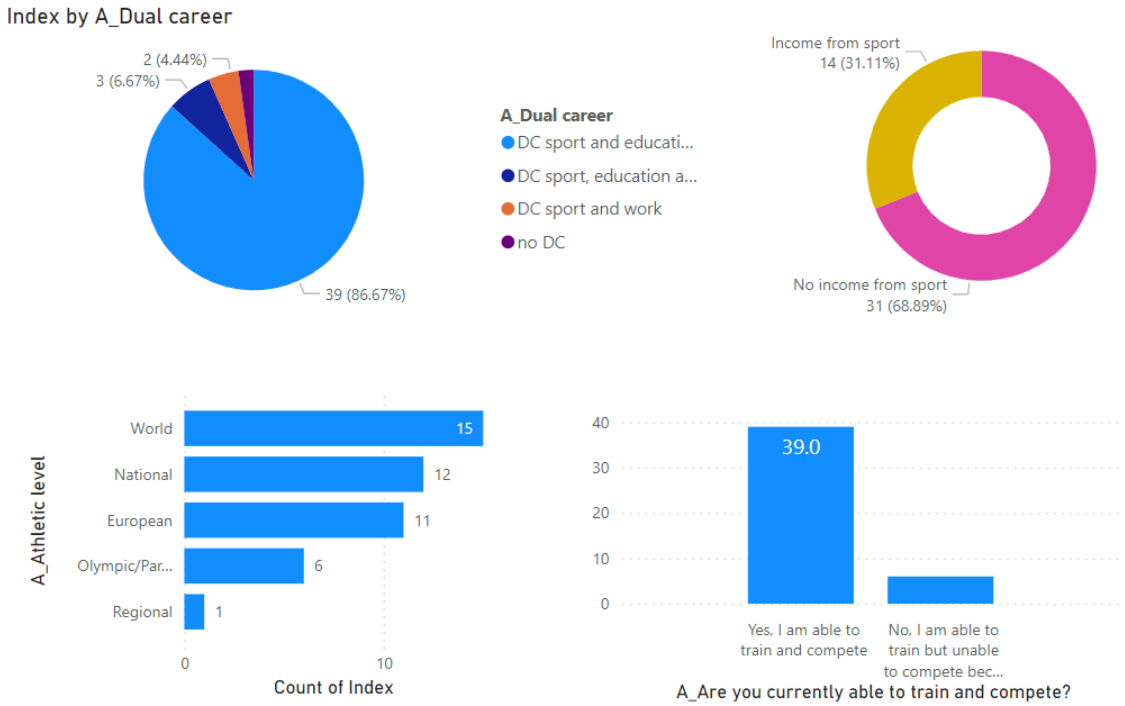


*Figure 5. Dual Career, level, and injury characteristics of the Belgian athlete sample.*

## Belgian entourage members sample (N = 118 ; 72% of full sample)

- In total, 118 entourage members completed the survey. Of these, 82% (N = 97) belonged to the athletic domain (e.g., coaches, assistant coaches, psychologists, physicians, technical directors, …), 9% (N = 11) belonged to the educational/vocational domain (e.g., teachers, dual career support providers, boarding school tutors, …), and 9% (N = 11) to the personal domain (e.g., parents, partners, housemates, friends, …).
- Of the 118 entourage members, 23% (N = 27) were females, and 77% (N = 89) were males.

The following sample characteristics refer to participants from the athletic and educational/vocational domains only:

- Of this sample, 21% worked with athletes from team sports, 48% with athletes from individual sports, and 31% with athletes from both types of sports. This is consistent with the European results.
- The majority of the Belgian entourage sample (70%) reported working with athletes from Olympic summer sports, while 25% reported working in multiple sports.
- Of this sample, 31% worked with youth or talented athletes, 16% worked with senior or elite athletes, and 53% worked with athletes from both career stages.
- The Belgian participants had 12 years of experience in their role on average.
- Regarding employment status, more than half of the Belgian participants are employed (N = 56; 52%), while 48% was self-employed or freelancers. Compared with the European sample, there are many more freelancers and self-employed entourage members in Belgium.

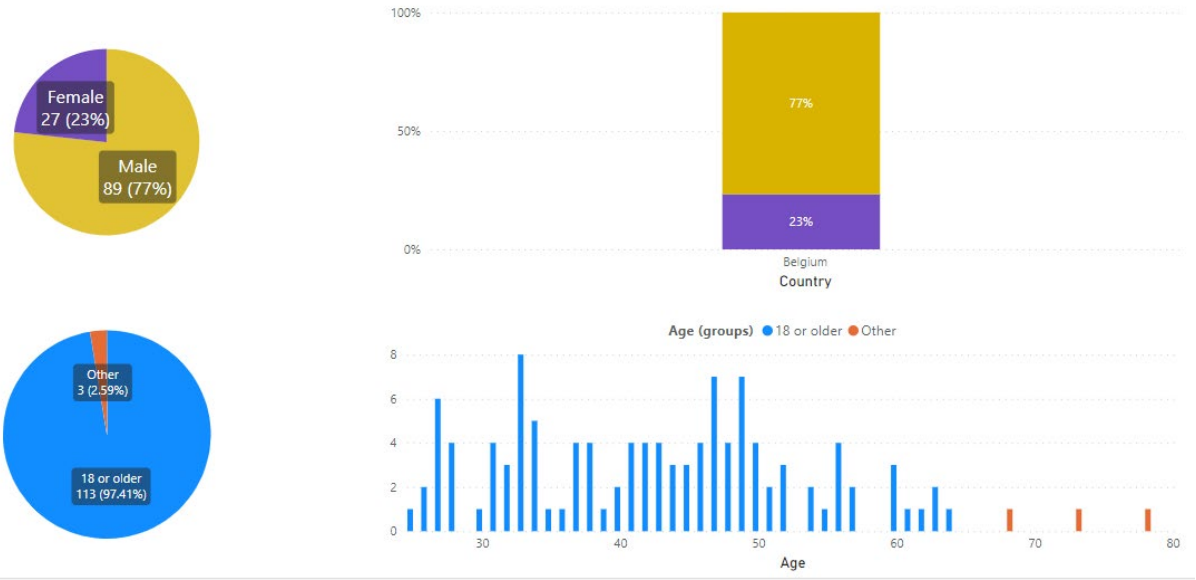


*Figure 6. Belgian entourage sample characteristics (gender, age)*

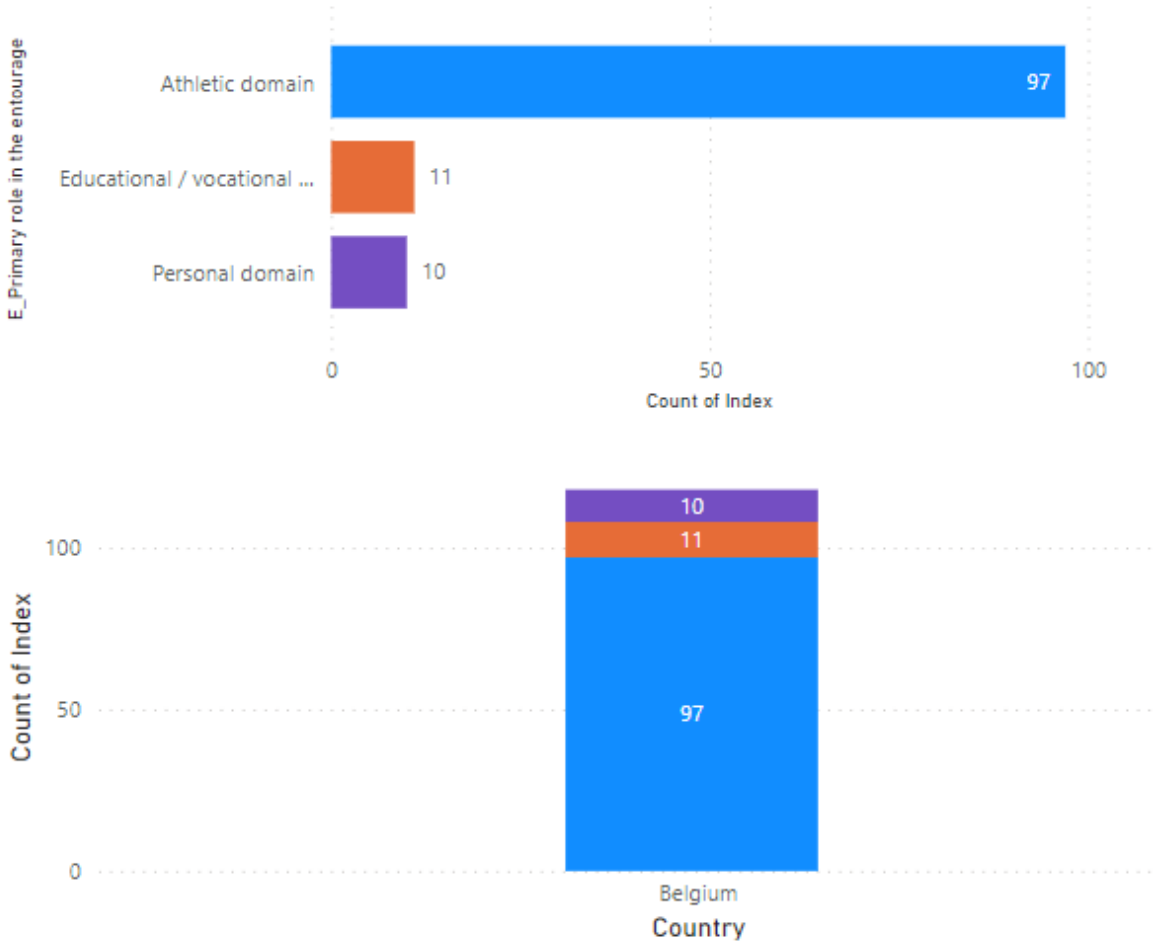


*Figure 7. Belgian entourage sample characteristics (domain distribution).*

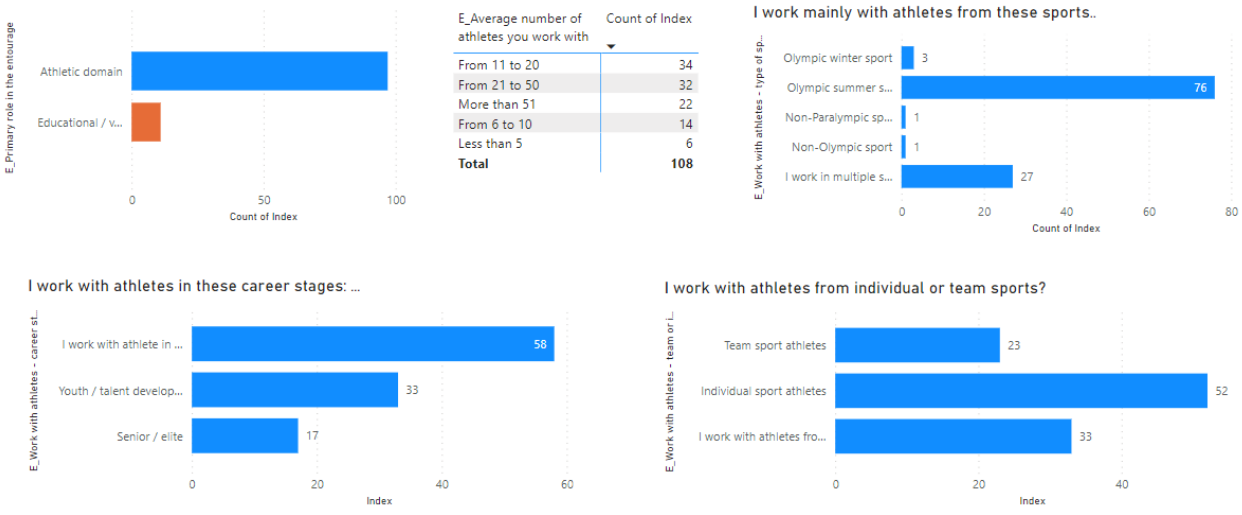


*Figure 8. Sport characteristics of the Belgian entourage sample.*

## Results

**Study constructs:**

a. Mental health
b. Mental ill-health
c. Mental health literacy
d. Perceived support (athletes)
e. Provided support (entourage)
f. MH promotion competencies

**Link between study constructs:**

a. Correlation between study constructs
b. Key predictors of MH

## Mental health

***MENTAL HEALTH CONTINUUM – SHORT FORM (MHC-SF).***

Mental health was measured using the Mental Health Continuum Short form (MHC-SF), developed by Keyes (2002).

- The scale has 14 items
- The scores are on a 6-point scale (0 – never; 5 – Every day)
- Three subscales: emotional well-being, social well-being, and psychological well-being
- It can be scores according to the three subscales + the general well-being scale, or according to the Mental Health Continuum (Languishing, moderate MH, Flourishing)

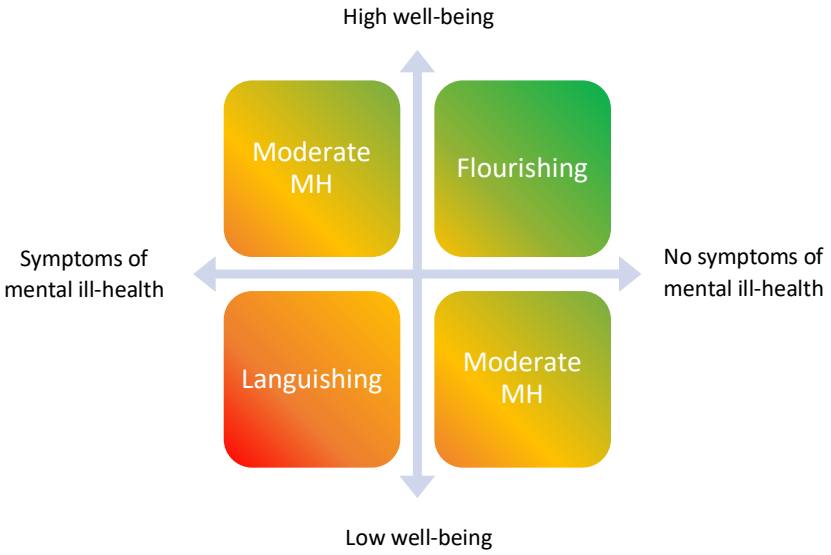


*Figure 9. Mental health dual continuum model (Keyes, 2002)*

**KEY FINDINGS**

Detailed results are displayed in the figures below.

- In the Belgian athlete population, 27% were categorised as flourishing, 62% with moderate mental health, and 11% as languishing. Compared to the European sample, the proportion of Belgian athletes categorised as flourishing is much smaller, while those categorised as languishing is higher.
- In the Belgian entourage population, 49% were categorised as flourishing, 48% with moderate mental health, and 3% as languishing. In this population, the findings on the Belgian sample are overall in line with the European data.
- Both classifications are displayed in Figure 10.
- As reported in the European data, in the Belgian sample we also identified a lower score on the social well-being subscales for both populations, compared to the scores on the emotional and psychological well-being. Average scores in the three subscales are displayed in Figure 11.

- In the emotional well-being subscale, 7% of **athletes** reported never feeling interested in life (item 2), and 7% reported feeling this only once or twice. In item 3 (feeling satisfied with life), 18% of the athlete sample reported never or only once or twice.
- In the social well-being scale, 27% of **athletes** reported never feeling that society is a good place (item 6), and 20% reported feeling it once or twice. On item 4, 18% of athletes reported never feeling that they had something important to contribute to society, and another 18% reported feeling this only once or twice.
- Findings at item level in the **athlete** sample are displayed in Figure 12.
- In the emotional well-being scale, 79% of the **entourage** sample felt interested in life (item 2) every day or almost every day, while 65% felt satisfied with life (item 3) every day or almost every day. Both these findings are in line with the European data.
- Another similarity between the Belgian and the European data is the distribution of responses in item 6 (our society is a good place) in the entourage sample.
- In the psychological well-being subscale, we found that 67% of the **entourage** sample felt that they were good at managing the responsibility of their daily lives (item 10) almost every day or every day. On item 12 (having experiences that challenged you to grow and become a better person), 2% of the **entourage** sample reported having never felt that and 11% having felt that only once or twice in the previous two weeks.
- Findings at item level in the **entourage** sample are displayed in Figure 13.

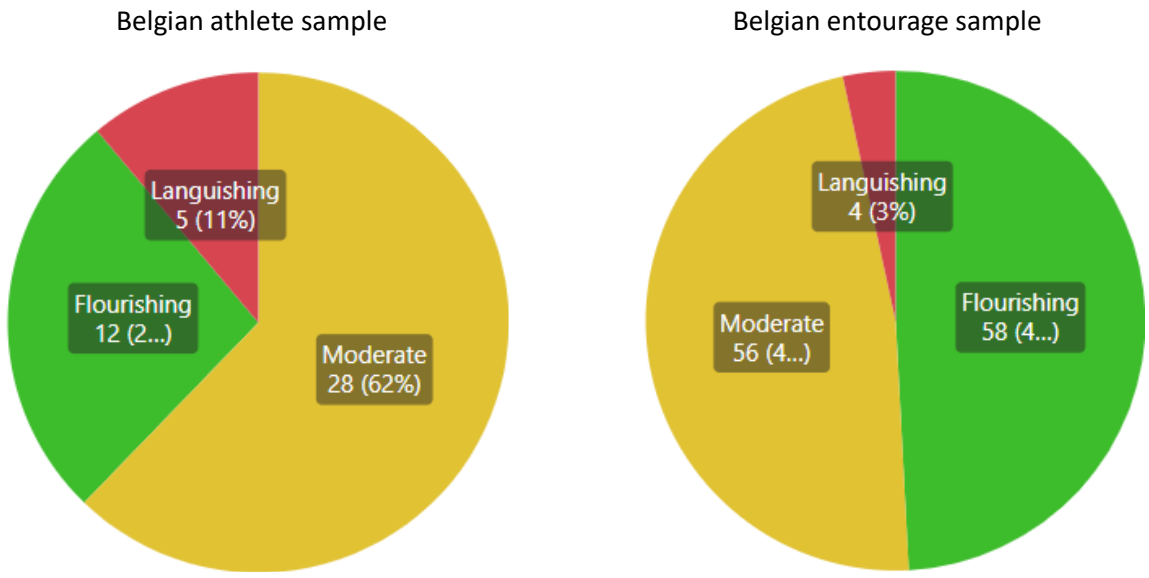


*Figure 10. Mental health classification for the two different groups in the Belgian sample.*

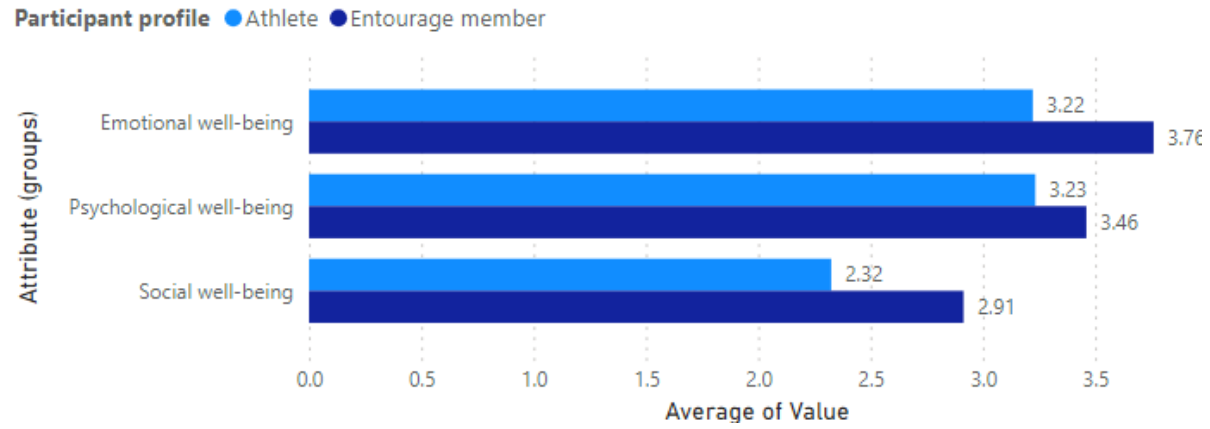


*Figure 11. Average MHC-SF scores in the three sub-scales for the two different groups of the Belgian sample.*

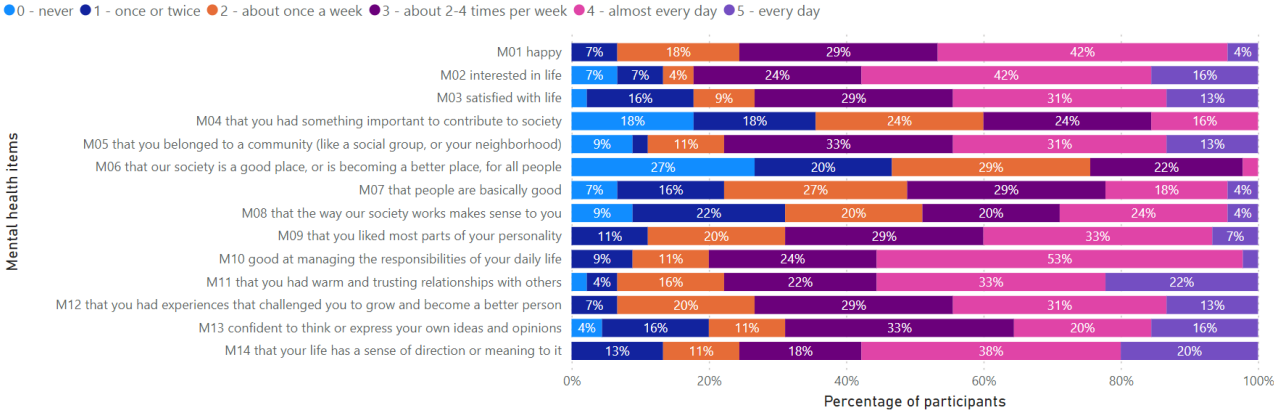


*Figure 12. Frequencies for the 14 MHC-SF items in the **athlete** sample.*

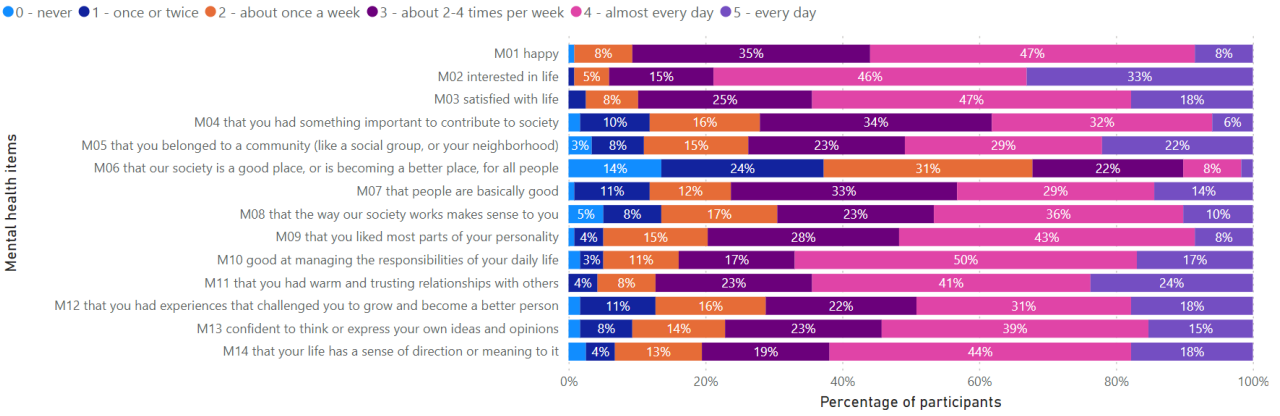


*Figure 13. Frequencies for the 14 MHC-SF items in the **entourage** sample.*

## Mental ill-health

### Patient-Health Questionnaire (PHQ-9)

The PHQ-9 is a 9-item scale that measures symptoms of depression in the last two weeks (e.g., "little interest or pleasure in doing things"). Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 27.

### Generalized Anxiety Disorder Questionnaire (GAD-7)

The GAD-7 is a 7-item scale that measures symptoms of generalized anxiety disorder. Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 21.

**KEY FINDINGS**

Detailed results are displayed in the figures below.

**ANXIETY AND DEPRESSION:**

- In the **athlete** population, 44% reported no symptoms of depression, 36% reported mild symptoms, 4% reported moderate symptoms, 9% reported moderately severe symptoms, and 7% reported severe symptoms. As for anxiety, 38% reported no symptoms of anxiety, 40% reported mild symptoms, 9% reported moderate symptoms, and 13% reported severe symptoms. The results are displayed in Figure 14.

- In the **entourage** population, 60% reported no symptoms of depression, 30% reported mild symptoms, 7% reported moderate symptoms, 2% reported moderately severe symptoms, and 1% reported severe symptoms. As for anxiety, 42% reported no symptoms of anxiety, 37% reported mild symptoms, 10% reported moderate symptoms, and 11% reported severe symptoms. The results are displayed in Figure 15.

- In both samples, and similarly to the European data, the highest scores on the PHQ-9 were reported in item 3 (having trouble falling asleep, or sleeping too much) and item 4 (feeling tired or having little energy). The lowest scores were found in both samples in item 9 (thoughts that you be better off dead, or hurting yourself in some way). Frequencies for each item are shown in Figure 16 (athletes) and Figure 18 (entourage).

- In both samples, and similarly to the European data, the highest scores on the GAD-7 were reported in item 3 (worrying too much about different things) and item 1 (feeling nervous, anxious or on edge). The lowest scores were reported in item 7 (feeling afraid as if something awful might happen). Frequences for each item are shown in Figure 17 (athletes) and Figure 19 (entourage).

**DIAGNOSIS AND HELP-SEEKING**

- Regarding diagnosis, 53% of **athletes** indicated to have received professional help in relation to their mental health, and 4% reported having received a formal diagnosis of mental health disorder. 9% reported experiencing mental health problems at the time of

filling out the survey (point prevalence). 39% indicated having experienced mental health problems in their life (lifetime prevalence), and the average age of onset of mental health problems reported by athletes was 17 years old. The results are displayed in Figure 20.

- Compared to the European data, we observed a higher percentage of athletes who received psychological professional help, but a lower percentage who received a formal diagnosis. The lifetime prevalence was higher in our sample, while the point prevalence was in line with the European data.
- In the **entourage** sample, 37% indicated to have received professional help in relation to their mental health, and 5% reported having received a formal diagnosis of mental health disorder. 9% reported experiencing mental health problems at the time of filling out the survey. 30% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by entourage members was 31 years old. The results are displayed in Figure 21.
- Compared to the European entourage data, we found consistent results related to having received professional help. Lifetime prevalence was higher in the Belgian sample, as well as the point prevalence.

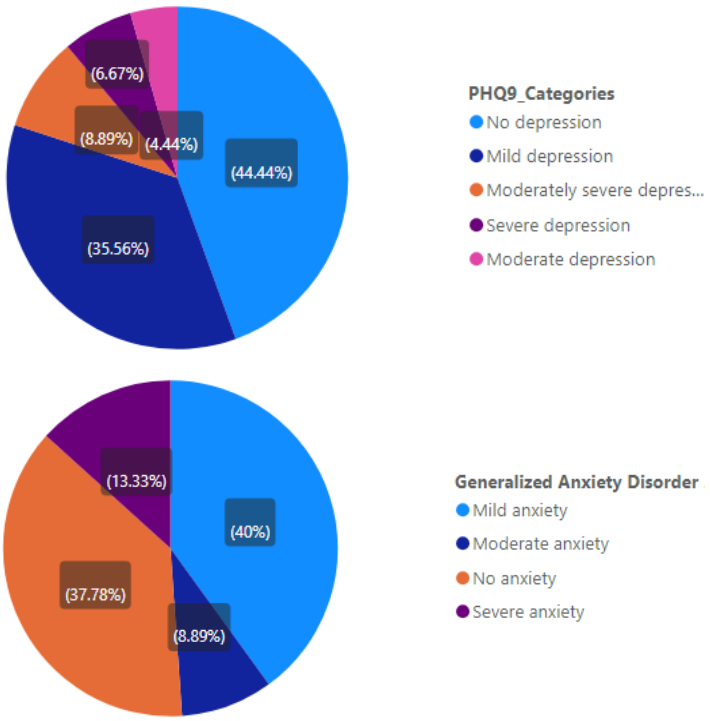


*Figure 14. Depression and anxiety prevalence in the Belgian **athlete** sample.*

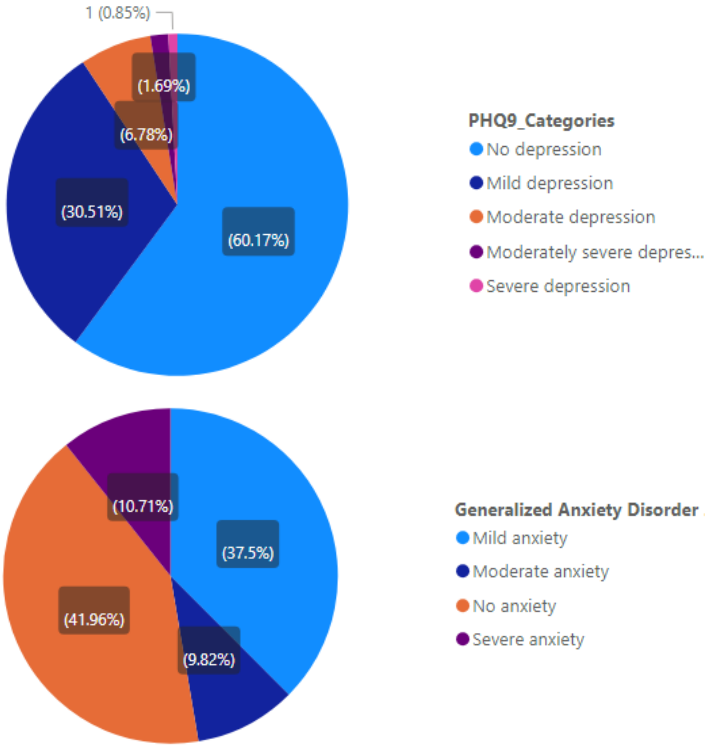


*Figure 15. Depression and anxiety prevalence in the Belgian **entourage** sample.*

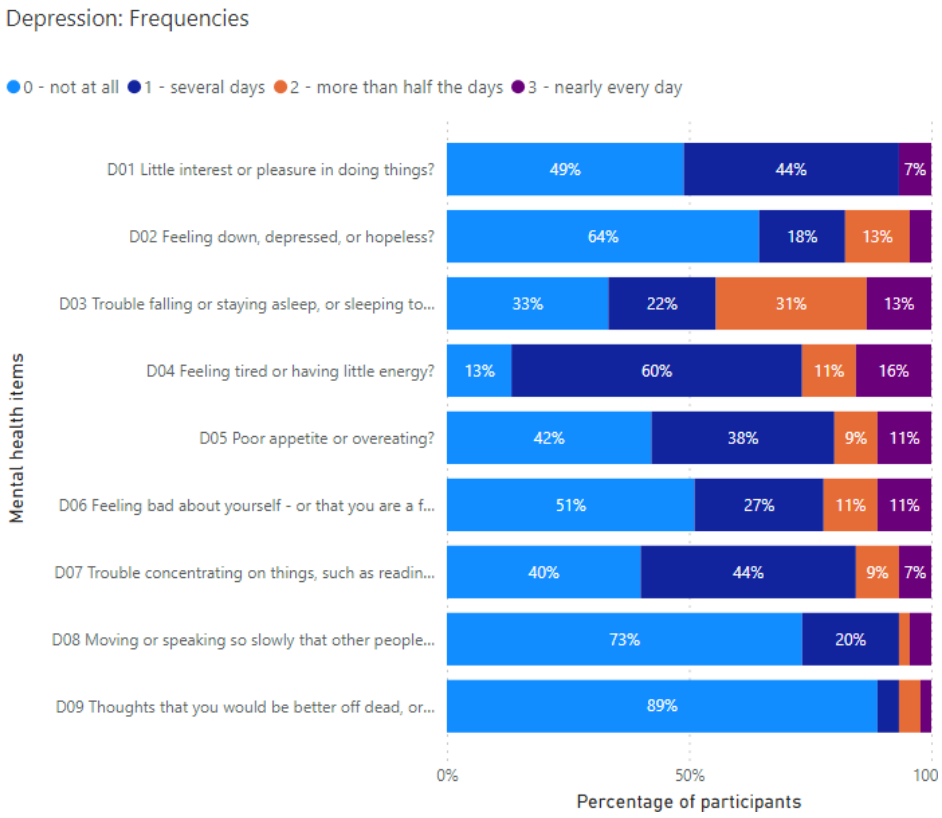


*Figure 16. Frequencies for the PHQ-9 items in the Belgian **athlete** sample.*

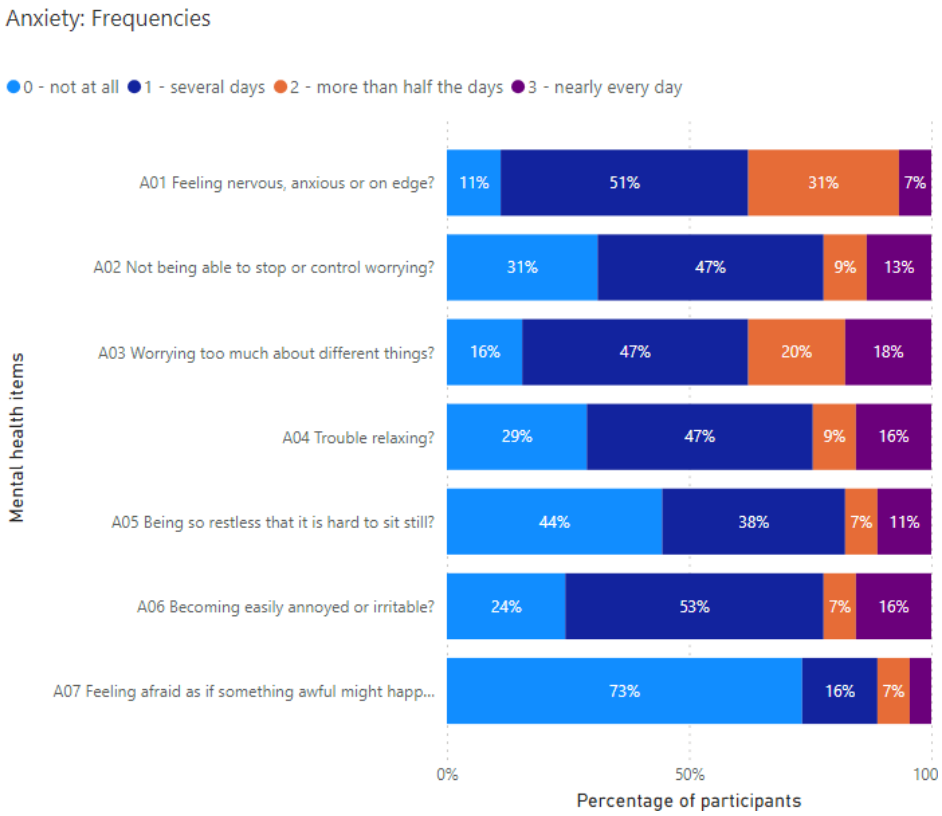


*Figure 17. Frequencies for the GAD-7 items in the Belgian **athlete** sample.*

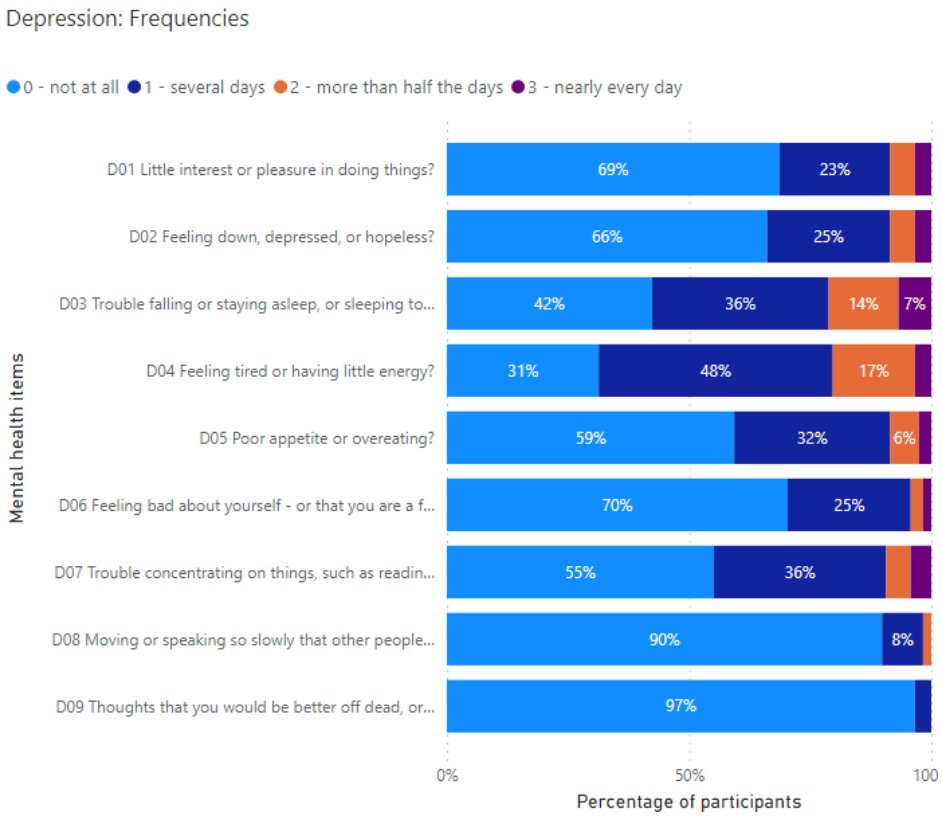


*Figure 18. Frequencies for the PHQ-9 items in the Belgian **entourage** sample.*

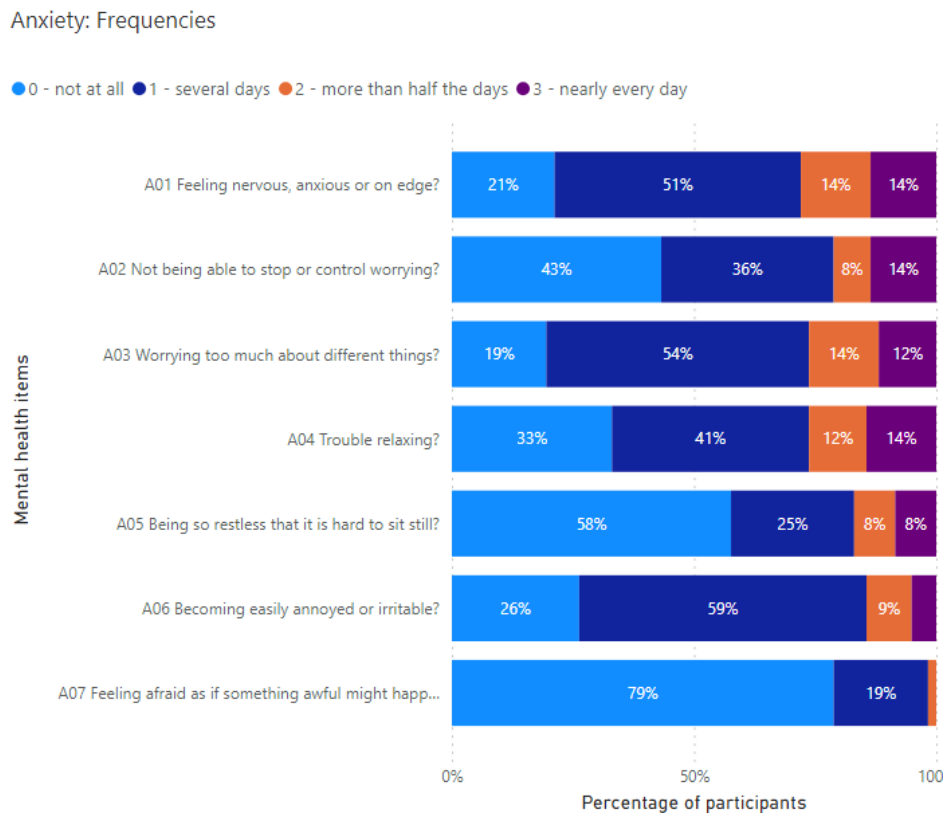


*Figure 19. Frequencies for the GAD-7 items in the Belgian **entourage** sample.*


*Figure 20. Diagnosis, professional psychological help, and history of mental health problems in the Belgian **athlete** sample.*

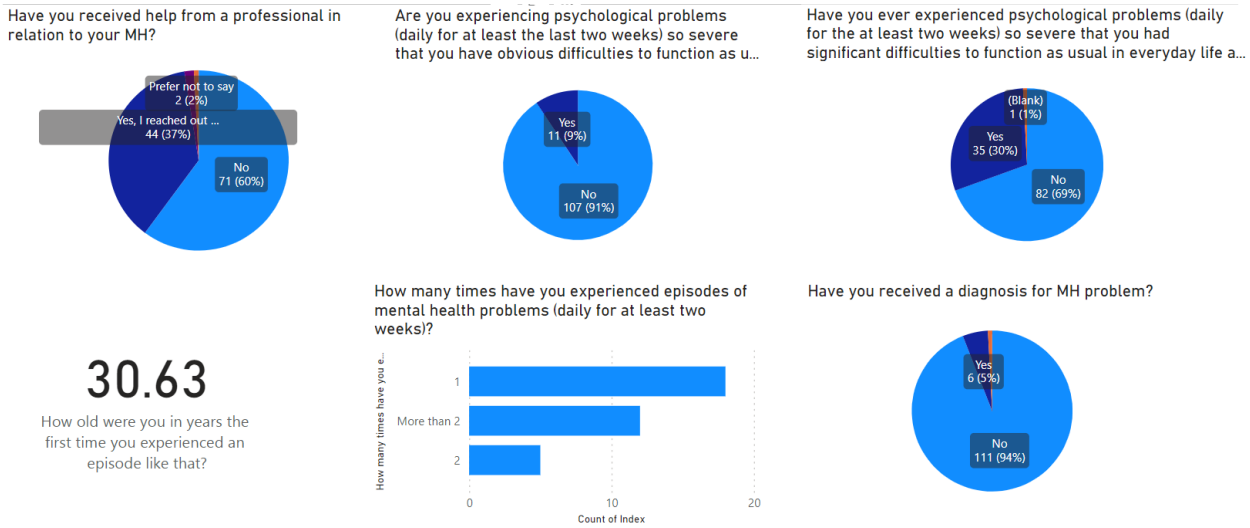


*Figure 21. Diagnosis, professional psychological help, and history of mental health problems in the Belgian **entourage** sample.*

## Mental Health Literacy

**Mental Health Literacy Questionnaire** (DC4MH, 2022; European Commission, 2023; International Olympic Committee, 2023)

This scale consists of 12 items and was designed to explore different topics related to mental health, both in a positive (e.g., "doing something meaningful or enjoyable on a regular basis contributed to good mental health") and a negative light (e.g., "if I had a mental health problem I would try to hide it from others"). Respondents rate each item on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the total score representing the level of mental health literacy: the higher the score, the higher the level of mental health literacy. When calculating the total score, the negative items (item 9, 10 and 12) were scored in reverse. The total score ranges from 12 to 60.

**KEY FINDINGS**

- In the **athlete** sample, the vast majority agreed or somewhat agreed with the first three items. 11% strongly or somewhat disagreed with item 5 (if I had a mental health problem, I would seek professional help), while 66% somewhat or strongly agreed with it.
- Regarding knowing where to seek information about mental health (item 7), 15% of the athlete sample strongly or somewhat disagreed with it, while 73% somewhat or strongly agreed.
- In our athlete sample, 47% somewhat or strongly agree with item 9 (if I had a mental health problem, I would try to hide it from others). No athlete participants strongly disagreed with this item.
- Results from each item are displayed in Figure 22.

- In the **entourage** sample, 100% of our sample somewhat or strongly agree with item 1 (adequate recovery contributes to good mental health).
- Regarding professional help, 10% strongly or somewhat disagreed with item 5 (if I had a mental health problem, I would seek professional help), while 74% of the entourage sample somewhat or strongly agreed with it.
- Regarding item 9 (if I had a mental health problem, I would try to hide it from others), 38% somewhat or strongly agreed with it, while 40% strongly or somewhat disagreed.
- Only 5% of the entourage sample somewhat or strongly agreed that mental health problems are less serious than medical problems (item 12), while 86% strongly or somewhat disagreed.
- Results from each item are displayed in Figure 23.

Our results from both populations are mostly in line with the European findings.

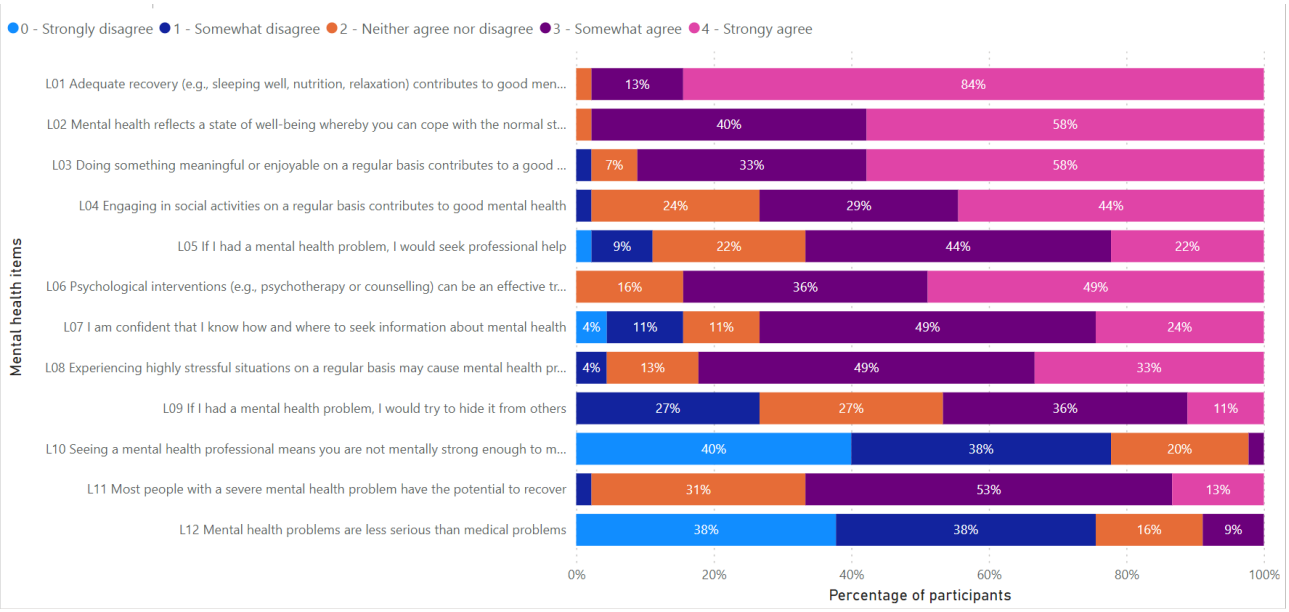


*Figure 22. Frequencies for the MHL questionnaire in the Belgian **athlete** sample.*

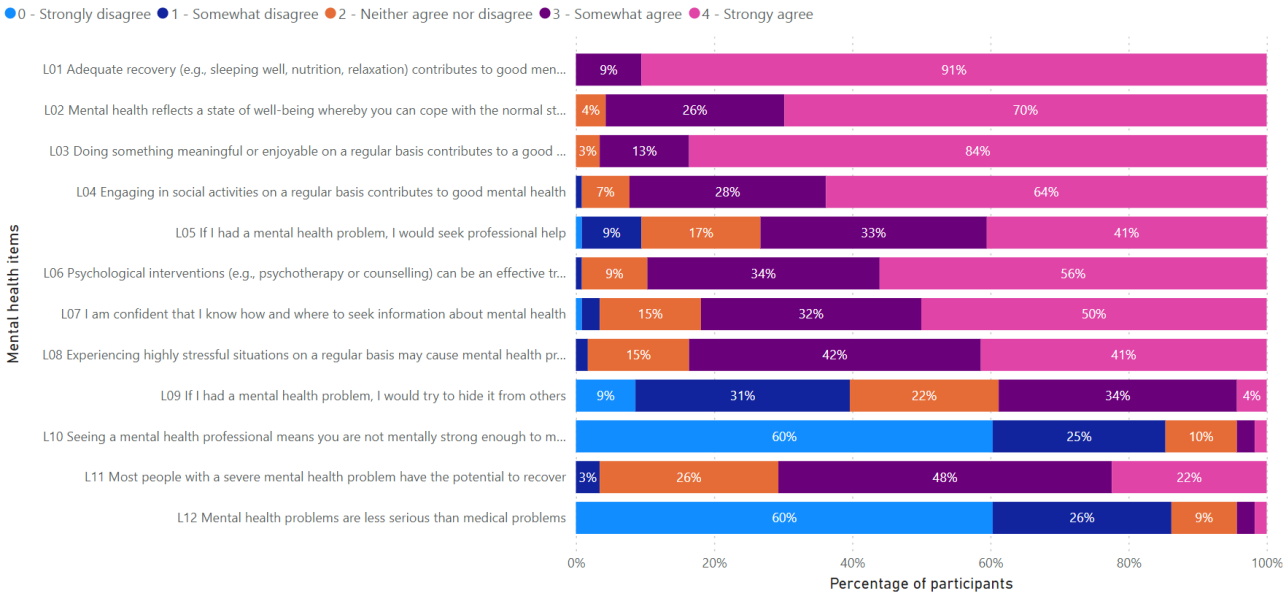


*Figure 23. Frequencies for the MHL questionnaire in the Belgian **entourage** sample.*

## Perceived support (athletes)

**Adapted version of the General Help-Seeking Questionnaire (GHSQ)**

The GHSQ is a 1-item scale used to investigate how likely it is that athletes would receive appropriate mental health support from different persons in the entourage. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- On average, roles from the personal domain scored higher, meaning that athletes are more likely to turn to them for mental health support.
- The people athletes would most likely turn to for mental health support are mental coaches, sport psychologists, parents, clinical psychologists, and partners.
- The people athletes are less likely to turn to for mental health support are technical directors, agents/managers, academic tutors, teachers, and data analysts.
- Details about each role and the score obtained are displayed in Figure 24 and Figure 25.
- All our findings are in line with the European data.

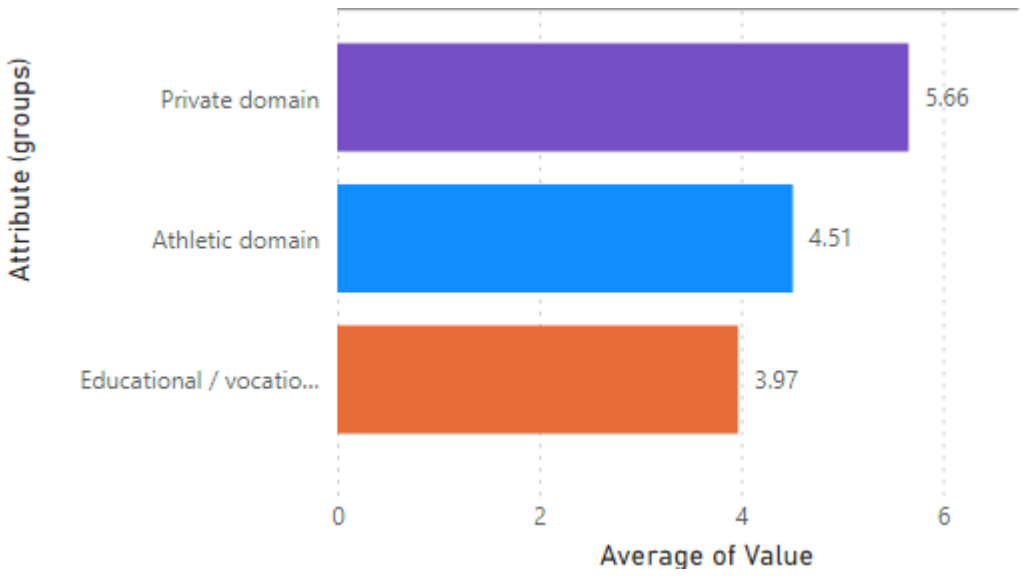


*Figure 24. Average scores of the different domains in the GHSQ.*

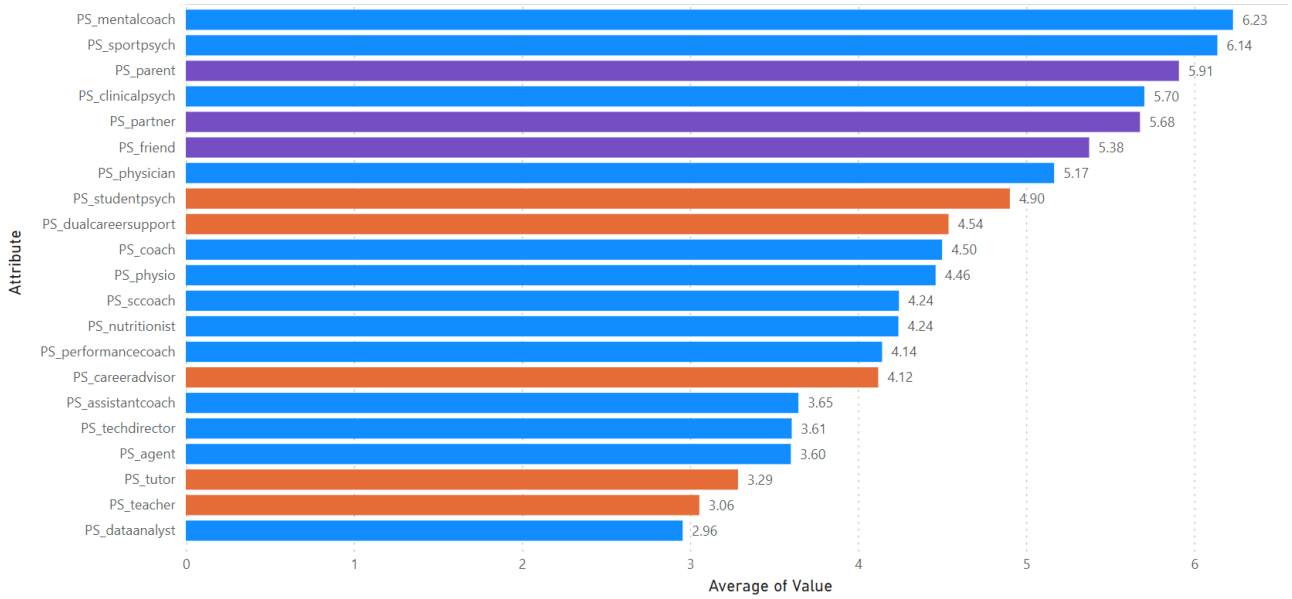


*Figure 25. Scores for the different roles in the entourage on the GHSQ from the athletes' perspective.*

## Mental health support provision (entourage)

One question aimed to investigate entourage members' confidence in providing adequate support to athletes dealing with mental health problems. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Entourage members were asked how likely it is that they would be able to offer appropriate mental health support to athletes. The scores are based on the average scores of the survey participants who declared working in each role.
- It is important to keep in mind that for some roles we only had one or two participants. Therefore the scores must be viewed with this aspect in mind.
- The entourage members in our sample who were ranked higher, meaning they felt more confident in offering appropriate mental health support, were career advisors (but only 1 participant from this role filled in the questionnaire), sport psychologists, physicians, and clinical sport psychologists.
- The roles that scored lower, meaning they felt less confident about being able to provide adequate mental health support, were nutritionists, performance lifestyle coaches, and assistant coaches.
- Results are displayed in Figure 26 and Figure 27.

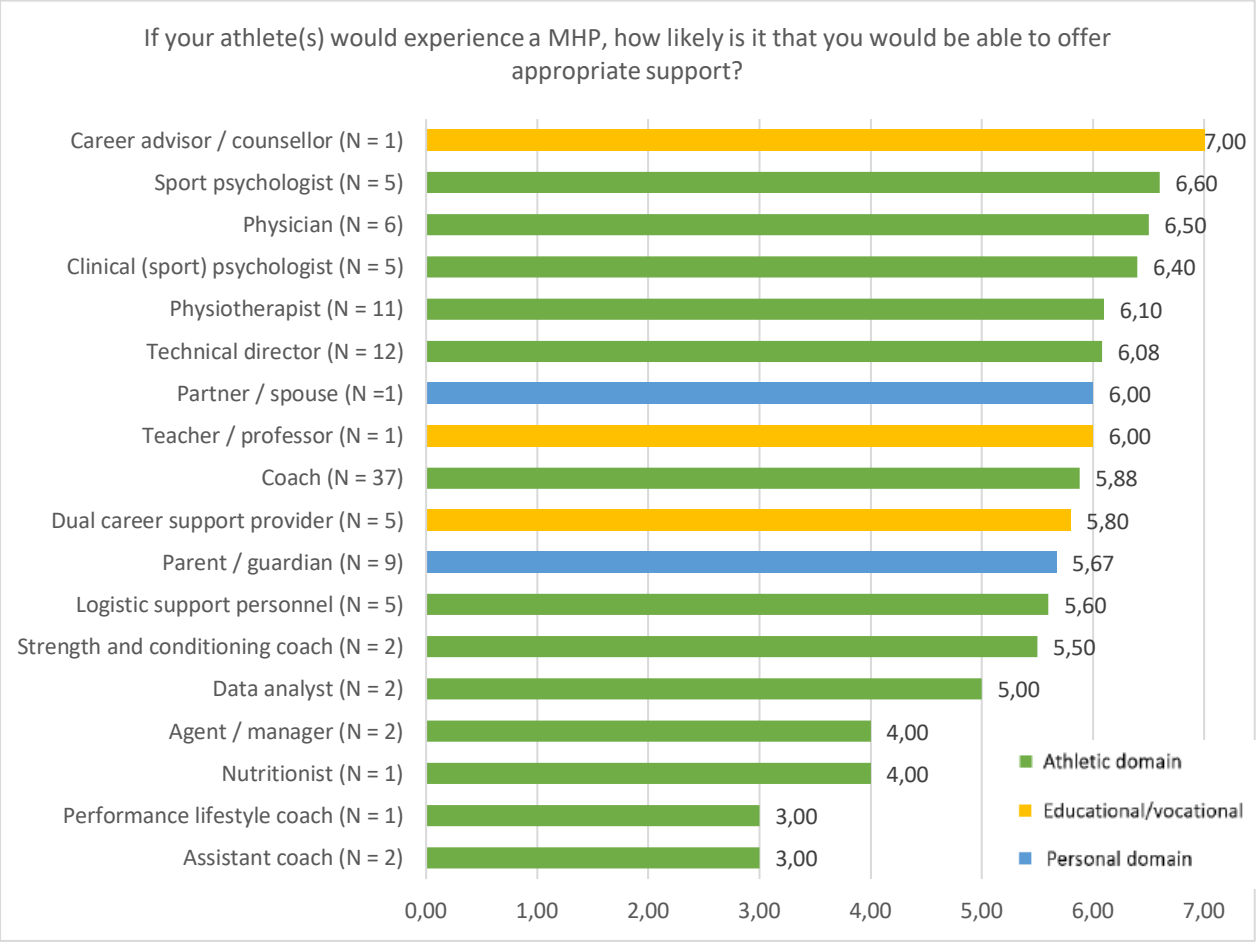


*Figure 26. Scores of the Belgian **entourage** sample on the GHSQ*

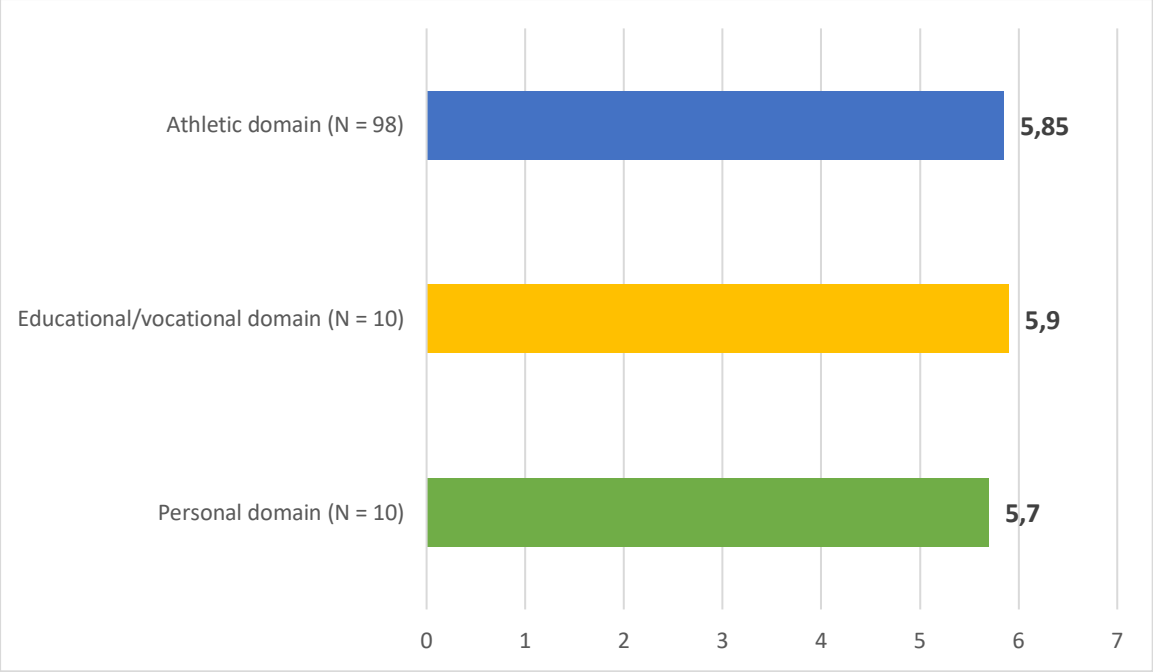


*Figure 27. Scores of the Belgian **entourage** by domain on the GHSQ.*

**KEY FINDINGS**

- Athletes and entourage members were asked to select the mental health promotion competencies that they felt were important to maintain mental well-being.
- The top three most important competencies according to athletes were: (1) being empathetic and actively listening, (2) recognising signs of mental health problems, and (3) understanding of mental health and mental health problems. These results are similar to the European findings, with the sole difference being a switch between number 2 and 3. The complete results are shown in Figure 27.
- The top three most important competencies according to entourage members were: (1) recognising signs of mental health problems, (2) being empathetic and using active listening, and (3) knowing when and how to refer athletes to MH professionals. These results are perfectly in line with the European findings. The full results are shown in Figure 28.

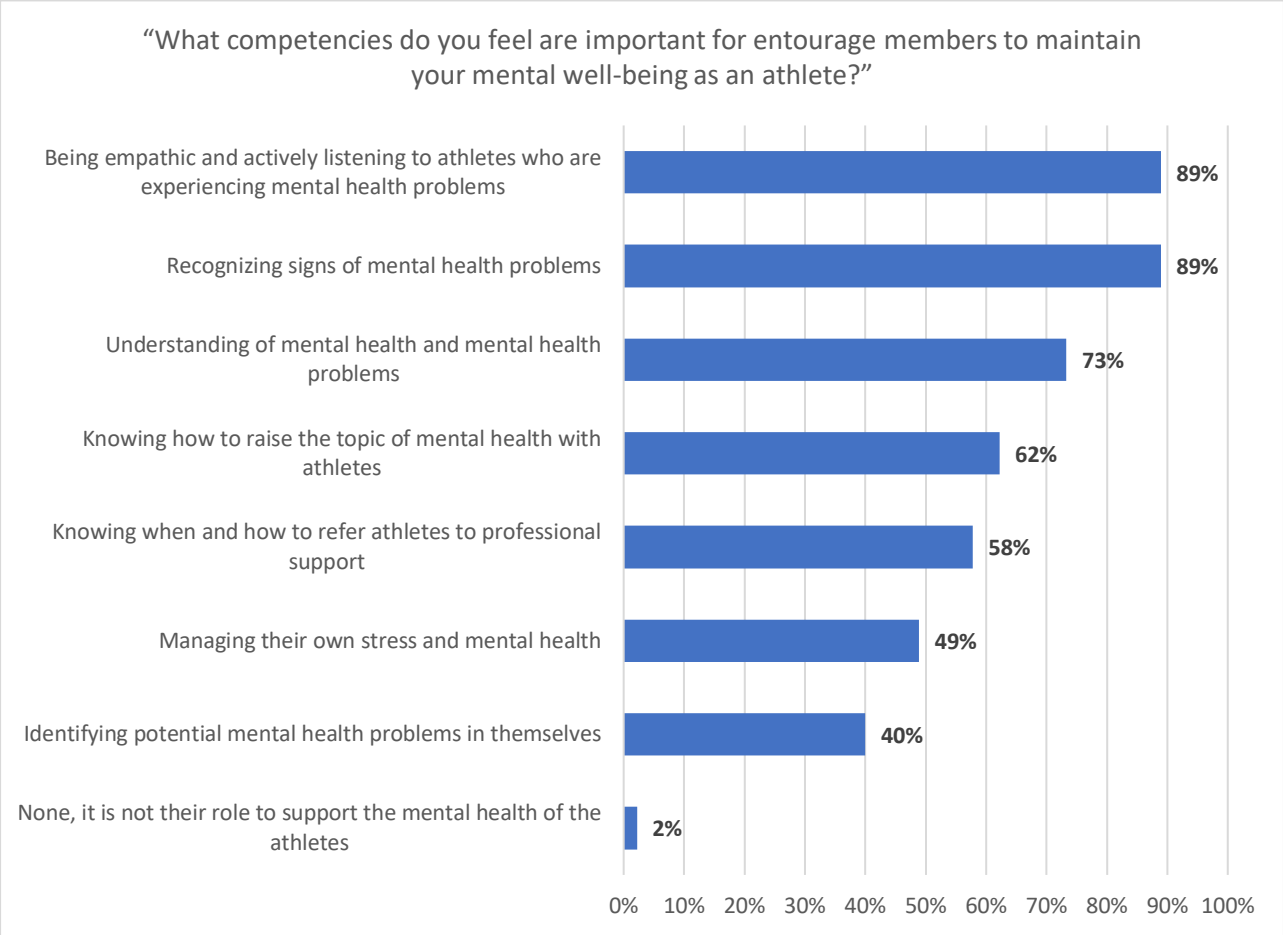


*Figure 28. Percentage of the Belgian **athlete** sample that chose each mental health support competence.*

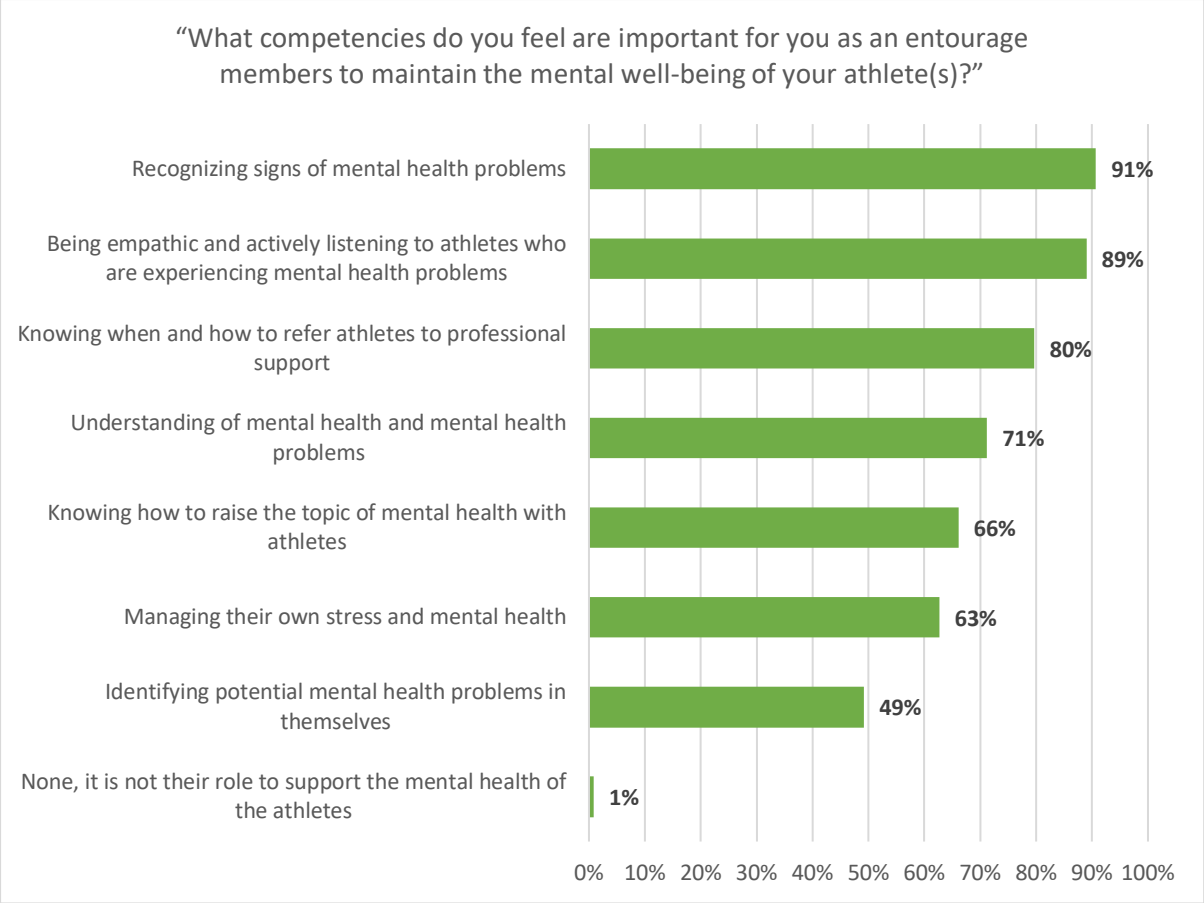


*Figure 29. Percentage of the Belgian **entourage** sample that chose each mental health support competence.*

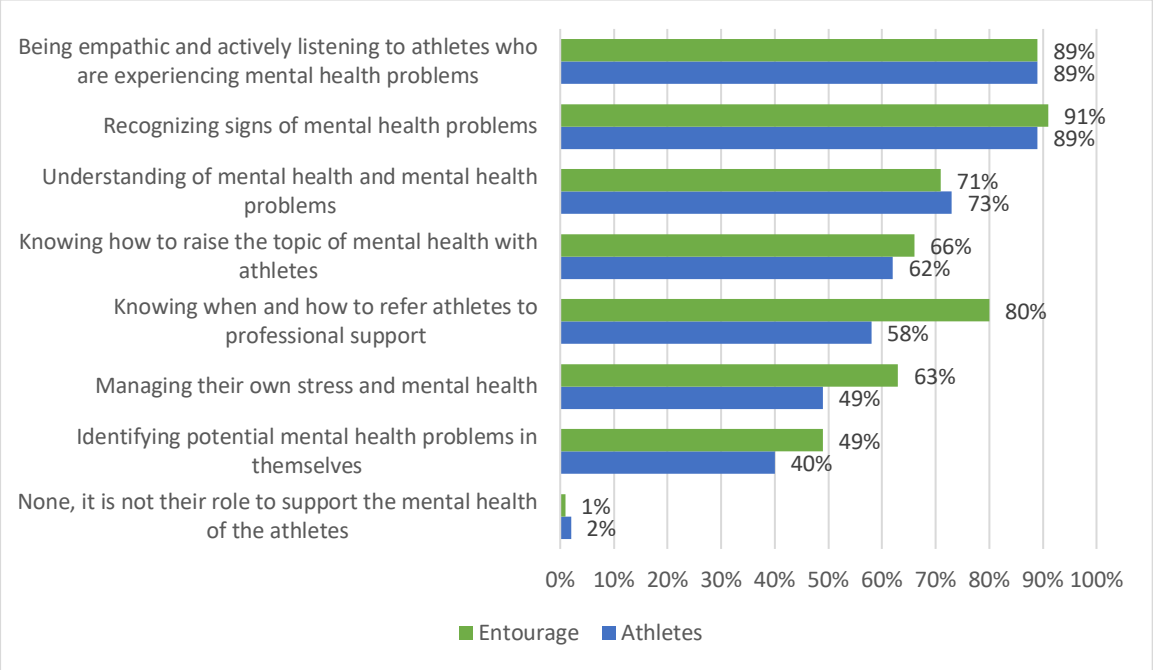


*Figure 30. Comparison between the two populations in the Belgian sample.*

## Link between study constructs

a. Correlation between study constructs
b. Key predictors of MH

**KEY FINDINGS**

**MENTAL HEALTH & WELL-BEING – FULL SAMPLE**

- The main predictors for **general well-being in the full Belgian sample were** low depression and higher mental health literacy. Together with type of participants (athlete vs entourage), age, gender, having received psychological help, having experienced (lifetime prevalence) or currently experiencing mental health problems (point prevalence), and anxiety, the model predicted 46% of the variance in mental health scores.
- The main predictors for **anxiety in the full Belgian sample** were high depression and having experienced MHP in the past. Together with well-being, type of participant, gender, age, mental health literacy, point prevalence, and having received psychological help, the model predicted 60% of the variance in the anxiety scores.
- The main predictors for **depression in the full Belgian sample** were high anxiety, low well-being, younger age, female gender, and currently experiencing MHP. Together with type of participant, mental health literacy, lifetime prevalence, and having received psychological help, the model predicted 71% of the variance in the depression scores.
- Compared to the European findings, the type of participant was never a significant predictor. Additionally, in our sample anxiety was not a predictor of general well-being.

**MENTAL HEALTH & WELL-BEING – ATHLETE SAMPLE**

- Medium to strong correlations between general well-being and depression (*r = .67*) anxiety (*r = .46*) were found. The correlation graphs are shown in Figure 30.
- The main predictor of **general well-being in the Belgian athlete sample** was low depression. Together with anxiety, mental health literacy, age, gender, injuries, Dual Career status, and sport type (individual vs. team), the model predicted 49% of the variance in mental health scores.
- The main predictors for **anxiety in the Belgian athlete sample** were high depression, currently experiencing MHP, and playing a team sport. Together with general well-being, mental health literacy, age, gender, Dual Career status, injuries, and lifetime prevalence, the model predicted 71% of the variance in anxiety scores.
- The main predictors for **depression in the Belgian athlete sample** were high anxiety and low general well-being. Together with mental health literacy, age, gender, Dual Career status, injury, type of sport, lifetime and point prevalence, the model predicted 73% of the variance in the depression scores.
- Compared to the European sample, we only found one significant predictor for athletes' general well-being. Gender and age were never significant predictors.

**MENTAL HEALTH & WELL-BEING – ENTOURAGE SAMPLE**

- Medium to strong correlation between general well-being and depression (*r= .56*) anxiety (*r= .42*) were found in the Belgian entourage sample. The correlation graphs are shown in Figure 31.
- The main predictors of **general well-being in the Belgian entourage sample** were high mental health literacy and low depression. Together with anxiety, age, gender, level of

competition at which they work, employment status, and years of experience, the model predicted 40% of the variance in mental health scores.

- The main predictor for **anxiety in the Belgian entourage sample** was high depression. Together with general well-being, mental health literacy, age, gender, level of competition, employment status, and years of experience, the model predicted 56% of the variance in anxiety scores.
- The main predictors for **depression in the Belgian entourage sample** were high anxiety and low well-being. Together with mental health literacy, age, gender, level of competition, employment status, and years of experience, the model predicted 65% of the variance in depression scores.
- Compared to the European data, we found only one significant predictor of anxiety in the entourage sample. Level of competition and years of experience were never significant predictors.

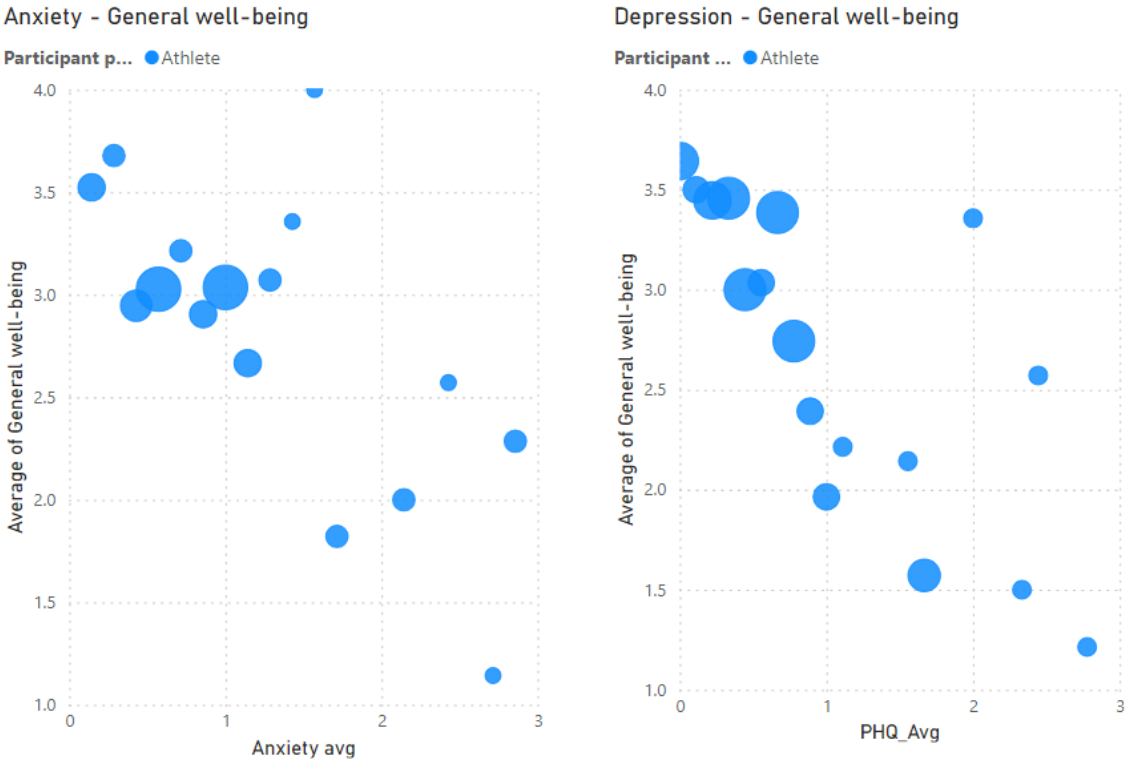


*Figure 31. Correlations between general well-being and mental ill-health in the Belgian **athlete** sample.*

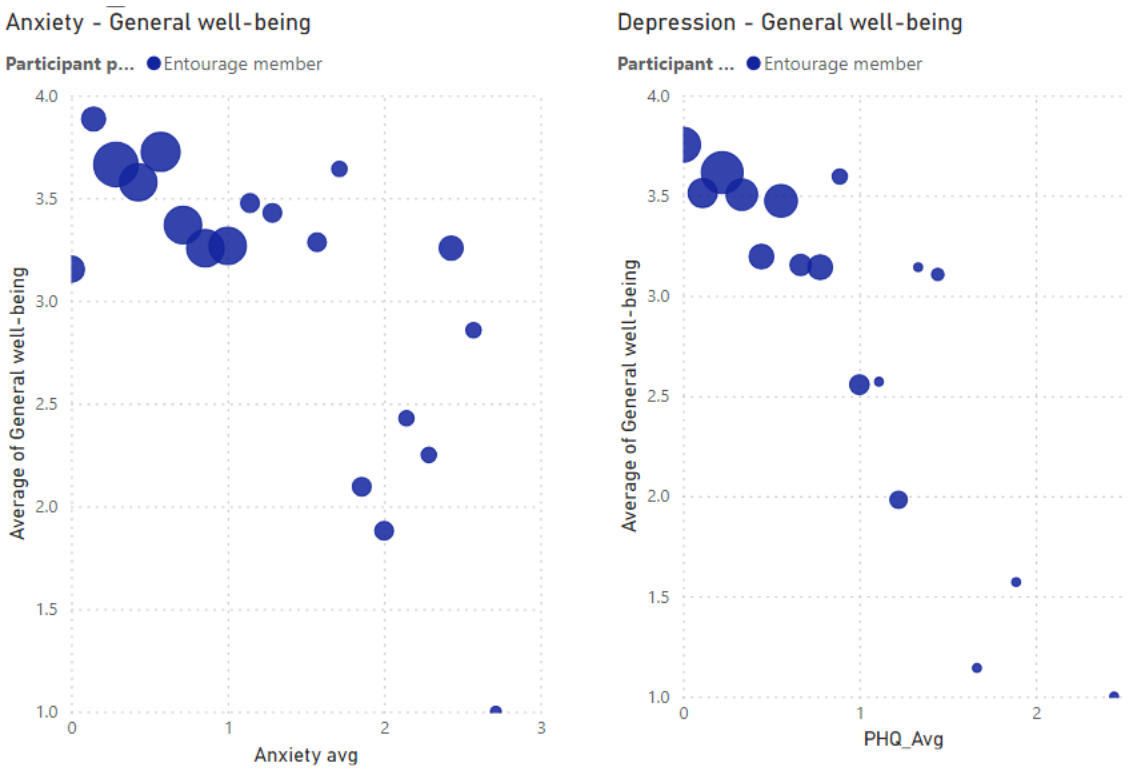


*Figure 32.* Correlations between general well-being and mental ill-health in the Belgian **entourage** sample.

## Qualitative data results

Athletes were asked (1) what skills entourage need to support their mental well-being, and (2) what skills athletes need to promote their own mental health.

Entourage members were asked what skills they need to (1) maintain the mental well-being of their athletes, and (2) maintain their own mental well-being.

**KEY FINDINGS**

In the **Belgian athlete sample**, 58% of our participants answered the open questions regarding mental health support and promotion.

- When asked about the competencies entourage members need to support athletes' mental health, the most addressed topics were communication, knowledge about referral and mental health, and engaging in conversation about mental health with athletes. Compared with the European data, we found some similarities (knowledge/access to mental health professionals, and monitoring/addressing mental health).

- When asked about competencies they need to promote their own mental health, they mostly talked about addressing the topic, support from friends and family, rest and recovery, a good atmosphere in the group, and more knowledge about mental health. Compared to the European data, we found some similarities (life balance, supportive environment).

In the **Belgian entourage sample,** 59% of our participants answered the open questions regarding mental health support and promotion.

- The mental health support needs mentioned by entourage members include communication skills and active listening, more knowledge about mental health, information about mental health professionals, trusting relationship with athletes, follow-up and monitoring of athletes.
- When asked about self-care, entourage members mentioned life balance, supporting working environment, social support, managerial support, knowledge about self.
- Most of the themes found in the Belgian data were also found in the European data.

## Next steps

### Implications

**PRACTICAL IMPLICATIONS**

- Work towards unified mental health policies across the different Belgian communities (Dutch-, French-, and German-speaking)
- Enhance the connection between the sporting bodies in Belgium
- Increase awareness about mental health policies in sport federations and at community level

**FUTURE RESEARCH RECOMMENDATIONS**

- Definitions of terms related to mental health (e.g., mental health/ill-health, well-being, welfare, safeguarding)
- Investigate retrospectively the impact of trauma, setbacks, and failures in athletes and entourage members
- Investigate reasons for drop-out from sport, both in athletes and entourage members

## References

Akesdotter, C., Kentta, G., Eloranta, S., & Franck, J. (2020). The prevalence of mental health problems in elite athletes. *J Sci Med Sport*, *23*(4), 329-335. https://doi.org/10.1016/j.jsams.2019.10.022

DC4MH. (2022). *Dual Careers for Mental Health*. https://spmb.research.vub.be/dual-careers-for-mental-health-dc4mh-0

European Commission. (2023). *Dual Careers for Mental Health*. Retrieved 13/03/2024 from https://erasmus-plus.ec.europa.eu/projects/search/details/622178-EPP-1-2020-1-BE-SPO-SCP

International Olympic Committee. (2023, 12/07/2023). *Measuring and Increasing Athletes' Mental Health Literacy (MHL): Cross-Cultural Validation of MHL Questionnaire and Evaluation of MHL Intervention Implementation*. Retrieved 13/03/2024 from https://olympics.com/ioc/news/2023-2025-advanced-olympic-research-grants-awarded

Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, *43*(2), 16.

Kroenke, K., Spitzer Rl Fau - Williams, J. B., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 8. https://doi.org/https://doi.org/10.1046/j.1525-1497.2001.016009606.x

MENTiS. (2023). *Promoting Mental Health through the Entourage in high-performance Sport*. https://spmb.research.vub.be/mentis

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

MENTiS

Co-funded by the European Union

# NATIONAL REPORT NETHERLANDS:

# MENTAL HEALTH OUTCOMES, LITERACY AND PROMOTION IN ATHLETES AND ENTOURAGE MEMBERS IN HIGH-PERFORMANCE SPORT

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**April 2024**

This report is an output of the first work package of the Erasmus+ Sport project

"Promoting Mental health through the ENTourage in high-performance Sport" (MENTiS)

# Table of contents

## Consortium

We would like to express our gratitude to all the athletes and entourage members who participated in this study. We thank the entire MENTiS Consortium for their valuable contributions to the current study and report. The MENTiS consortium:

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| Nicky Van Rossem | Belgisch Olympisch en Interfederaal Comité (BOIC) |

## Key findings

**Participants**:

- A total of 98 participants completed the survey, representing talented and elite athletes (N = 9; 9%) and entourage members of talented and elite athletes (N = 89; 91%). In particular
- The term "entourage" refers to all the people associated with athletes and included entourage from three domains: the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists; N = 88), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors; N = 1), and the personal domain (e.g., parents, partners, friends; N = 0).

**Mental health outcomes:**

- *Athlete sample:*
  - Mental health continuum: 44.5% were categorised as flourishing, 44.5% with moderate mental health, and 11% as languishing.
  - Mental ill-health: 55.5% reported no symptoms of depression and 44,5% reported mild symptoms. As for anxiety, 44.4% reported no symptoms of anxiety, 33.3% reported mild symptoms, 22.2% reported moderate symptoms.
  - Mental health literacy: 100% of the Dutch athletes strongly belief that adequate recovery contributes to good mental health, 66% of the athletes would try to hide a mental health problem for others and only 44% of the athletes know how and where to find mental health support.
- *Entourage sample:*
  - Mental health continuum: 54% were categorised as flourishing, 45% with moderate mental health, and 1% as languishing.
  - Mental ill-health: 76.4% reported no symptoms of depression, 21.35% reported mild symptoms, 2.25% reported moderate symptoms. As for anxiety, 57% reported no symptoms of anxiety, 34% reported mild symptoms, 8% reported moderate symptoms, and 1% reported severe symptoms.
  - Mental health literacy: 42% of the entourage members would try to hide a mental health problem for others, 90% belief mental health problems are as serious as medical problems and 89% belief that engaging in social activities contributes to good mental health.

**Other findings:**

- Overall, athletes reported that they are more likely to receive appropriate mental health support from clinical and sport psychologists, mental coaches or people in their personal environment as parents, partners, and friends.
- Entourage members who felt more likely to provide appropriate mental health support were clinical and sport psychologists and physicians.

## Aims of the MENTiS survey

An online survey was developed by the MENTiS consortium for athletes and entourage members on mental health outcomes, mental health literacy, and mental health promotion.

The aim of the MENTiS survey was to:

1. Investigate the **prevalence of mental health indicators** (e.g., wellbeing, anxiety, depression) in athletes and entourage members from 6 European countries (i.e., Belgium, France, the Netherlands, Spain, Sweden, UK).
2. Investigate the perceptions about **mental health support** and ideas about how to improve mental health support.
3. Investigate the **role of potential influencing factors on mental health** (e.g., mental health literacy, mental ill-health, gender; for athletes specifically: the presence/absence of injuries; for entourage specifically: domain of support, job characteristics).
4. **Create an evidence base** for the development of workshops and (online) resources targeting entourage members in order to enhance their competencies in mental health promotion (WP2 and WP3 of the MENTiS project).

The results obtained with the survey are displayed in a European report and 6 national reports (i.e. Belgium, France, the Netherlands, Spain, Sweden, UK).

More information on the MENTiS project can be found here: https://spmb.research.vub.be/mentis

## Procedure & instruments

An online survey was administered to athletes and entourage members in the six participating countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.

Before administering the survey, ethical approval was granted by the Ethical Committee of Human Sciences of the Vrije Universiteit Brussel. Parental consent was required before minors could complete the survey.

The survey targeted two different groups:

1. Talented and elite athletes
2. Entourage members of talented and elite athletes belonging to the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors), or the personal domain (e.g., parents, partners, friends).

Data was collected in two phases: the first phase was April – August 2023, and the second phase was September – October 2023. During this 2nd phase, additional data were collected in Belgium and UK. The phase of data collection (i.e. 1 and 2) was included as a variable in the analysis. After collecting the data, data was analysed in SPSS and displayed in PowerBI. All consortium members had access to the PowerBI report, and received their national raw data.

The online survey was developed in Qualtrics and made available in 6 languages (English, French, Dutch, Spanish, Catalan, and Swedish).

The survey is available here: https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

The survey's content differs slightly between athlete and entourage participants. It was divided into five sections:

1. **Demographics**:
   i. **Demographics for athletes**: gender, age, sport characteristics, level of competition, dual career, income, employment, injury.
   ii. **Demographics for entourage members**: gender, age, domain (athletic, educational/vocational, personal), role in the entourage, sport characteristics, athletes' career stage, level of competition, number of athletes they work with, employment status.
2. **Mental health and well-being**
   i. Mental Health Continuum – Short Form (MHC-SF), (Keyes, 2002): 14-item scale that investigates general well-being, as well as social, psychological and emotional well-being; 6-point Likert scale from 0 (*never*) to 5 (*everyday*). Scores range from 0 to 70.
   ii. Patient-Health Questionnaire (PHQ-9), (Kroenke et al., 2001): 9-item scale that measures depression; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 27.

iii. Generalised Anxiety Disorder Assessment (GAD-7), (Spitzer et al., 2006): 7-item scale that measures anxiety; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 21.

iv. 1 item about receiving professional psychological help.

v. 2 items about lifetime and point prevalence of mental health problems; 1 item about age of onset of mental health problems.

**3. Mental health literacy**

i. Mental Health Literacy Questionnaire, developed during the E+ Dual Careers for Mental Health project (European Commission, 2023), and currently being validated as part of the Olympic Studies Advanced Research Grant: "Measuring and Increasing Athletes' Mental Health Literacy (REFS)" (International Olympic Committee, 2023): 12-item scale that measures mental health literacy; 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 12 to 60.

**4. Mental health support**

i. **Perceived support (for Athletes)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of receiving support from different sources. The different sources in this case were an extensive list of roles in the entourage: for the roles that were not indicated, there was the possibility of adding an extra role in a text box. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

ii. **Support provision (for Entourage)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of offering adequate support to athletes facing mental health problems. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

**5. Competencies in mental health support**

i. **Athletes**: 1 item to explore what competencies entourage need to support athletes' mental health; 1 item to explore what competencies athletes' need to support their mental health; 2 open questions to further investigate the abovementioned topics.

ii. **Entourage**: 1 item to explore what competencies they need to support athletes' mental health; 1 item to explore what competencies they need to support their own mental health; 2 open questions to further investigate the abovementioned topics.

## Data collection in the Netherlands

- **Who?** An online survey was administered to athletes and entourage members in the Netherlands and five other European countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.
- **When?** Data was collected between May and September 2023.
- **How?** Participants received an online link by email to fill out the survey.
- **Survey link:** https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

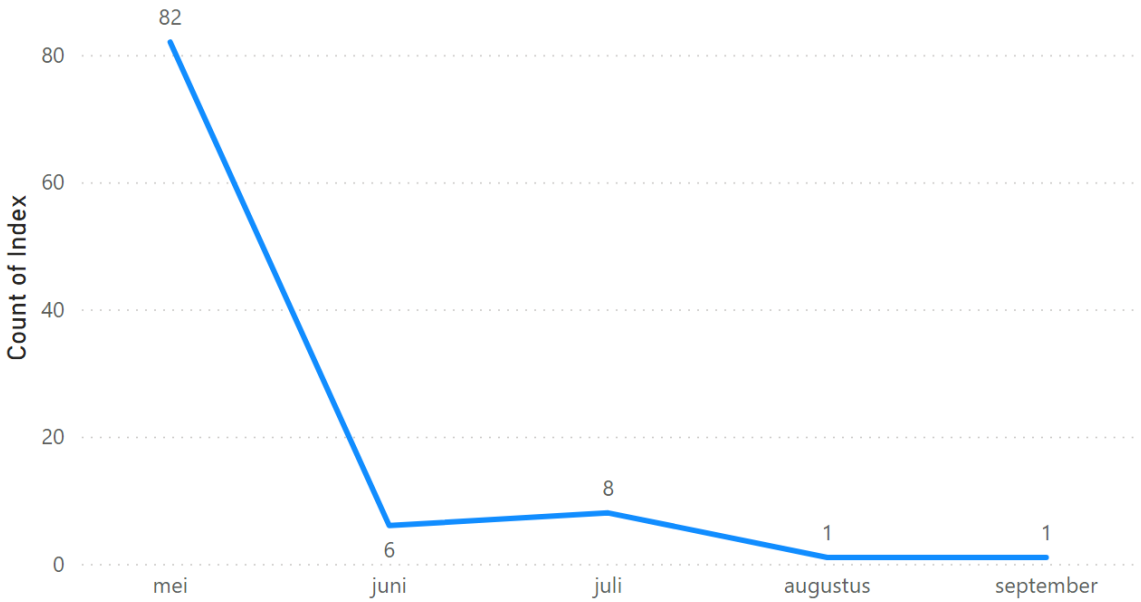


*Figure 1. Complete responses collected (N = 98) within the Netherlands between May and September 2023.*

## Participants

**Sample characteristics**

- In total 98 participants participated in the Netherlands; of which 9 athletes (9%) and 89 entourage members (91%).
- Slightly more females (56%) participated compared to males (44%). In the European sample males and females were equally distributed (49% females, 51% males).
- In contrast to the other European countries, the Netherlands had the largest sample of entourage members (respectively, 49% entourage members and 51% athletes). Figure 2 presents the European distribution of athletes and entourage members per country.

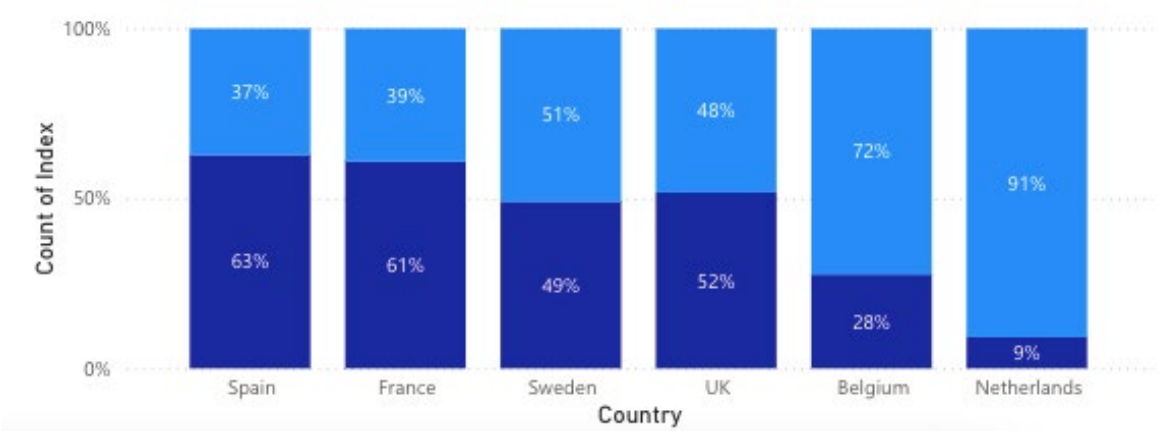


*Figure 2. Characteristics of the European sample.*

## Athlete sample (N = 9; 9% of full sample)

**Key findings athlete sample**

In total, 9 athletes completed the survey. The athlete sample characteristics are displayed in the figures below.

- The sample included 8 females (89%) and 1 male participant (11%). The age ranged from 19 to 35 years, with a mean age of 26.7 years (SD = 4.3 years).
- The sample included 8 korfball players and 1 ice skater. All athletes participated at World and Olympic level. No Paralympic athletes participated in the survey.
- 8 out of the 9 athletes combined their athletic career with education and/or work. 1 athlete did not have a dual career. They all received income from professional sports. 8 out of 9 had a contract with the sports federation, 1 with a private club/organisation and 1 from another organisation.
- 7 out of 9 athletes were able to train *and* compete, whereas 2 out of the 9 athletes were able to train but not to compete.
- Compared to the European sample, the Netherlands had the smallest sample of athletes participating in the survey. Thereby, almost all athletes played korfball. In the international sample there was more variation of different sports.

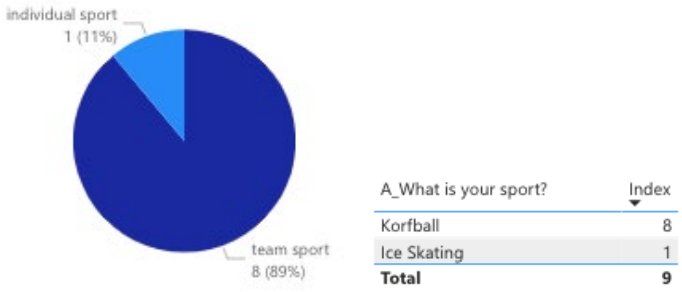


*Figure 3. Sport characteristics of the Dutch athlete sample*

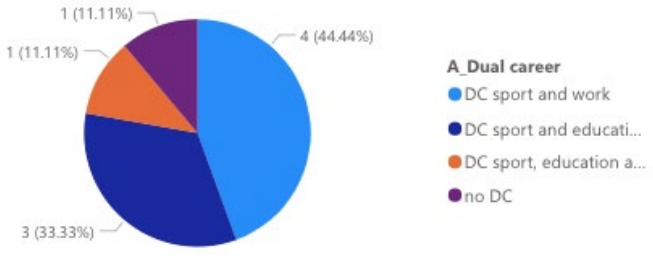


*Figure 4. Dual career characteristics of the Dutch athlete sample*

## Entourage members sample (N = 89; 91% of full sample)

In total, 89 entourage members completed the survey. The entourage members sample characteristics are displayed in the figures below.

- 99% (N = 88) belonged to the athletic domain (e.g., coaches, assistant coaches, psychologists, physicians, technical directors), 1% (N = 1) belonged to the educational/vocational domain (e.g., teachers, dual career support providers, boarding school tutors), and 0% (N = 0) to the personal domain (e.g., parents, partners, housemates, friends). Figure 5 shows an overview of the distribution of working areas of the European sample.

- Table 1 shows an overview of the Dutch entourage members roles'. Most of them were physician (18%), physiotherapists (17%) and nutritionists (16%).

- Most of the entourage members work with Olympic summer sports (N = 56; 63%) and a quarter of the entourage members work in multiple sports (N = 25; 28%) (see figure 6).

- About a third of them work with both individual and team sports, a third works with individual athletes and another third works with team sport athletes (see figure 7).

- 72% of the entourage members are working part-time in elite sports and 28% of them are working full-time in elite sports.

- More than 57% of the Dutch entourage members works both with senior/elite athletes and youth/talented athletes.

| E_Primary role in the entourage | Count of Index | %GT Count of Index |
|---|---|---|
| **Athletic domain** | **88** | **98.88%** |
| Physician | 16 | 17.98% |
| Physiotherapist | 15 | 16.85% |
| Nutritionist | 14 | 15.73% |
| Data analyst | 10 | 11.24% |
| Other (please specify) | 8 | 8.99% |
| Sport psychologist | 8 | 8.99% |
| Strength and conditioning coach | 7 | 7.87% |
| Clinical (sport) psychologist | 5 | 5.62% |
| Performance lifestyle coach | 3 | 3.37% |
| Assistant coach | 1 | 1.12% |
| Coach | 1 | 1.12% |
| **Educational / vocational domain** | **1** | **1.12%** |
| Dual career support provider | 1 | 1.12% |
| **Total** | **89** | **100.00%** |

*Table 1. Overview of the primary roles of the Dutch entourage members*

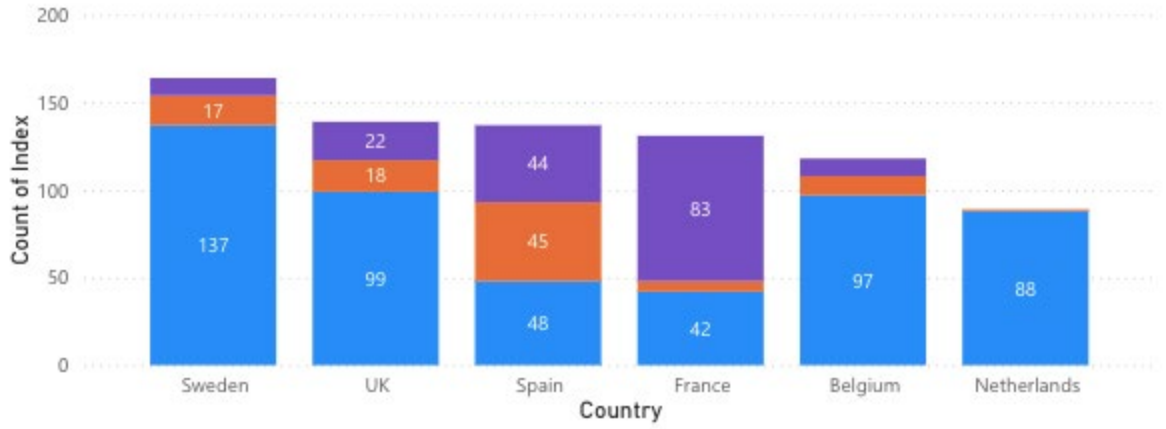


*Figure 5. Distribution of the working areas for the European sample (with in blue: sport domain, in orange: educational/vocational domain and in purple: personal domain.*

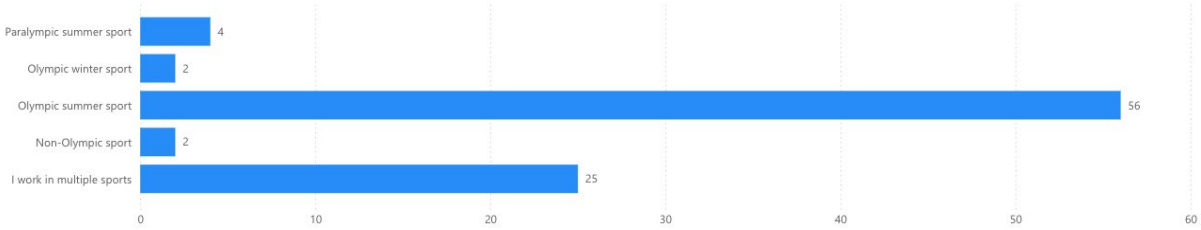


*Figure 6. Overview of the main working areas of the Dutch entourage members*

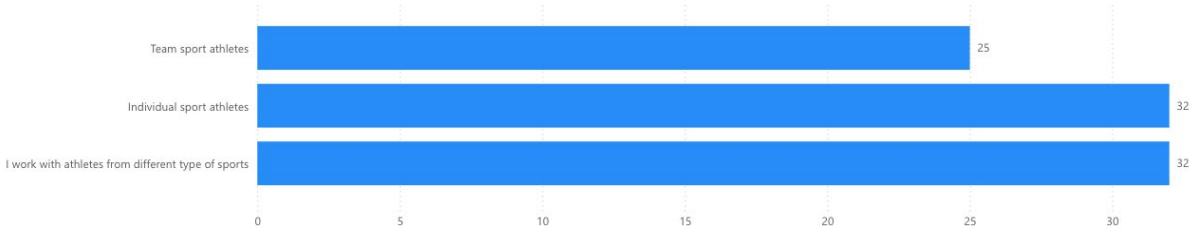


*Figure 7. Overview of the types of sports in which Dutch entourage members work*

## Results

**Study constructs:**

a. Mental health
b. Mental ill-health
c. Mental health literacy
d. Perceived support (athletes)
e. Provided support (entourage)
f. MH promotion competencies

**Link between study constructs:**

a. Correlation between study constructs
b. Key predictors of MH

## Mental health

***MENTAL HEALTH CONTINUUM – SHORT FORM (MHC-SF).***

Mental health was measured using the Mental Health Continuum Short form (MHC-SF), developed by Keyes (2002).

- The scale has 14 items
- The scores are on a 6-point scale (0 – never; 5 – Every day)
- Three subscales: emotional well-being, social well-being, and psychological well-being
- It can be scores according to the three subscales + the general well-being scale, or according to the Mental Health Continuum (Languishing, moderate MH, Flourishing)

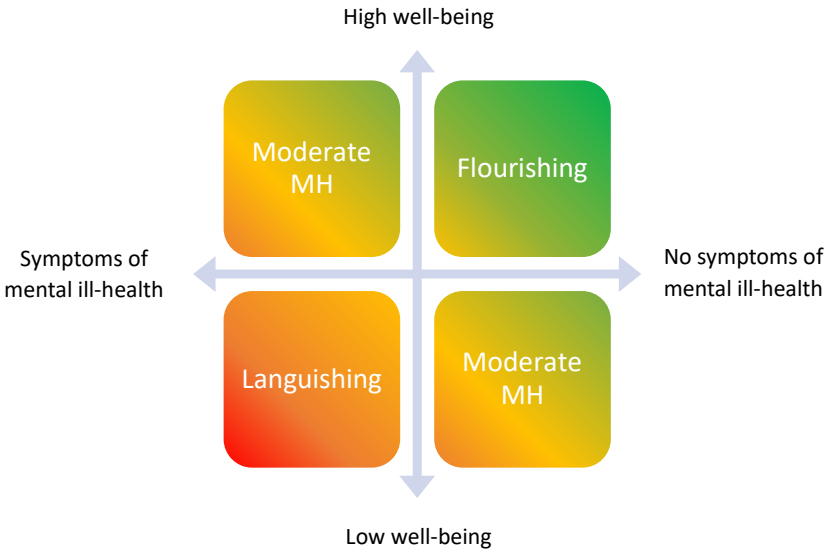


*Figure 8. Mental health dual continuum model (Keyes, 2002)*

**KEY FINDINGS**

Detailed results are displayed in the figures below.

- In the Dutch athlete population, 44,5% were categorised as flourishing, 44,5% with moderate mental health, and 11% as languishing. Whereas in the European athlete sample, 48% were categorised as flourishing, 47% with moderate mental health, and 5% as languishing.

- In the Dutch entourage population, 54% were categorised as flourishing, 45% with moderate mental health, and 1% as languishing. While in the European entourage member sample, 53,34% were categorised as flourishing, 42,42% with moderate mental health, and 4,24% as languishing.

- Looking at the individual items related to mental health (figure 10), we see that Dutch entourage members score higher on almost all items with the exception of two items: "the belief that people are basically good" (athletes: 2.81 vs. EM: 3.11) and "the belief that you had something important to contribute to society" (athletes: 3.22 vs. EM: 3.03). Higher scores mean that they experience this belief more often.

- Both athletes as entourage members score low on the item "that our society is a good place, for all people" (athletes: 1.78 and EM: 2.09). The European sample also scored lower on this item than on other items (athletes: 2.3 and EM score 2.1).

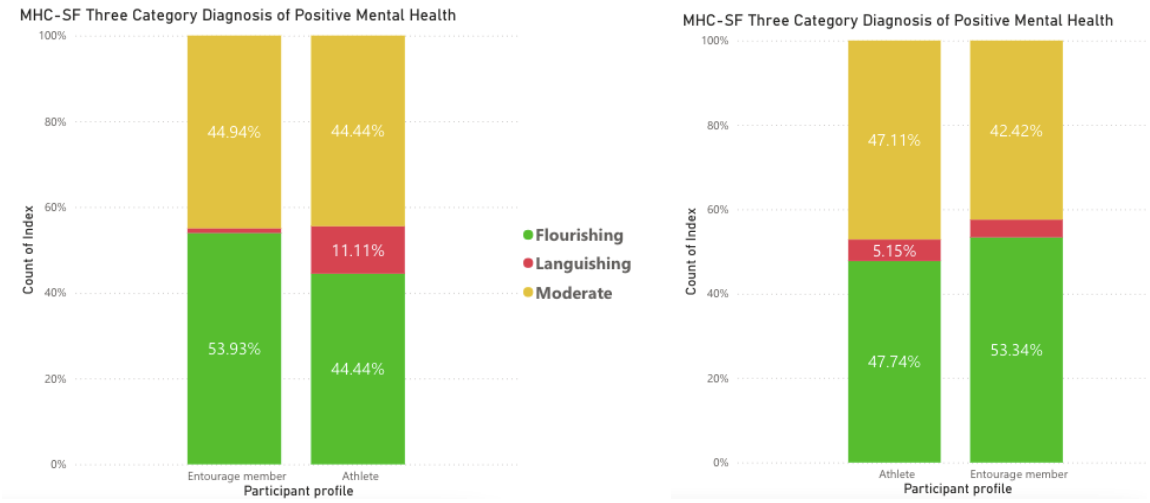


*Figure 9. Overview of the mental health categories for athletes and entourage members for the Netherlands (left) and Europe (right).*

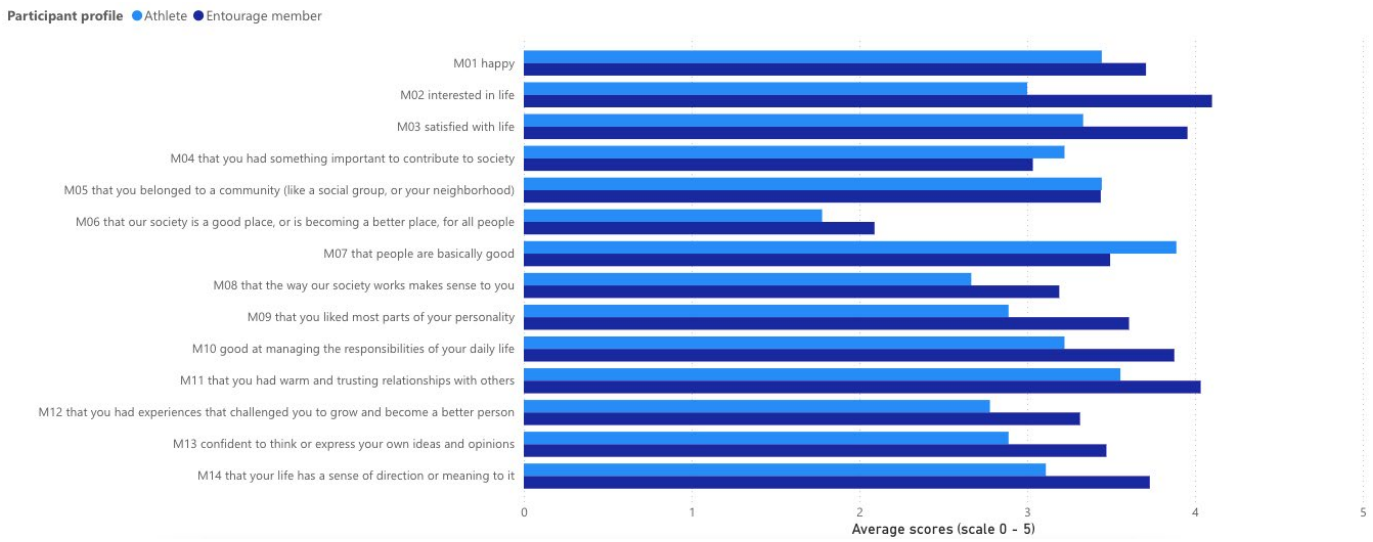


*Figure 10. Comparison of the scores on individual items of mental health for Dutch athletes and entourage members.*

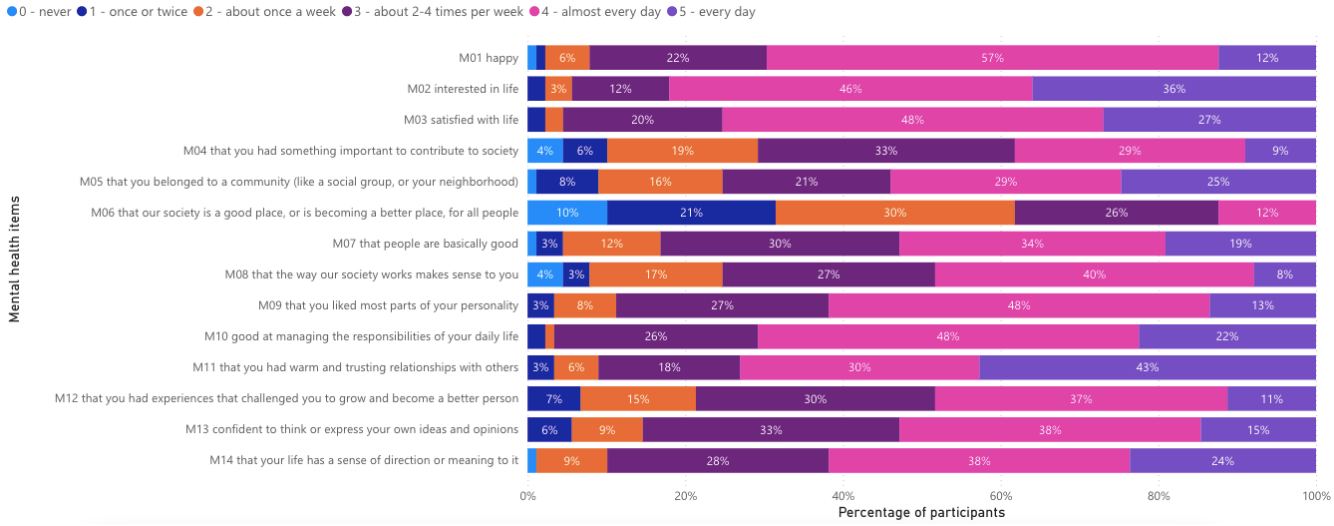


*Figure 11. In-depth analysis of entourage members' answer of mental health items*

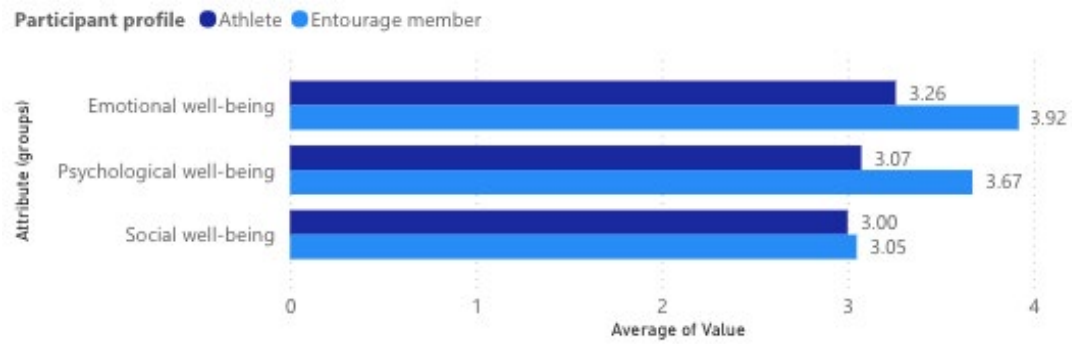


*Figure 12. Overview of well-being scores of Dutch athletes versus entourage members*

**Patient-Health Questionnaire (PHQ-9)**

The PHQ-9 is a 9-item scale that measures symptoms of depression in the last two weeks (e.g., "little interest or pleasure in doing things"). Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 27.

**Generalized Anxiety Disorder Questionnaire (GAD-7)**

The GAD-7 is a 7-item scale that measures symptoms of generalized anxiety disorder. Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 21.

**KEY FINDINGS**

Detailed results are displayed in the figures below.

**ANXIETY AND DEPRESSION:**

- In the **athlete** population, 55.5% reported no symptoms of depression, 44,5% reported mild symptoms, 0% reported moderate symptoms, 0% reported moderately severe symptoms, and 0% reported severe symptoms. As for anxiety, 44.4% reported no symptoms of anxiety, 33.3% reported mild symptoms, 22.2% reported moderate symptoms, and 0% reported severe symptoms.

- In the **entourage** population, 76.4% reported no symptoms of depression, 21.35% reported mild symptoms, 2.25% reported moderate symptoms, 0% reported moderately severe symptoms, and 0% reported severe symptoms. As for anxiety, 57% reported no symptoms of anxiety, 34% reported mild symptoms, 8% reported moderate symptoms, and 1% reported severe symptoms.

- In comparison to the European population, the Dutch athletes and entourage members have lower scores on both anxiety and depression.

  % No anxiety:
  - Dutch athletes = 44.4% vs. European athletes: 33.6%
  - Dutch entourage members = 57.1% vs. European entourage members = 41.7%

  % No depression:
  - Dutch athletes = 55.6% vs. European athletes: 42.2%
  - Dutch entourage members = 76.4% vs. European entourage members = 60.8%

- There is not only a bigger percentage with no anxiety and no depression, but also the rates of severity of anxiety and depression are lower for the Dutch sample in comparison to the European population (see figure 13, 14, 16 and 17).

- In general, Dutch athletes score higher on all individual items of anxiety than Dutch entourage members (see figure 15). The difference between their scores is the highest for the item: "I'm afraid if something awful is happening" (athletes = 0.78 vs. entourage

members = 0.17)

- Looking at the individual scores for depression, it is notable that athletes scores remarkable higher on the item “feeling tired or having little energy” (athletes = 1.22 vs. entourage members = 0.85). By contrast, entourage members score notable higher than athletes on the item “having trouble concentrating on things such as reading the newspaper or watching television” (athletes = 0.11 vs. entourage members = 0.45).

**DIAGNOSIS AND HELP-SEEKING**

- Regarding diagnosis, 78% of **athletes** (7 out of 9) indicated to have received professional help in relation to their mental health, and none of them (0%) reported having received a formal diagnosis of mental health disorder. 11% (n = 1) reported experiencing mental health problems at the time of filling out the survey. 56% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by athletes was 18.4 years old.

- In the **entourage** sample, 39% indicated to have received professional help in relation to their mental health, and 10% reported having received a formal diagnosis of mental health disorder. 4% reported experiencing mental health problems at the time of filling out the survey. 27% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by entourage members was 25.7 years old.

- All results related to diagnosis and help-seeking are comparable to the European population.

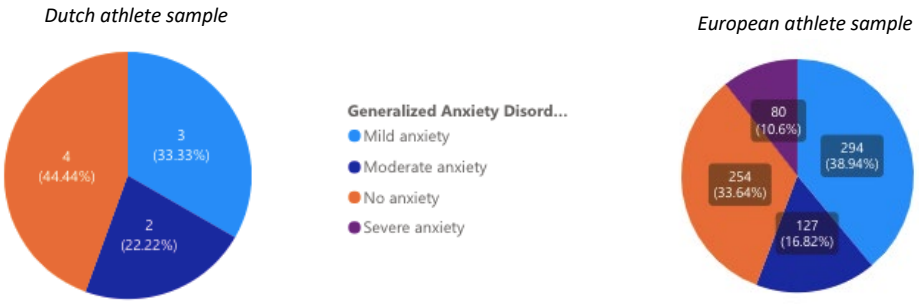


*Figure 13. Overview of athletes’ anxiety scores for the Netherlands (left) and Europe (right).*

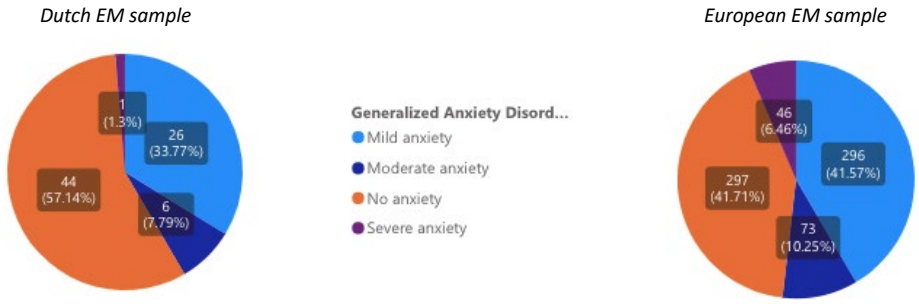


*Figure 14. Overview of the anxiety scores for entourage members for the Netherlands (left) and Europe (right).*

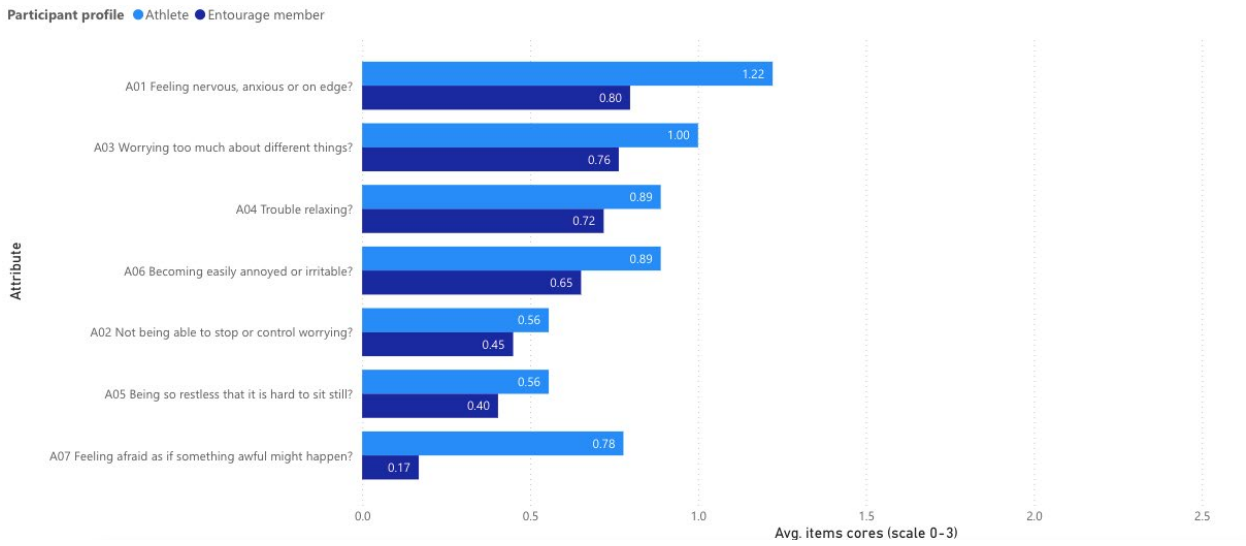


*Figure 15. Scores on the individual items of anxiety for Dutch athletes and entourage members*


*Figure 16. Overview of athletes' depression scores for the Netherlands (left) and Europe (right).*


*Figure 17. Overview of the depression scores for entourage members for the Netherlands (left) and Europe (right).*

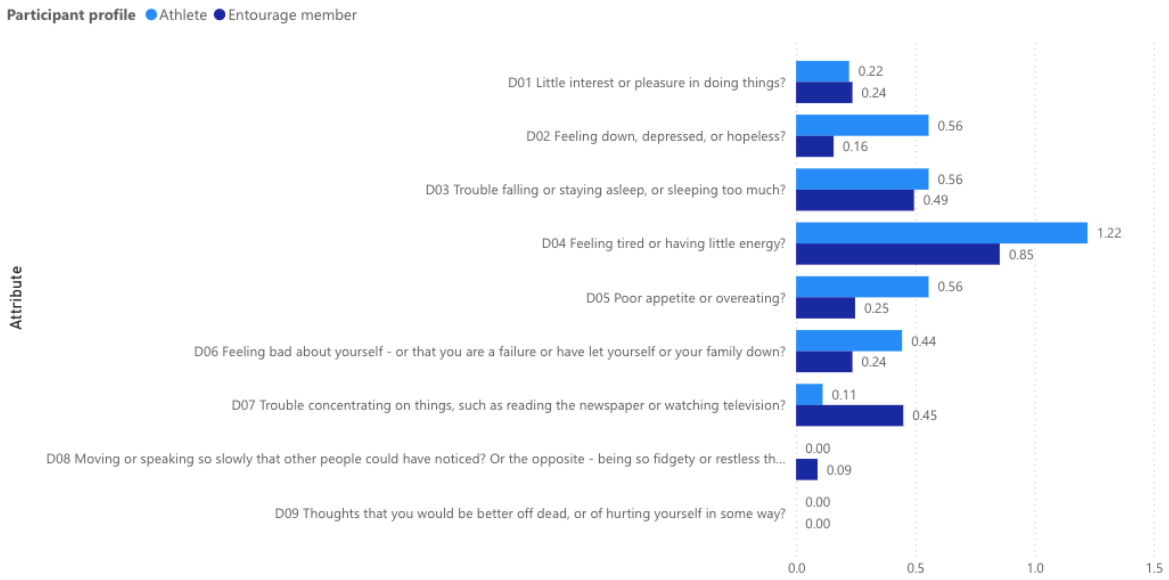


*Figure 18. Scores on the individual items of depression for Dutch athletes and entourage members*

Mental Health Literacy Questionnaire

This scale consists of 12 items and was designed to explore different topics related to mental health, both in a positive (e.g., "doing something meaningful or enjoyable on a regular basis contributed to good mental health") and a negative light (e.g., "if I had a mental health problem I would try to hide it from others"). Respondents rate each item on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the total score representing the level of mental health literacy: the higher the score, the higher the level of mental health literacy. When calculating the total score, the negative items (item 9, 10 and 12) were scored in reverse. The total score ranges from 12 to 60.

**KEY FINDINGS**

- Dutch entourage members identified slightly higher levels of mental health literacy (mean = 40.5) than Dutch athletes (mean = 37.9). This is in line with the findings of other countries where entourage members in general also score higher on mental literacy (see figure 19).

- Looking at the individual items (see figure 20), Dutch athletes score remarkable higher than entourage members on the item "If I had a mental health problem, I would try to hide it from others" (athletes = 2.89 vs. entourage members = 1.81). At the same time, athletes score lower on the item "I am confident that I know how and where to seek information about mental health" (athletes = 2.89 vs. entourage members = 1.81). Last, Dutch athletes score higher than entourage members on the item "Seeing a mental health professional means that you are not strong enough to manage you own difficulties" (athletes = 1.11 vs. entourage members = 0.38). This means that athletes are more likely to hide their mental health problems, are less confident how and where to find information regarding their mental health and they stronger belief that seeing a mental health professional means that they not capable of managing their own business.

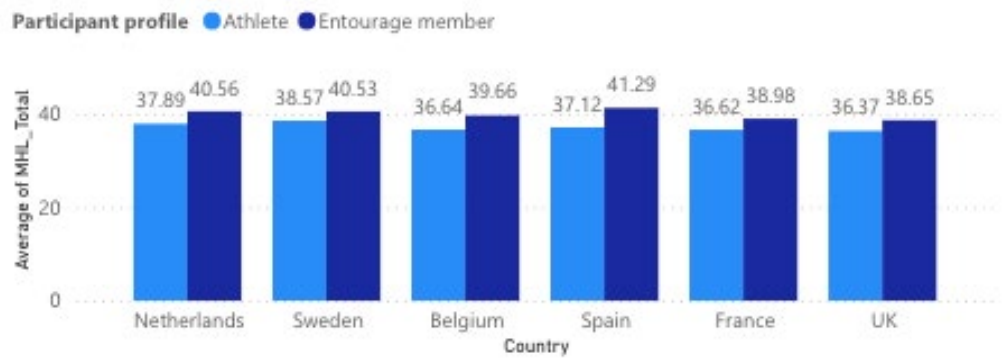


*Figure 19. Mental health literacy scores for athletes and entourage members for each country*

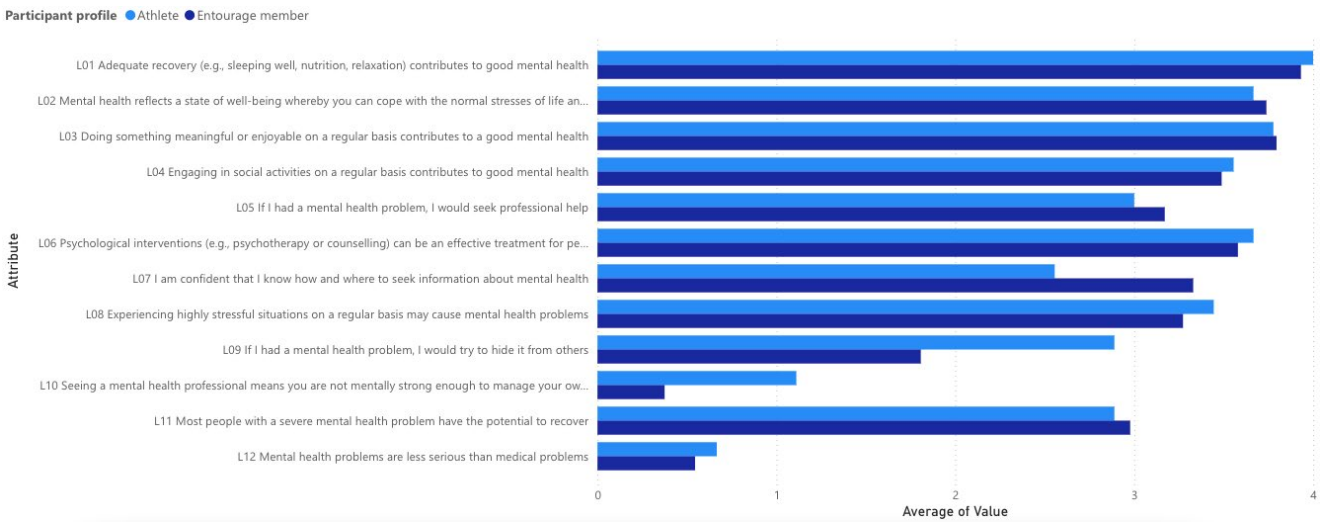


*Figure 20. Mental health literacy item scores for Dutch athletes and entourage members*

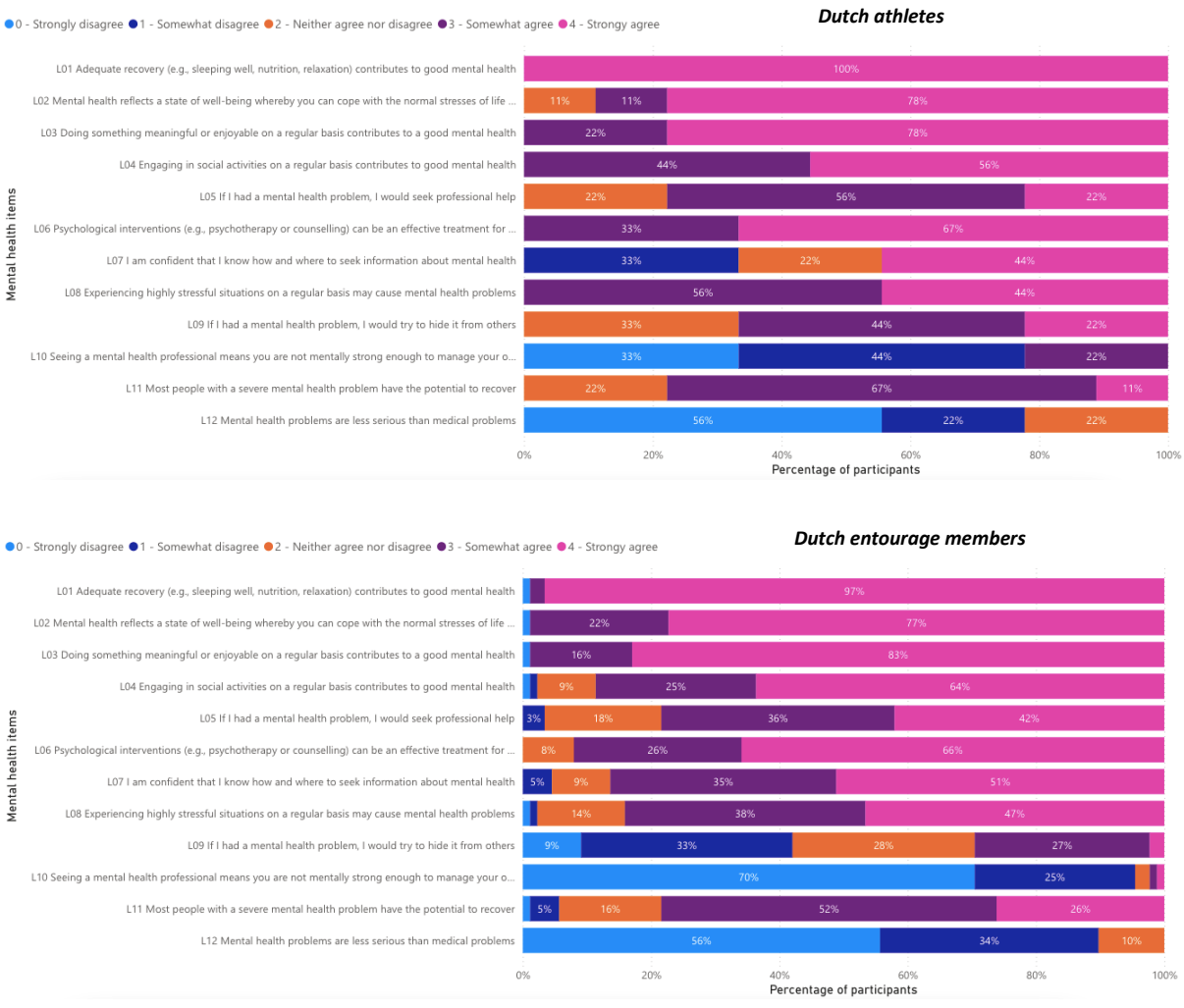


*Figure 21. Frequency of mental health literacy item scores for Dutch athletes (above) and entourage members (below)*

## Perceived support (athletes)

**Adapted version of the General Help-Seeking Questionnaire (GHSQ)**

The GHSQ is a 1-item scale used to investigate how likely it is that athletes would receive appropriate mental health support from different persons in the entourage. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Dutch athletes are most likely to seek help in their personal environment, mainly from their partners (score 6.78), parents (score 6.44) and friends (6.13) or somewhere else outside the athletic and educational domain (other = 7.0). One athlete said that by other he/she meant a sister (which is also the private domain), but other athletes did not fill in what they meant with. This is in line with the findings of the European athlete population.
- Within the sports environment, athletes are most likely to seek mental help from a sports psychologist (score = 6.78), mental coach (score = 5.78) or clinical psychologist (5.38). Athletes are least likely to go to someone in the educational/vocational domain.
- Interestingly, within the multidisciplinary coaching staff, Dutch athletes are most likely to go to the assistant coach, while assistant coaches report having fewer competencies to deal with mental health problems.

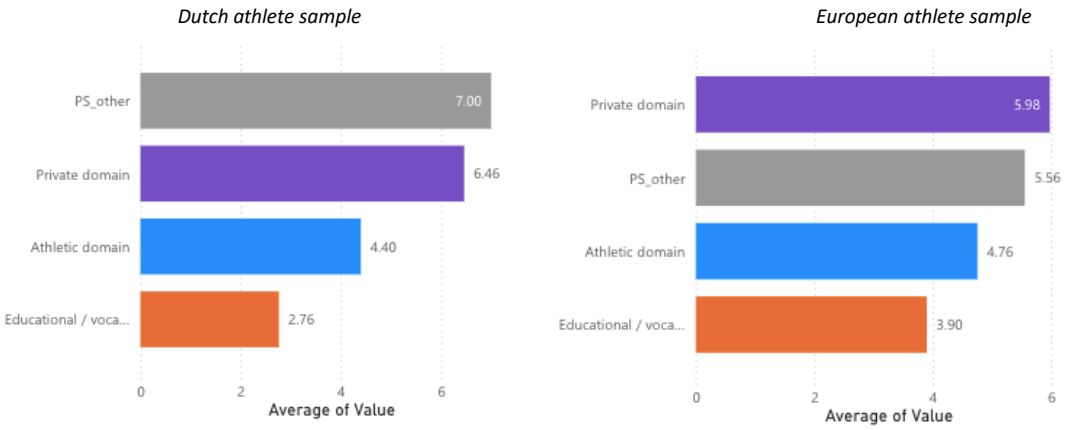


*Figure 22. Athletes' rating for perceived support for mental well-being from different domains*

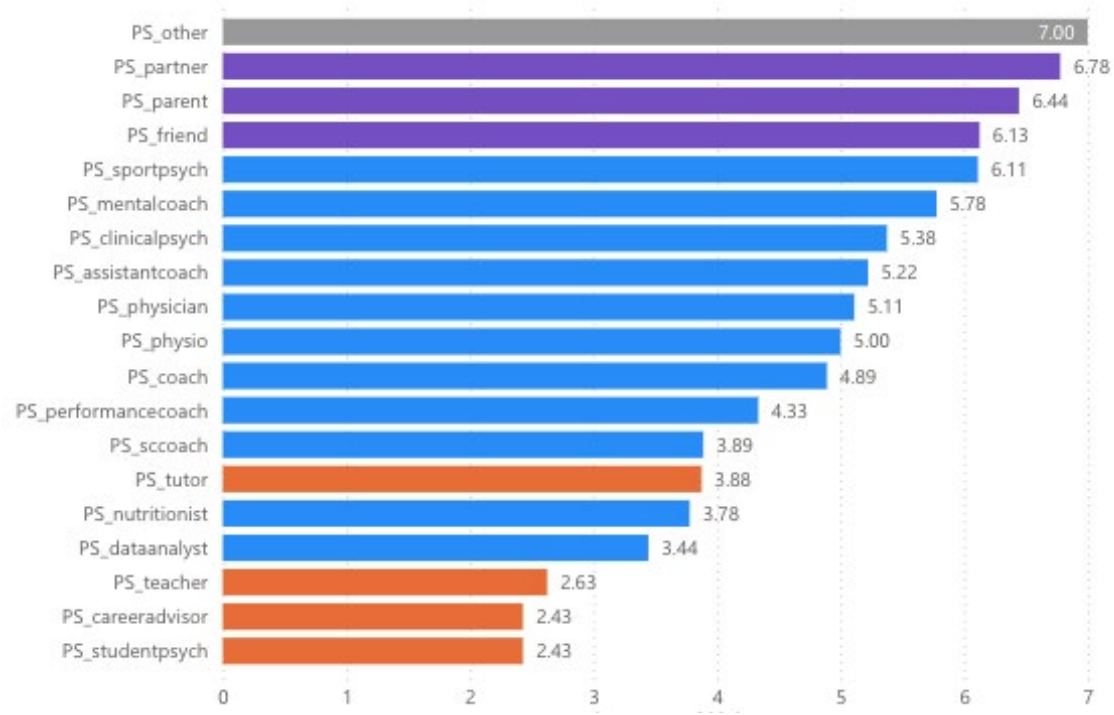


*Figure 23. In-depth analysis of Dutch athletes' rating for perceived support for mental well-being from different entourage members*

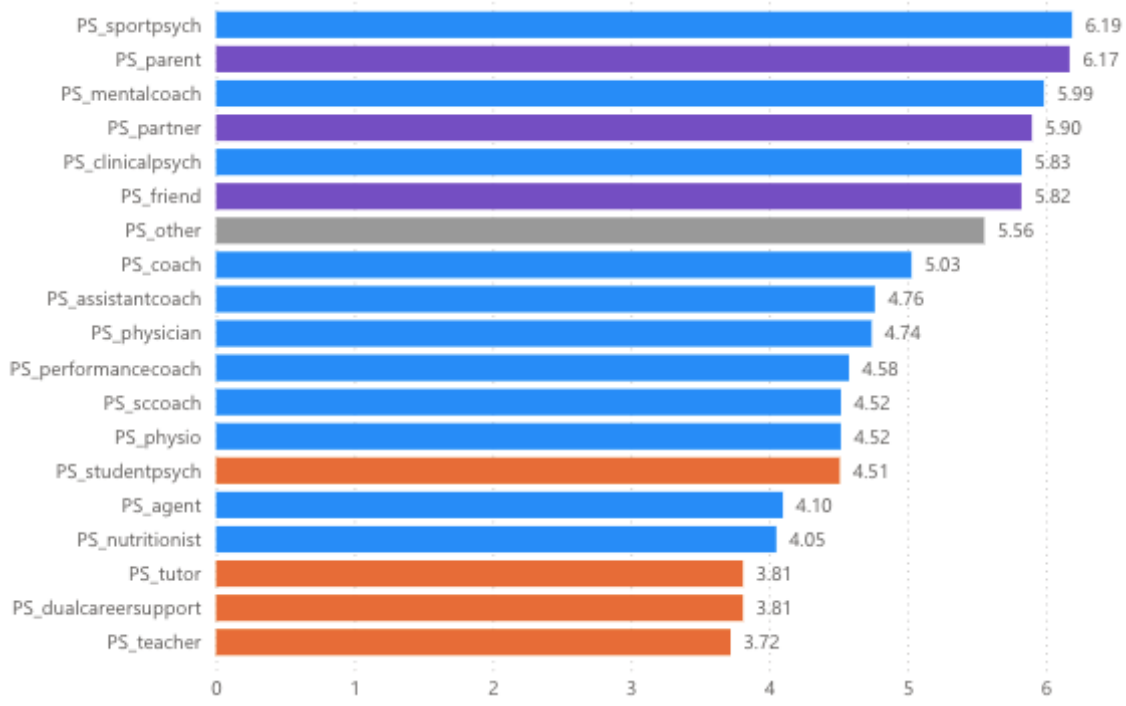


*Figure 24. In-depth analysis of European athletes' rating for perceived support for mental well-being from different entourage members*

## Mental health support provision (entourage)

One question aimed to investigate entourage members' confidence in providing adequate support to athletes dealing with mental health problems. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Entourage members were asked how likely it is that they would be able to offer appropriate mental health support to athletes. The scores are based on the average scores of the survey participants that declared working in each role (figure 25).
- Clinical psychologists feel most able to provide appropriate help with athletes' mental health (7.0), followed by sport psychologists (6.5), physicians (6.5) and performance lifestyle coaches (6.33).
- Assist coaches feel least able to offer appropriate mental health support (3.0).
- In the European sample (figure 26), there are great differences by country as to which entourage members feel able to provide appropriate help with athletes' mental health. No single conclusion can be drawn at the European level.

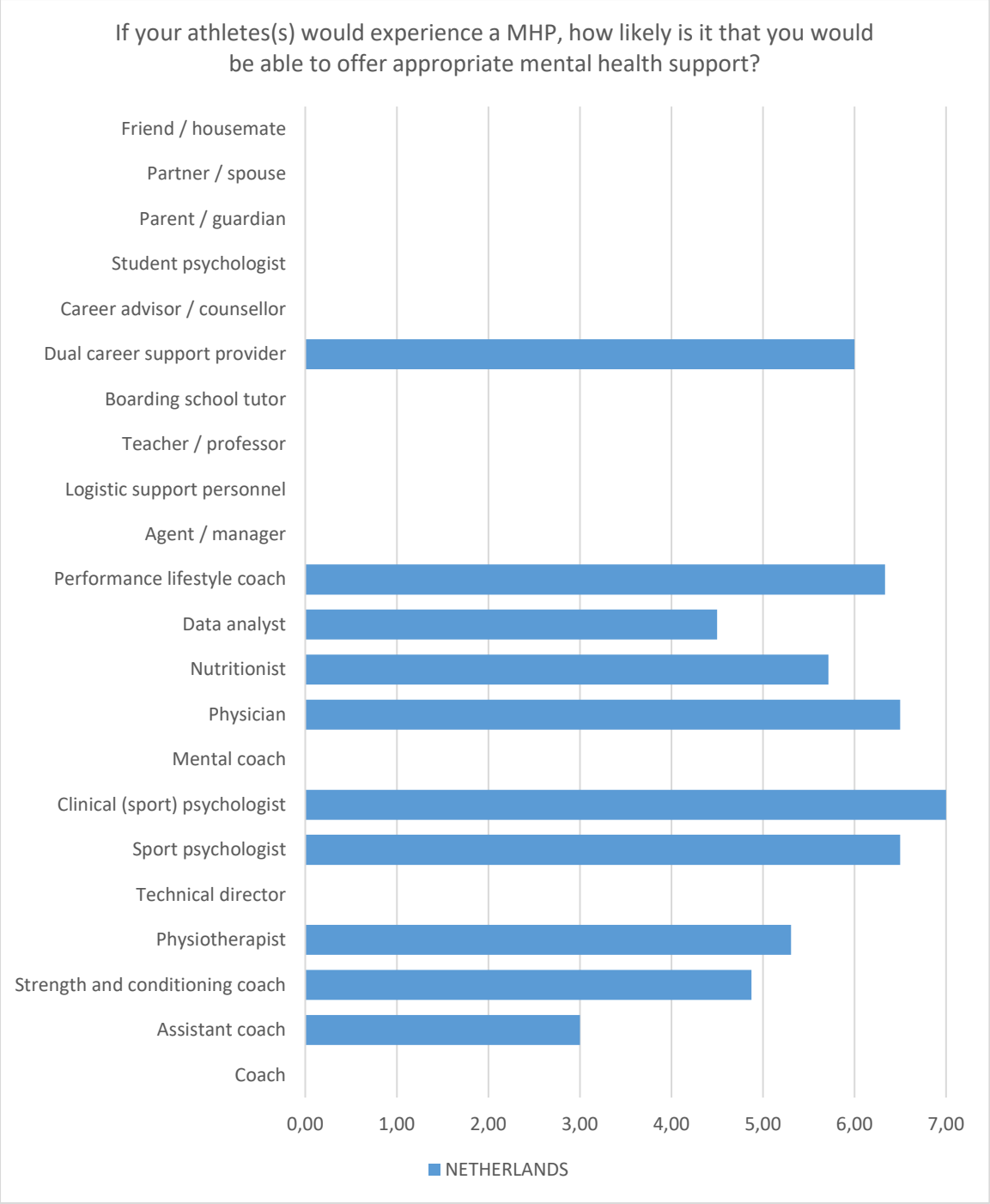


*Figure 25. Overview of Dutch entourage members' own belief to be able to help athletes with mental health issues.*

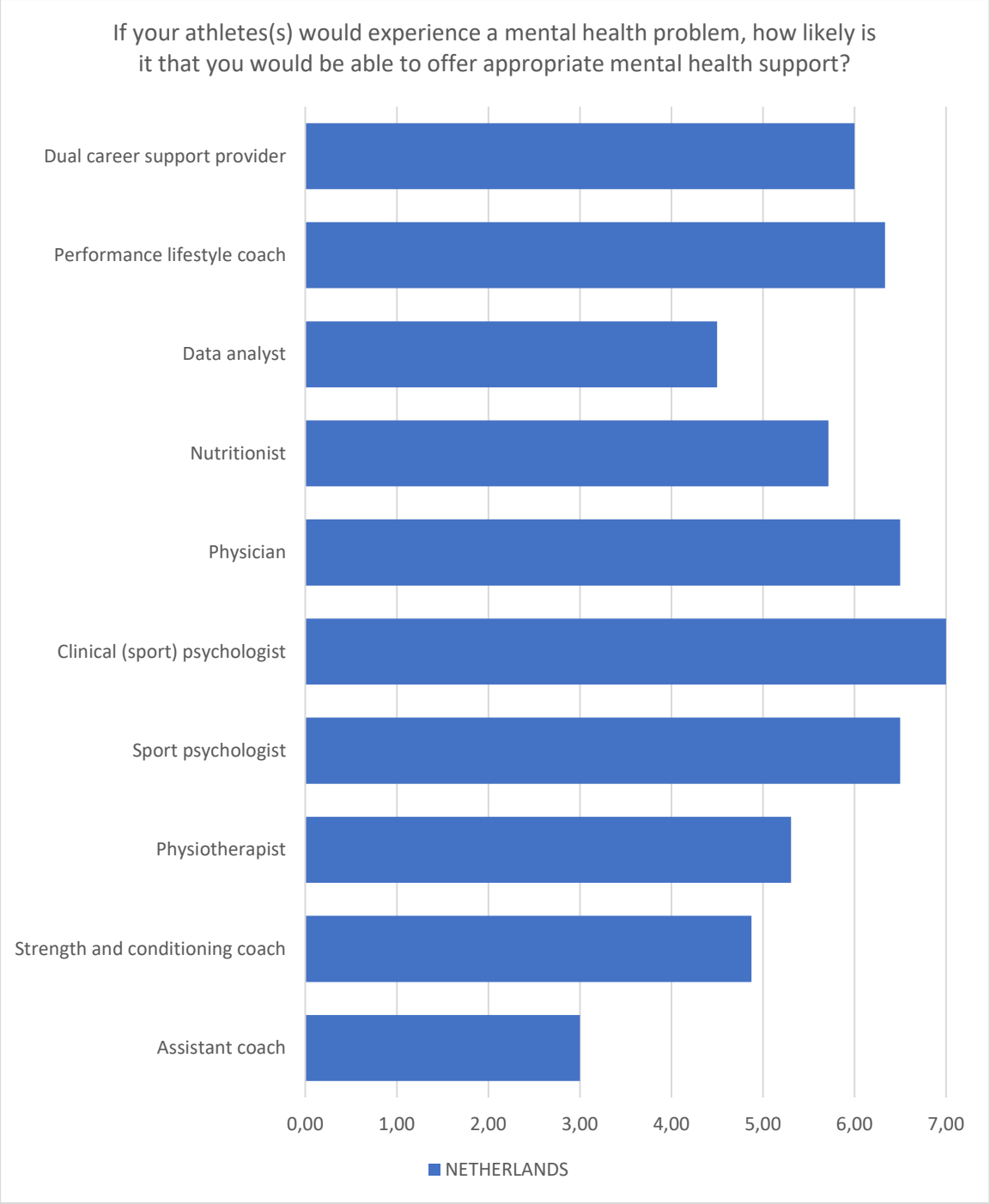


*Figure 26. Overview of European entourage members' own belief to be able to help athletes with mental health issues.*

**KEY FINDINGS**

- Athletes and entourage members were asked to select the mental health promotion competencies that they felt were important to maintain mental well-being.

- The top three most important competencies according to athletes:
  - Recognizing signs of mental health (89%)
  - Being empathic and actively listening to athletes who are experiencing mental health problems (89%)
  - Understanding of mental health and mental health problems (78%)
  - Knowing how to raise the topic of mental health with athletes (78)

- The top three most important competencies according to entourage members:
  - Recognizing signs of mental health (98%)
  - Knowing how and when to refer athletes to professional support (91%)
  - Being empathic and actively listening to athletes who are experiencing mental health problems (89%)

- None of the athletes nor entourage members reported “none, it is not their role to support the mental health of athletes”, which implies that all participants think it is the role of entourage members to have competencies related to maintaining athletes’ mental health.

- All findings are roughly consistent with the European sample.

- The percentages of entourage members are generally higher than for athletes. Among entourage members, all items score higher than 60%, implying that they generally consider all the listed competencies more important than athletes who consider some specific competencies more important.

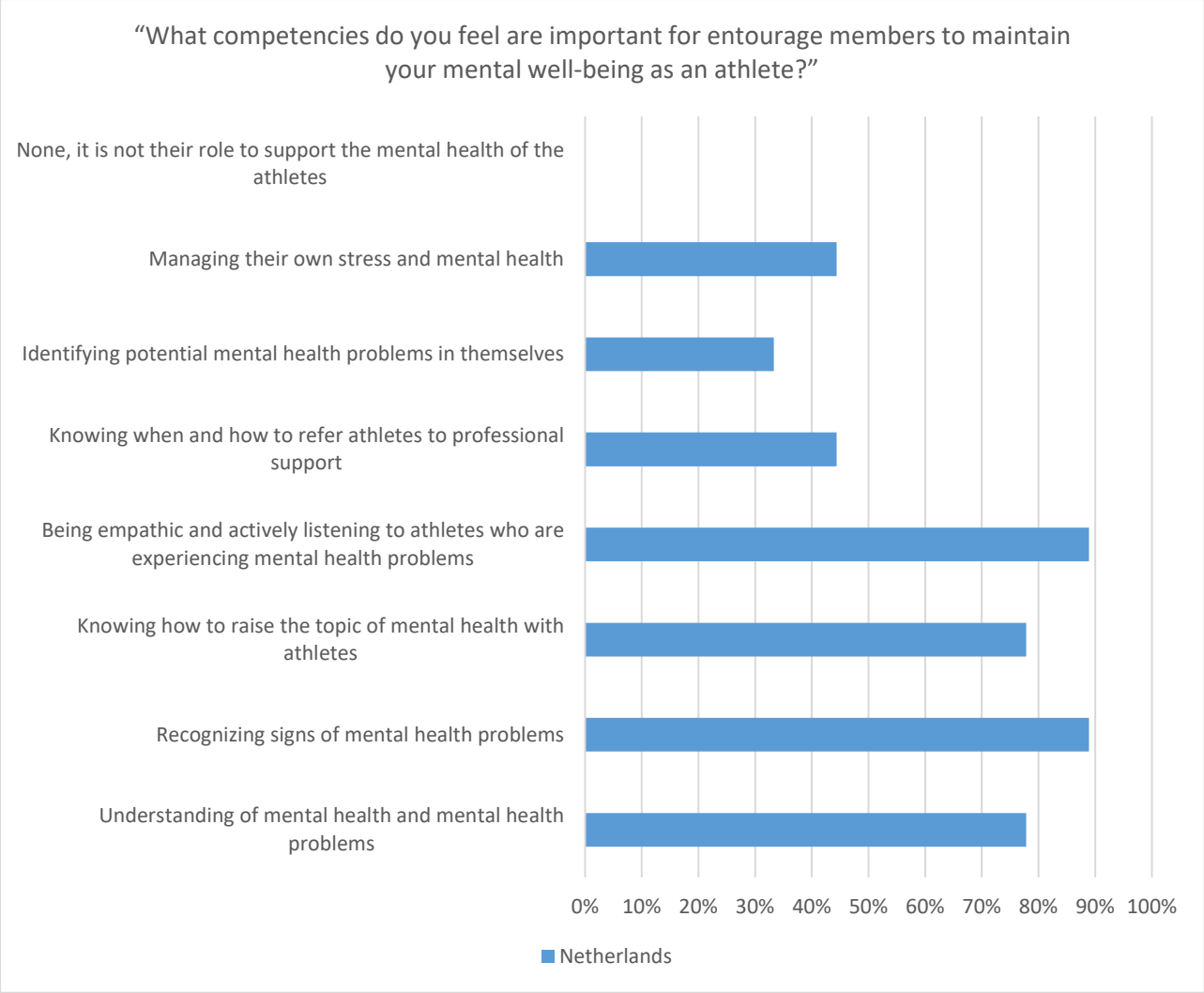


*Figure 27. Athletes' perspective of entourage members required competencies to maintain athletes' mental health.*

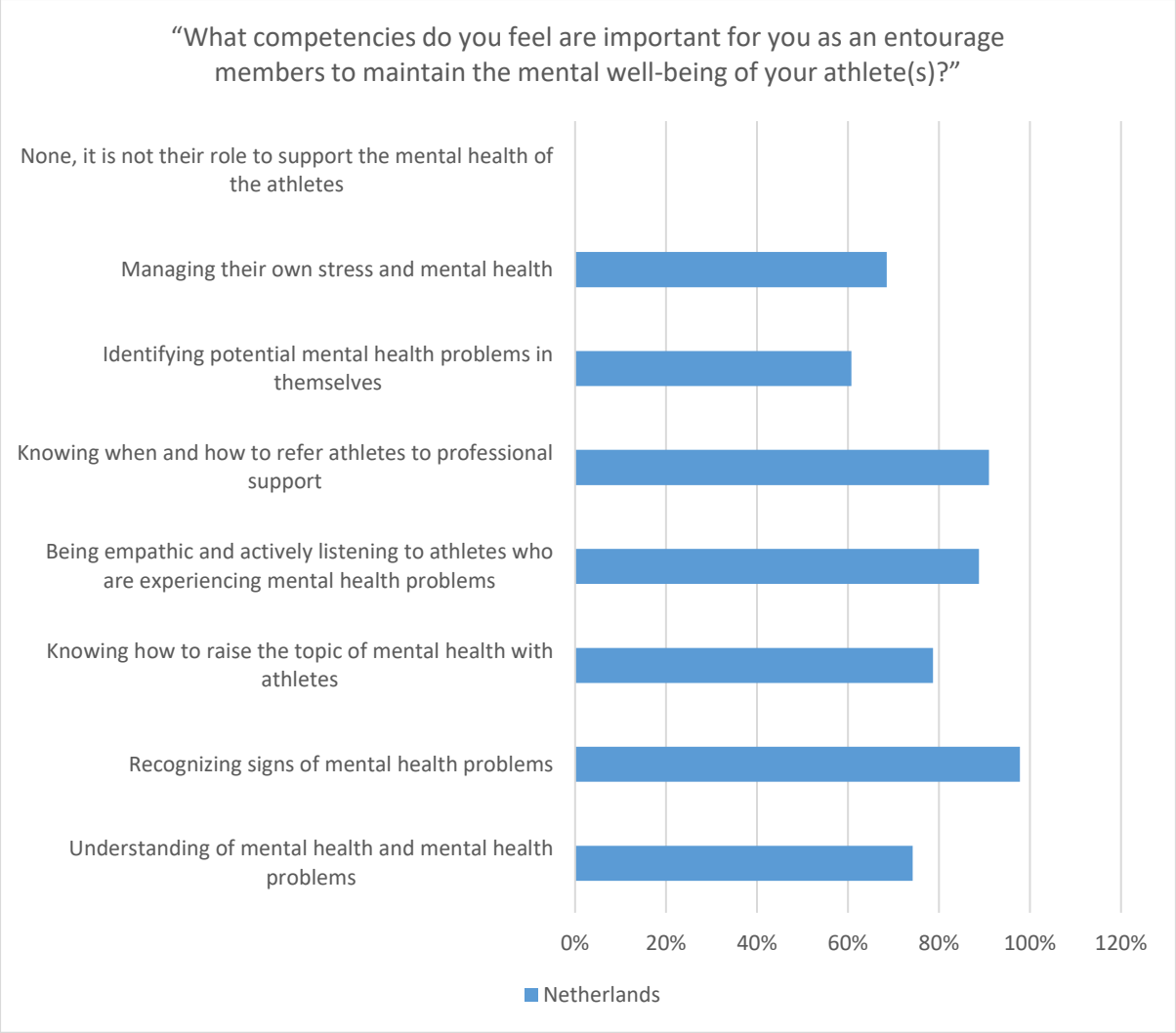


*Figure 28. Entourage members perspective of their required competencies to maintain athletes' mental health.*

## Link between study constructs

a. Correlation between study constructs
b. Key predictors of MH

**KEY FINDINGS**

**MENTAL HEALTH & WELL-BEING – ATHLETE SAMPLE**

The low number of participating athletes does not allow us to perform regression analyses on the athletes' sample. Therefore, in this section we focus only on the correlations of the entourage members' data.

**MENTAL HEALTH & WELL-BEING – ENTOURAGE SAMPLE**

- There is a significant correlation between general well-being and anxiety is: r = -.473 (significant; p < .001)
- Between general well-being and depression, also a significant is found: r = -.457 (significant; p < .001)
- Predictors of **general well-being** are: low anxiety, high mental health literacy. With depression scores, gender, age, employment status, years of experience, and level of competition, the model explains 30% of the variance in well-being scores
- Predictors for **anxiety** are: high depression, low well-being. With gender, age, employment status, years of experience, and level of competition, the model explains 57% of the variance in anxiety scores.
- Last, high anxiety is a predictor for **depression.** With well-being scores, gender, age, employment status, years of experience, and level of competition, the model explains 56% of the variance in depression scores.

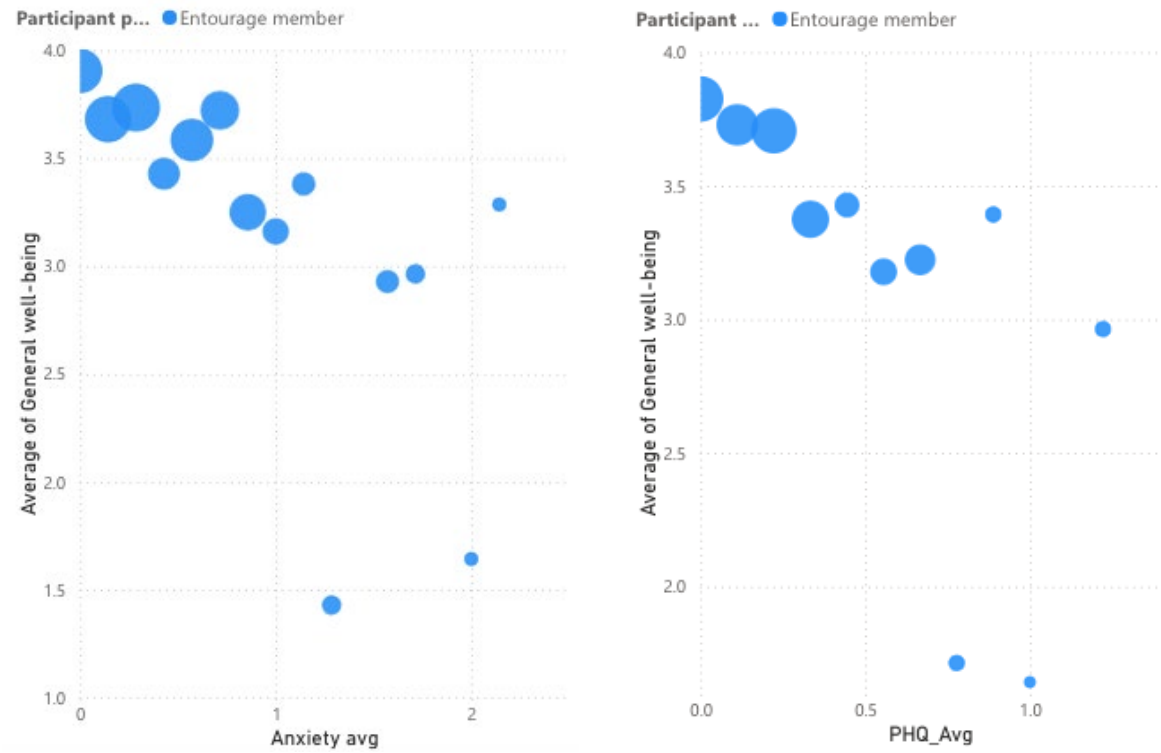


*Figure 29. Correlations between general well-being and mental ill-health in the entourage sample.*

## Qualitative data results

Athletes were asked (1) what skills entourage need to support their mental well-being, and (2) what skills athletes need to promote their own mental health.

Entourage members were asked what skills they need to (1) maintain the mental well-being of their athletes, and (2) maintain their own mental well-being.

**KEY FINDINGS**

**Athlete sample:**

A total of 3 athletes answered the open questions regarding mental health support and promotion.

- **Entourage members' skills to maintain athletes' mental well-being:** the themes emerging from the qualitative data collected are:
  - Being empathic
  - The need of sport psychologist at their club
  - Having someone to talk to

- **Athletes' skills to maintain their own mental well-being**: the themes emerging from the qualitative data collected are:
  - Recognizing signs of mental ill-health in themselves
  - Improving life balance
  - Improving active – rest balance

*Note that only 4 athletes completed the open-ended questions very briefly. Therefore, it is difficult to draw conclusions from these responses.*

**Entourage sample:**

A total of 53 entourage members answered the open questions regarding mental health support and promotion.

- **Entourage members' skills to maintain athletes' mental well-being:** the main themes emerging from the qualitative data collected are:

- (Inter)personal and professional skills:
  - Good listening skills
  - Being empathetic
  - Understanding and appreciation
  - Show confidence
  - Knowledge about mental health
  - Making mental health easy to discuss
  - Being able to monitor mental health well

- Organizational requirements:
  - Working in a professional organization

- Having a good network
- Working together as a team
- Sufficient time and (financial) resources for your tasks
- Being able to contact each other quickly and directly
- A safe environment where the mental health is talked about openly

- **Entourage members' skills to maintain their own mental well-being**: the main themes emerging from the qualitative data collected are:
  - Gain appreciation and understanding
  - Good work-life balance
  - Good cooperation with colleagues
  - Being able to indicate own limits
  - Safe working environment
  - Clear task and function description and feedback on performance
  - More time and (financial) resources

## Next steps

### Practical implications

**RECOMMENDATIONS FOR FUTURE RESEARCH:**

- Given that the number of athletes in the Dutch sample is so low, it is necessary to conduct more additional research on the mental health of Dutch athletes.
- Investigating risk and protective factors for entourage members' mental health
- What can be done at the organizational level to promote athletes' and entourage members' mental health?
- Longitudinal study of entourage members' mental health across the athletic season/multiple seasons

**RECOMMENDATIONS FOR PRACTICE:**

- Working towards an improvement of athletes' mental health literacy (e.g., better understanding of mental health and mental health problems, recognizing the signs of mental health problems, better knowledge of the psychological care routes)
- The research shows that Dutch athletes do not yet know where to turn with mental health issues. We will make the role and availability of mental health professionals in our network more visible so that athletes know where to go with mental health problems.
- Improve the mental health promotion skills of entourage members, also considering the needs of athletes (e.g., improving listening and communication skills, understanding mental health, recognizing signs of mental health problems)
- Raise awareness regarding the importance of managing own stress and mental health both for entourage members and athletes.

## References

European Commission. (2023). *Dual Careers for Mental Health*. Retrieved 13/03/2024 from https://erasmus-plus.ec.europa.eu/projects/search/details/622178-EPP-1-2020-1-BE-SPO-SCP

International Olympic Committee. (2023, 12/07/2023). *Measuring and Increasing Athletes' Mental Health Literacy (MHL): Cross-Cultural Validation of MHL Questionnaire and Evaluation of MHL Intervention Implementation*. Retrieved 13/03/2024 from https://olympics.com/ioc/news/2023-2025-advanced-olympic-research-grants-awarded

Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, *43*(2), 16.

Kroenke, K., Spitzer Rl Fau - Williams, J. B., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 8. https://doi.org/https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

MENTiS

Co-funded by the European Union

# NATIONAL REPORT FRANCE:

# MENTAL HEALTH OUTCOMES, LITERACY AND PROMOTION IN ATHLETES AND ENTOURAGE MEMBERS IN HIGH-PERFORMANCE SPORT

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*Laboratory Sport, Expertise, and Performance; French Institute of Sport (INSEP); Paris*

**April 2024**

This report is an output of the first work package of the Erasmus+ Sport project

"Promoting Mental health through the ENTourage in high-performance Sport" (MENTiS)

Loughborough University · INSEP · VUB Vrije Universiteit Brussel · NOC*NSF · UAB Universitat Autònoma de Barcelona

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## Consortium

We would like to express our gratitude to all the athletes and entourage members who participated in this study. We thank the entire MENTiS Consortium for their valuable contributions to the current study and report. The MENTiS consortium:

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| Nicky Van Rossem | Belgisch Olympisch en Interfederaal Comité (BOIC) |

## Key findings

- A total of 335 participants completed the survey, representing talented and elite athletes (N = 204; 61%) and entourage members of talented and elite athletes (N = 131; 39%). In particular, the term “entourage” refers to all the people associated with athletes.
- In the athlete population, 43% were categorised as flourishing, 53% with moderate mental health, and 4% as languishing.
- In the entourage population, 48% were categorised as flourishing, 45% with moderate mental health, and 7% as languishing.
- Overall, athletes tend to report lower scores of mental health literacy than entourage members. Entourage members from the educational domain (n = 6) showed higher scores of mental health literacy (mean = 41.17) than those from the athletic domain (n = 42; mean = 39.56) and those from the personal domain (n = 83; mean = 38.51).
- Overall, roles in the personal domain (e.g. parents, partners, friends) obtained the highest scores, meaning that athletes find it very likely to turn to them when facing mental health problems. Among the roles in the athletic domain, sport psychologists and mental coaches are ranked high, while data analysts, nutritionists and agents ranked the lowest.
- Mental coaches and sport psychologists tend to show the highest confidence in providing adequate support to athletes dealing with mental health problems.
- In the personal domain, roles such as parents, partners and friends also show high confidence in providing adequate support to athletes dealing with mental health problems.

## Aims of the MENTiS survey

An online survey was developed by the MENTiS consortium for athletes and entourage members on mental health outcomes, mental health literacy, and mental health promotion.

The aim of the MENTiS survey was to:

1. Investigate the **prevalence of mental health indicators** (e.g., wellbeing, anxiety, depression) in athletes and entourage members from 6 European countries (i.e., Belgium, France, the Netherlands, Spain, Sweden, UK).
2. Investigate the perceptions about **mental health support** and ideas about how to improve mental health support.
3. Investigate the **role of potential influencing factors on mental health** (e.g., mental health literacy, mental ill-health, gender; for athletes specifically: the presence/absence of injuries; for entourage specifically: domain of support, job characteristics).
4. **Create an evidence base** for the development of workshops and (online) resources targeting entourage members in order to enhance their competencies in mental health promotion (WP2 and WP3 of the MENTiS project).

The results obtained with the survey are displayed in a European report and 6 national reports (i.e. Belgium, France, the Netherlands, Spain, Sweden, UK).

More information on the MENTiS project can be found here: https://spmb.research.vub.be/mentis

## Procedure & instruments

An online survey was administered to athletes and entourage members in the six participating countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.

Before administering the survey, ethical approval was granted by the Ethical Committee of Human Sciences of the Vrije Universiteit Brussel. Parental consent was required before minors could complete the survey.

The survey targeted two different groups:

1. Talented and elite athletes
2. Entourage members of talented and elite athletes belonging to the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors), or the personal domain (e.g., parents, partners, friends).

Data was collected in two phases: the first phase was April – August 2023, and the second phase was September – October 2023. During this 2nd phase, additional data were collected in Belgium and UK. The phase of data collection (i.e. 1 and 2) was included as a variable in the analysis. After collecting the data, data was analysed in SPSS and displayed in PowerBI. All consortium members had access to the PowerBI report, and received their national raw data.

The online survey was developed in Qualtrics and made available in 6 languages (English, French, Dutch, Spanish, Catalan, and Swedish).

The survey is available here: https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

The survey's content differs slightly between athlete and entourage participants. It was divided into five sections:

1. **Demographics**:
   i. **Demographics for athletes**: gender, age, sport characteristics, level of competition, dual career, income, employment, injury.
   ii. **Demographics for entourage members**: gender, age, domain (athletic, educational/vocational, personal), role in the entourage, sport characteristics, athletes' career stage, level of competition, number of athletes they work with, employment status.
2. **Mental health and well-being**
   i. Mental Health Continuum – Short Form (MHC-SF), (Keyes, 2002): 14-item scale that investigates general well-being, as well as social, psychological and emotional well-being; 6-point Likert scale from 0 (*never*) to 5 (*everyday*). Scores range from 0 to 70.
   ii. Patient-Health Questionnaire (PHQ-9), (Kroenke et al., 2001): 9-item scale that measures depression; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 27.

iii. Generalised Anxiety Disorder Assessment (GAD-7), (Spitzer et al., 2006): 7-item scale that measures anxiety; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 21.

iv. 1 item about receiving professional psychological help.

v. 2 items about lifetime and point prevalence of mental health problems; 1 item about age of onset of mental health problems.

**3. <u>Mental health literacy</u>**

i. Mental Health Literacy Questionnaire, developed during the E+ Dual Careers for Mental Health project (European Commission, 2023), and currently being validated as part of the Olympic Studies Advanced Research Grant: "Measuring and Increasing Athletes' Mental Health Literacy (REFS)" (International Olympic Committee, 2023): 12-item scale that measures mental health literacy; 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 12 to 60.

**4. <u>Mental health support</u>**

i. **Perceived support (for Athletes)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of receiving support from different sources. The different sources in this case were an extensive list of roles in the entourage: for the roles that were not indicated, there was the possibility of adding an extra role in a text box. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

ii. **Support provision (for Entourage)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of offering adequate support to athletes facing mental health problems. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

**5. <u>Competencies in mental health support</u>**

i. **Athletes**: 1 item to explore what competencies entourage need to support athletes' mental health; 1 item to explore what competencies athletes' need to support their mental health; 2 open questions to further investigate the abovementioned topics.

ii. **Entourage**: 1 item to explore what competencies they need to support athletes' mental health; 1 item to explore what competencies they need to support their own mental health; 2 open questions to further investigate the abovementioned topics.

## Data collection in France

- **Who?** An online survey was administered to athletes and entourage members. Athletes were contacted using the national registry of elite athletes, and entourage members through indirect solicitations by the national training centres.
- **When?** Data were collected between April and October 2023.
- **How?** Participants received an online link by email to fill out the survey.
- **Survey link:** https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM


Figure 1. Complete responses collected (N = 335) with the MENTiS survey between April and October 2023.

## Participants

Add full sample characteristics

- 335 participants in total; 204 athletes (61%) and 131 entourage members (39%).
- The sample was composed of 53% of females and 47% of males.
- The sample was composed of 11% of participants aged under 18 years and 89% of adults.
- The French sample ranked second in terms of number of athletes included, and fourth for entourage members (out of six countries).

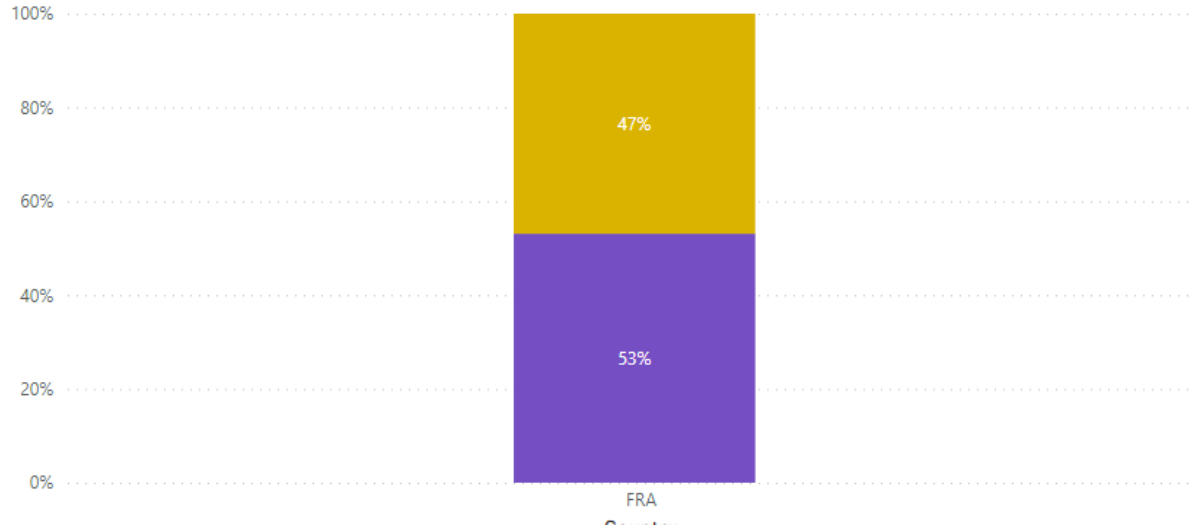


Figure 2. Gender distributrion of the total sample: females in purple, males in yellow

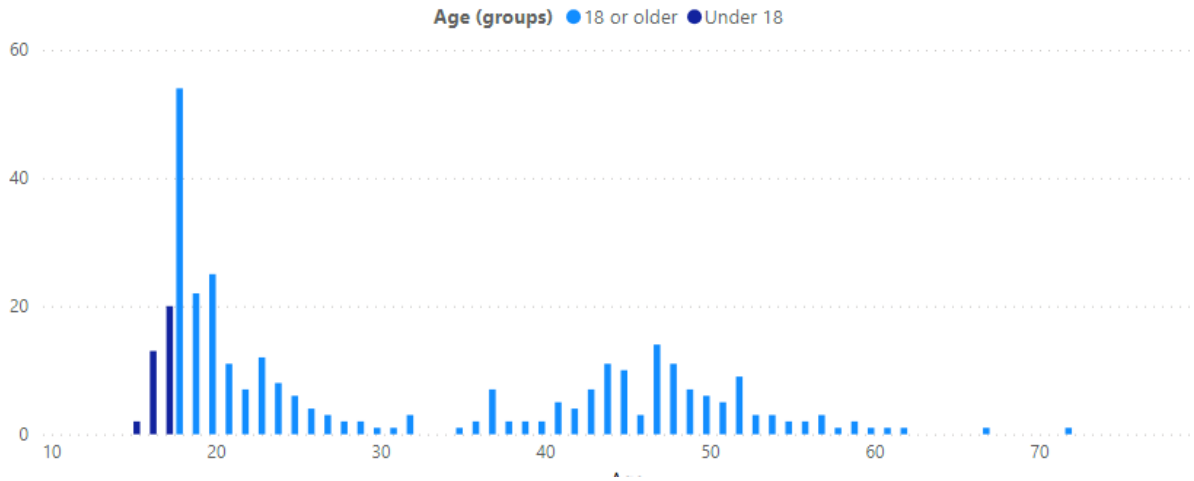


Figure 3. Age distributrion of the total sample.

French athlete sample (N = 204; 61% of full sample)

**Key findings athlete sample**

In total, 204 athletes completed the survey. The athlete sample characteristics are displayed in the figures below.

- The sample included 52% female athletes and 48% male athletes.
- The sample included 82% of adult athletes and 18% of athletes between 16 and 18 years old.
- Most athletes (n = 111; 54%) were mainly active in Olympic summer sports; and 73 (36%) were mainly active in non-Olympic sports.
- Approximately 2 thirds of the sample were athletes competing at a World or European level (62%).
- 95% of athletes in the sample were Dual career athletes (combining sport with either education or work or both).

Sample characteristics are displayed in Figures 4, 5, and 6.

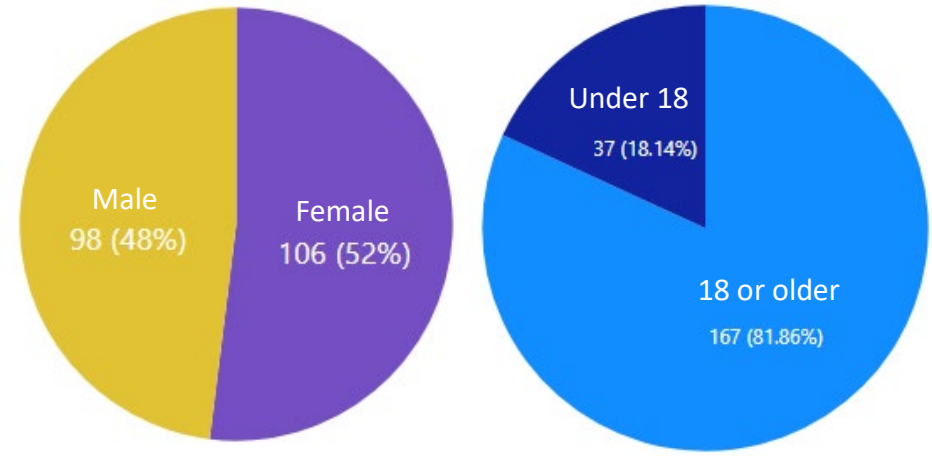


Figure 4. Age and gender distribution of the athletes.


Figure 5. Sport characteristics of the athletes.

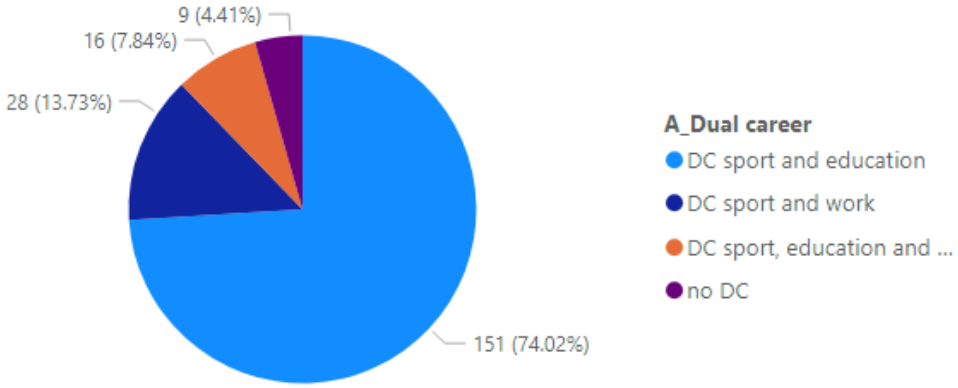


Figure 6. Dual career options of the athletes.

## French entourage members sample (N = 131; 39% of full sample)

**Key findings entourage sample**

In total, 131 entourage members completed the survey. Of these, 32% (N = 42) belonged to the athletic domain (e.g., coaches, assistant coaches, psychologists, physicians, technical directors, …), 5% (N = 6) belonged to the educational/vocational domain (e.g., teachers, dual career support providers, boarding school tutors, …), and 63% (N = 83) to the personal domain (e.g., parents, partners, housemates, friends, …).

- The sample included 56% female and 44% male entourage members.
- The age ranged between 22 and 72 years old for entourage members.
- Of the 42 entourage members from the athletic domain, a majority worked with athletes competing primarily in Olympic summer sports (n = 34) and individual sports (n = 26).

Sample characteristics are displayed in Figures 7, 8, and 9.

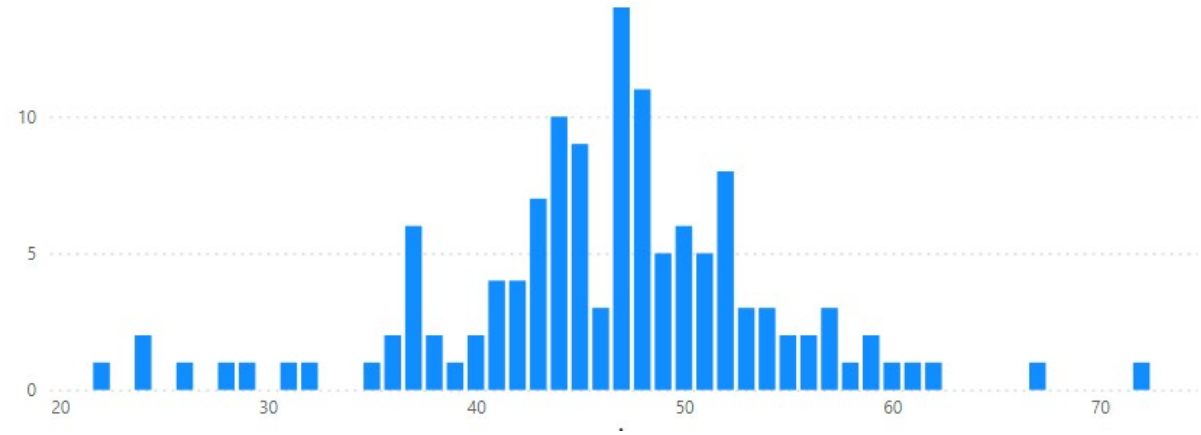


Figure 7. Age distribution of the entourage members.

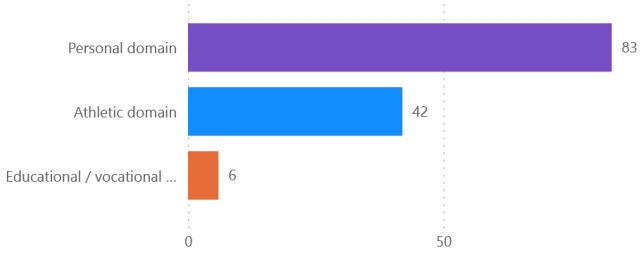


Figure 8. Domain distribution of entourage members.

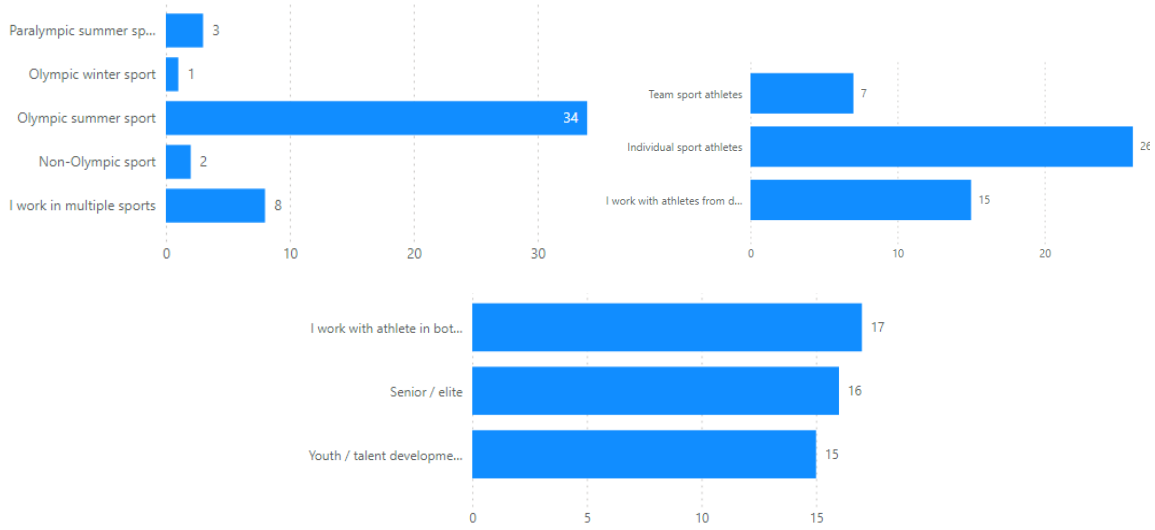


Figure 9. Characteristics of entourage members from the athletic domain.

## Results

**Study constructs:**

a. Mental health
b. Mental ill-health
c. Mental health literacy
d. Perceived support (athletes)
e. Provided support (entourage)
f. MH promotion competencies

**Link between study constructs:**

a. Correlation between study constructs
b. Key predictors of MH

***MENTAL HEALTH CONTINUUM – SHORT FORM (MHC-SF).***

Mental health was measured using the Mental Health Continuum Short form (MHC-SF), developed by Keyes (2002).

- The scale has 14 items
- The scores are on a 6-point scale (0 – never; 5 – Every day)
- Three subscales: emotional well-being, social well-being, and psychological well-being
- It can be scores according to the three subscales + the general well-being scale, or according to the Mental Health Continuum (Languishing, moderate MH, Flourishing)

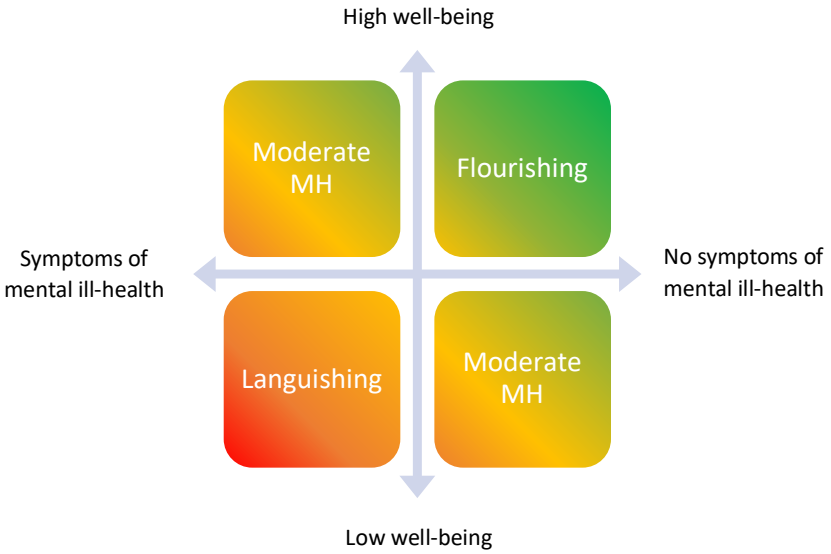


*Figure 10. Mental health dual continuum model (Keyes, 2002)*

**KEY FINDINGS**

Detailed results are displayed in the figures below.

- In the athlete population, 43% were categorised as flourishing, 53% with moderate mental health, and 4% as languishing.
- In the entourage population, 48% were categorised as flourishing, 45% with moderate mental health, and 7% as languishing.

General scores of well-being were similar between athletes and entourage members.

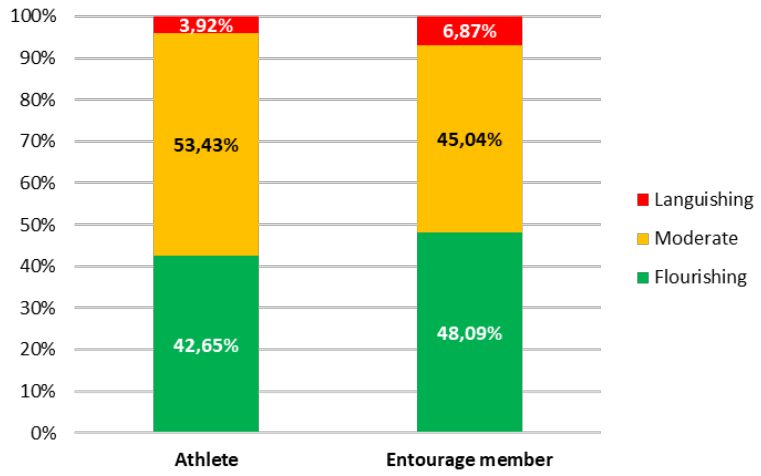


Figure 11. Mental Health classification for the two different groups in the France sample.

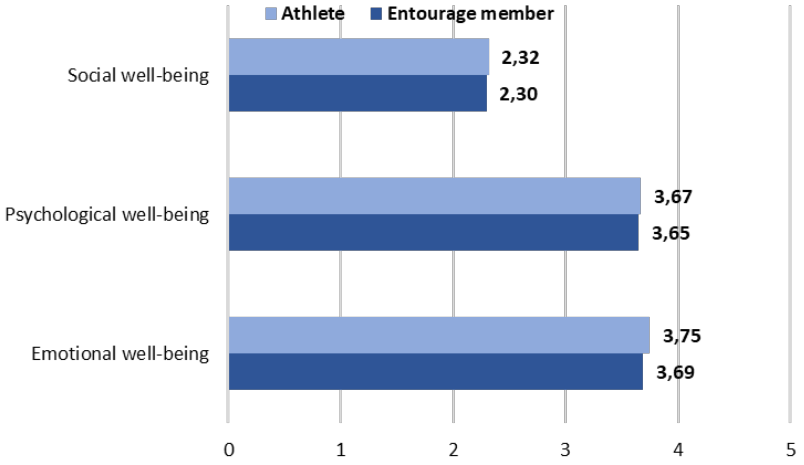


Figure 12. Average MHC-SF scores for the two different groups in the France sample.

## Mental ill-health

**Patient-Health Questionnaire (PHQ-9)**

The PHQ-9 is a 9-item scale that measures symptoms of depression in the last two weeks (e.g., "little interest or pleasure in doing things"). Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 27.

**Generalized Anxiety Disorder Questionnaire (GAD-7)**

The GAD-7 is a 7-item scale that measures symptoms of generalized anxiety disorder. Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 21.

**KEY FINDINGS**

Detailed results are displayed in the figures below.

**ANXIETY AND DEPRESSION:**

- In the athlete population, 43% reported no symptoms of depression, 33% reported mild symptoms, 18% reported moderate symptoms, 4% reported moderately severe symptoms, and 1% reported severe symptoms. As for anxiety, 42% reported no symptoms of anxiety, 35%reported mild symptoms, 14% reported moderate symptoms, and 9% reported severe symptoms.
- In the entourage population, 56% reported no symptoms of depression, 34% reported mild symptoms, 8% reported moderate symptoms, 2% reported moderately severe symptoms, and 1% reported severe symptoms. As for anxiety, 43% reported no symptoms of anxiety, 41% reported mild symptoms, 11% reported moderate symptoms, and 5% reported severe symptoms.

**DIAGNOSIS AND HELP-SEEKING**

- Regarding diagnosis, 4% of athletes indicated to have received professional help in relation to their mental health, and 36% reported having received a formal diagnosis of mental health disorder. 6% reported experiencing mental health problems at the time of filling out the survey. 15% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by athletes was 17 years old.
- In the entourage sample, 7% indicated to have received professional help in relation to their mental health, and 36% reported having received a formal diagnosis of mental health disorder. 4% reported experiencing mental health problems at the time of filling out the survey. 9% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by entourage members was 32 years old.
- Compared to European data, the French samples of athletes and entourage members reported less experiences of mental health problems both at the time of the survey and during their lifetime.
- However, compared to European data, the French samples of athletes and entourage members reported similar rates of diagnosis for mental health problems.

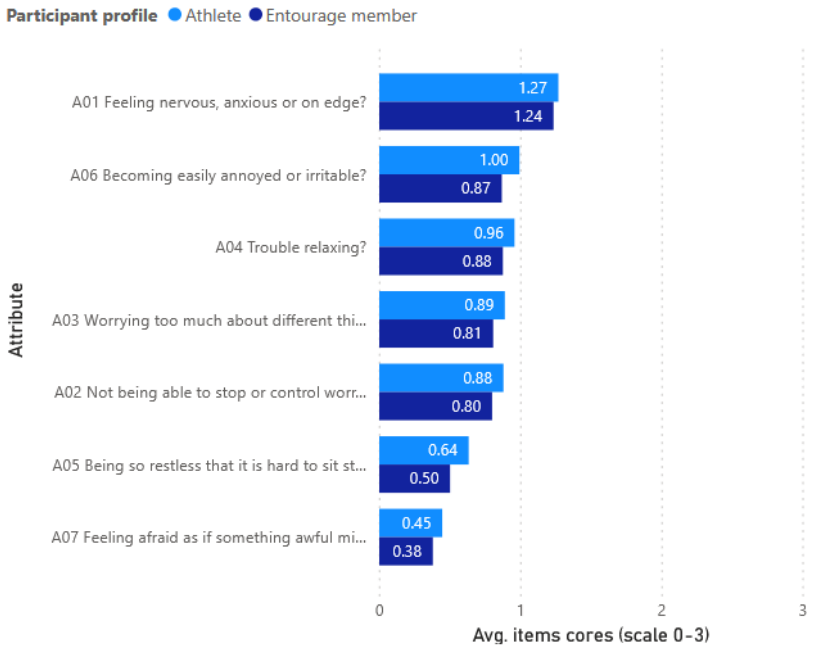


Figure 13. GAD-7 average scores of French athletes and entourage members.

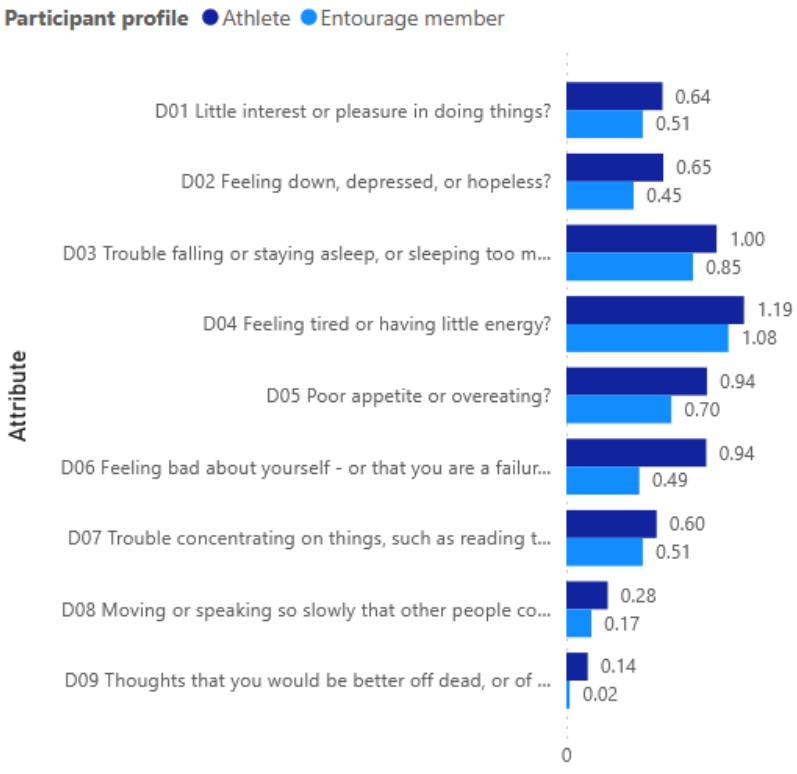


Figure 14. PHQ-9 average scores of French athletes and entourage members.

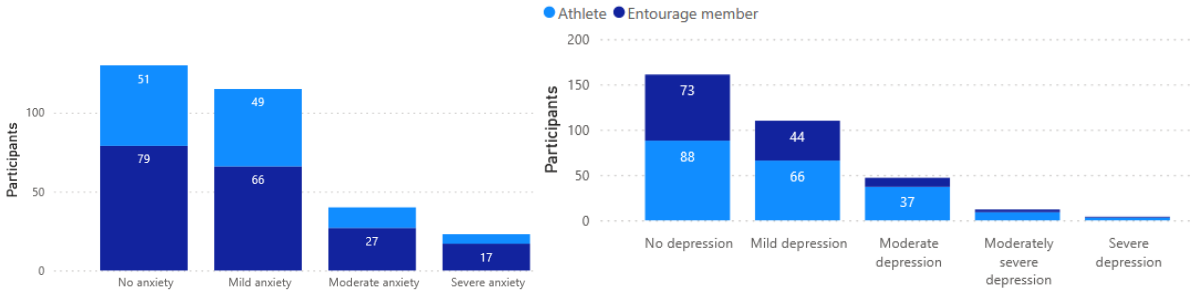


Figure 15. Anxiety and depression prevalence in the two groups.

Mental Health Literacy Questionnaire

This scale consists of 12 items and was designed to explore different topics related to mental health, both in a positive (e.g., “doing something meaningful or enjoyable on a regular basis contributed to good mental health”) and a negative light (e.g., “if I had a mental health problem I would try to hide it from others”). Respondents rate each item on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the total score representing the level of mental health literacy: the higher the score, the higher the level of mental health literacy. When calculating the total score, the negative items (item 9, 10 and 12) were scored in reverse. The total score ranges from 12 to 60.

**KEY FINDINGS**

Detailed results for the 12 items are shown in the visuals below:

- Overall, athletes tend to report lower scores of mental health literacy than entourage members.
- Entourage members from the educational domain (n = 6) showed higher scores of mental health literacy (mean = 41.17) than those from the athletic domain (n = 42; mean = 39.56) and those from the personal domain (n = 83; mean = 38.51).

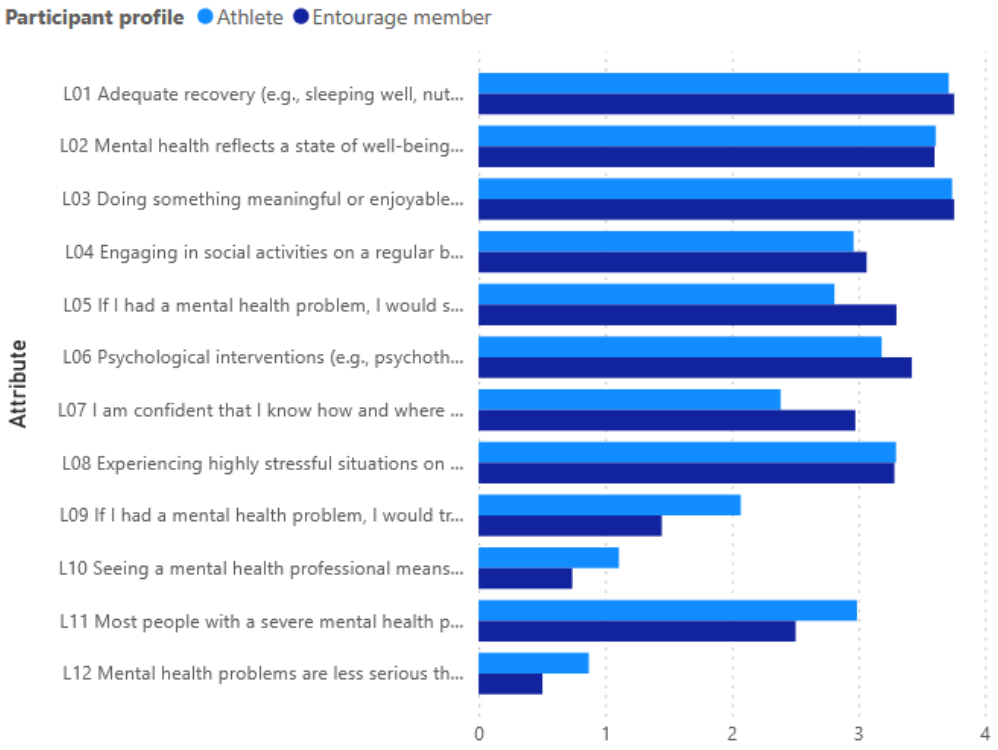


Figure 16. MHLQ average scores of French athletes and entourage members.

## Perceived support (athletes)

**Adapted version of the General Help-Seeking Questionnaire (GHSQ)**

The GHSQ is a 1-item scale used to investigate how likely it is that athletes would receive appropriate mental health support from different persons in the entourage. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

Detailed results are shown in Figure 17:

- Overall, roles in the personal domain (e.g. parents, partners, friends) obtained the highest scores, meaning that athletes find it very likely to turn to them when facing mental health problems.
- In contrast, roles in the educational/vocational domain scored consistently lower (e.g. school tutors, dual career support providers, teachers, career advisors), meaning that athletes reported finding it less likely to turn to them for mental health support.
- Among the roles in the athletic domain, sport psychologists and mental coaches are ranked high, while data analysts, nutritionists and agents ranked the lowest.

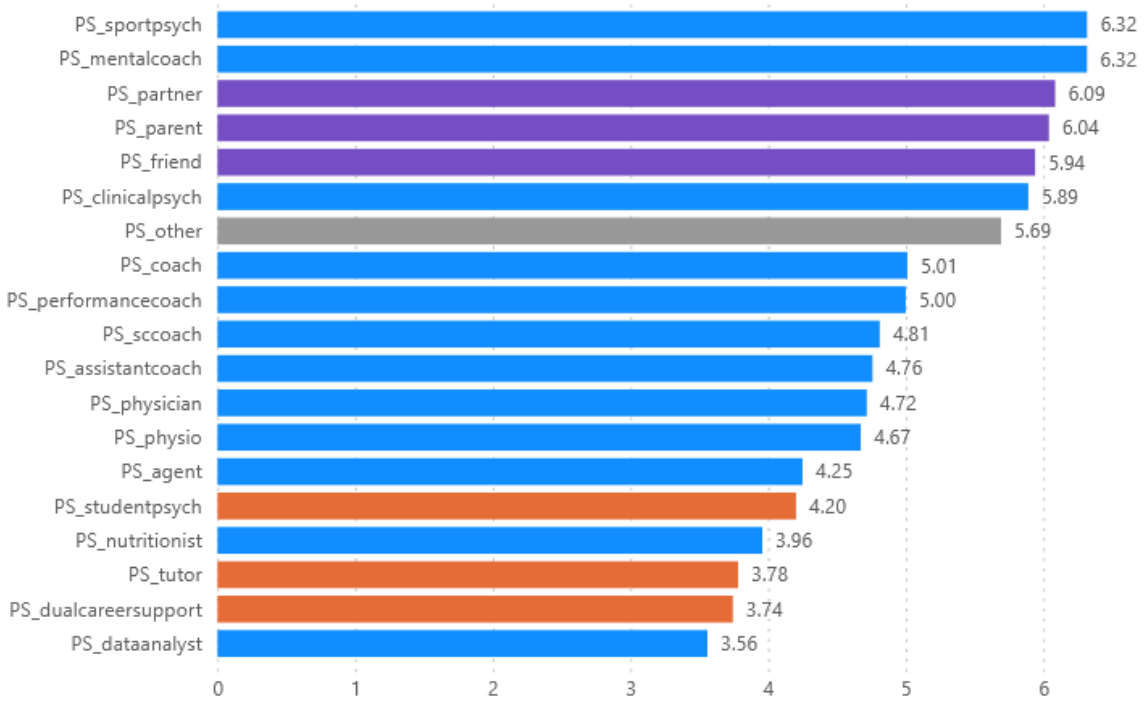


Figure 17. Scores for the different roles in the entourage on the GHSQ from the **athletes'** perspective.

## Mental health support provision (entourage)

One question aimed to investigate entourage members' confidence in providing adequate support to athletes dealing with mental health problems. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Entourage members were asked how likely it is that they would be able to offer appropriate mental health support to athletes. The scores are based on the average scores of the survey participants that declared working in each role.
- Mental coaches and sport psychologists tend to show the highest confidence in providing adequate support to athletes dealing with mental health problems.
- In the personal domain, roles such as parents, partners and friends also show high confidence in providing adequate support to athletes dealing with mental health problems.

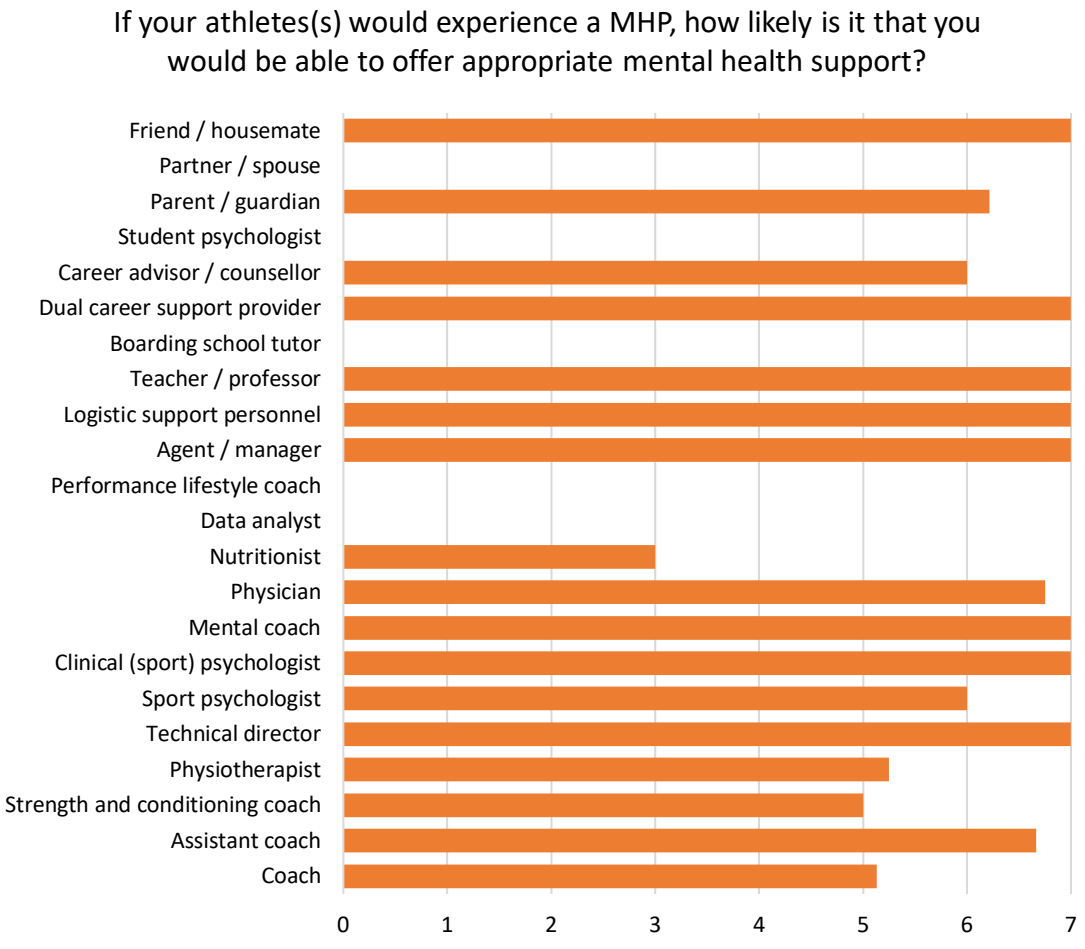


Figure 18. Scores for confidence in providing adequate support to athletes dealing with mental health problems.

**KEY FINDINGS**

- Athletes and entourage members were asked to select the mental health promotion competencies that they felt were important to maintain mental well-being.
- According to athletes, being empathetic and actively listening, recognizing signs and understanding mental health problems are the most important competencies.
- According to entourage members, being empathetic and actively listening, recognizing signs of mental health problems and knowing when and how to refer athletes to professional support are the most important competencies.


Figure 19. Important competencies to maintain mental well-being in athletes, from the athletes.

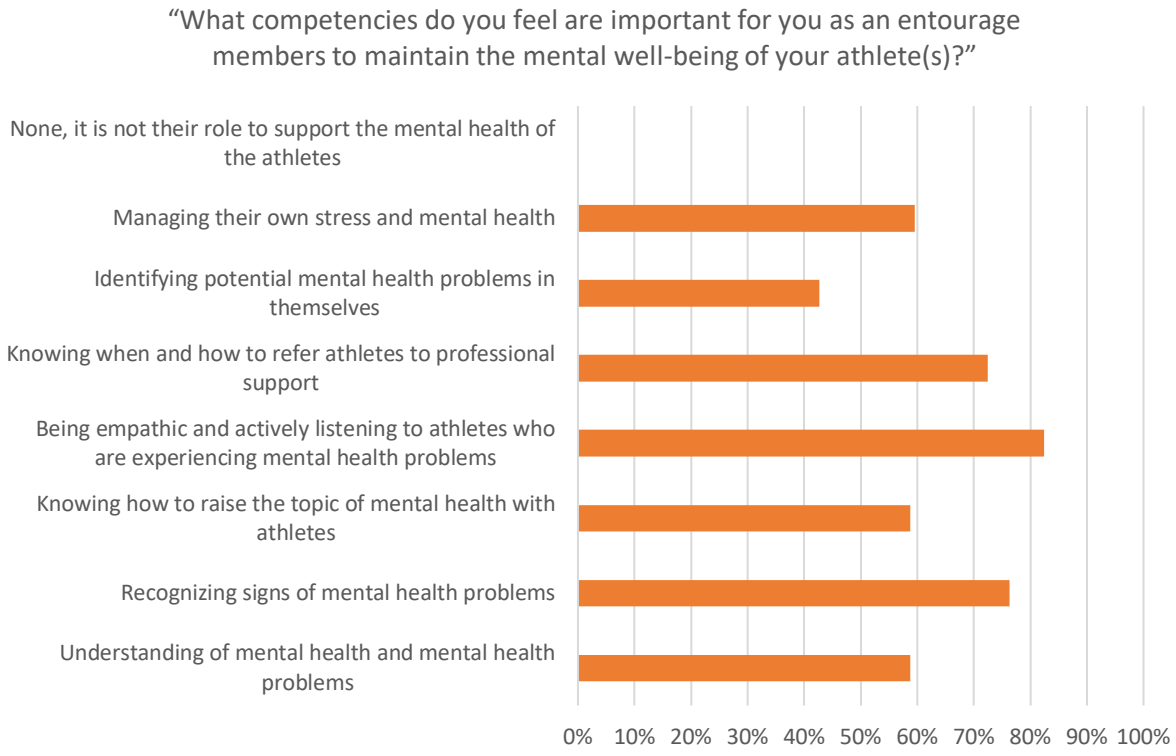


Figure 20. Important competencies to maintain mental well-being in athletes, from the entourage members.

## Link between study constructs

**KEY FINDINGS**

**MENTAL HEALTH & WELL-BEING**

- In both the athletes and entourage members sample, there was a negative correlation between anxiety and well-being, and between depression and well-being.

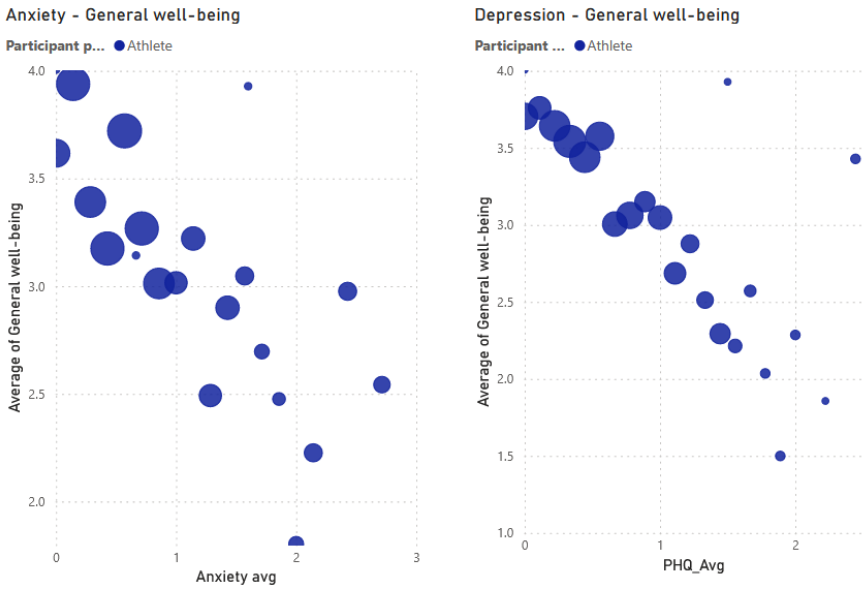


Figure 21. Correlations between general well-being and mental ill-health in the athlete sample.

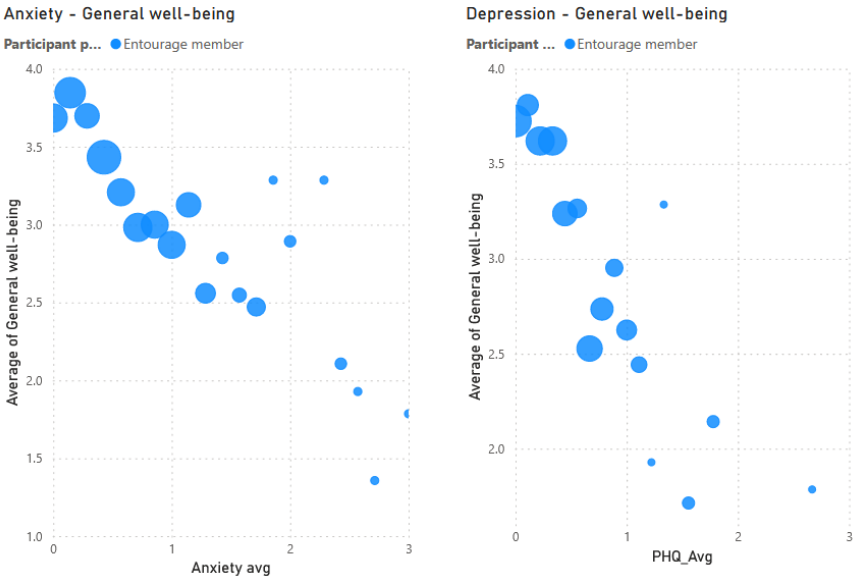


Figure 22. Correlations between general well-being and mental ill-health in the entourage members sample.

## Qualitative data results

Athletes were asked (1) what skills entourage need to support their mental well-being, and (2) what skills athletes need to promote their own mental health.

Entourage members were asked what skills they need to (1) maintain the mental well-being of their athletes, and (2) maintain their own mental well-being.

**KEY FINDINGS**

**Athlete sample:**

**(1) What skills entourage need to support the athletes' mental well-being:**

- Knowing how to listen without judging;
- Be benevolent and empathetic;
- Know how to give appropriate advice (find the right words);
- Know the athlete and his/her personal and professional life well;
- Provide ongoing support and follow-up for the athlete;
- Have knowledge of preparation and mental health to recognize disorders and provide a solution;
- Enable the athlete to balance rest and work;
- Put the athlete's well-being first.

**(2) What skills athletes need to promote their own mental health:**

- Have access to specialized personnel;
- A healthy environment;
- To be able to practice sophrology and meditation;
- Mental health training and access to mental health guides;
- Having a close-knit entourage;
- Give priority to family time;
- Giving yourself time to rest and do other activities (another sport, for example) = having an excellent life balance;
- Know when you need help and know yourself in general;
- To have better self-esteem;
- Knowing how to communicate.

**Entourage sample:**

**(1) What skills they need to maintain the mental well-being of their athletes:**

- Training in mental health, sophrology, relaxation and meditation;
- Provide a stable environment;
- Regular exchanges with coaches and other staff members = organization of coach/family meetings;
- Being a good listener;
- For the coach, follow the child/parent and child/school relationship (through an online website?);
- Know how to talk to and advise the athlete;
- Understand the sport and the athlete's life in general;
- Know the right people to call;

- Be caring and inspire confidence;
- Provide financial support for psychological follow-up;
- Accept advice from others.

**(1) What skills they need to maintain their own mental well-being:**

- Consult a psychologist if necessary or not;
- Meditation and sophrology;
- Be kind to yourself and know how to detach yourself;
- Trust the sports structure and the athlete's project;
- Know your limits;
- Have a close-knit family around the athlete;
- Increase exchanges between family, trainers and medical staff to get involved in the athlete's sporting life;
- Rest as much as possible;
- Know how to stay in your role;
- Learn about mental health;
- Know how to cut yourself off from the world of sport and avoid working too much (especially for a trainer).

## Next steps

### Practical implications

Based on the research findings, describe your key practical implication

RECOMMENDATIONS:

- Develop/improve a tool especially for family so that they can follow the athletes' everyday life;
- Organize trainings and raise awareness as much as possible among the entourage and the athletes;
- Allow the athletes to have a balance between sport and personal life;
- Allow every athlete to have access to a sport psychologist : organize at least one session per year (already the case in INSEP but not in CREPS).

## References

European Commission. (2023). *Dual Careers for Mental Health*. Retrieved 13/03/2024 from https://erasmus-plus.ec.europa.eu/projects/search/details/622178-EPP-1-2020-1-BE-SPO-SCP

International Olympic Committee. (2023, 12/07/2023). *Measuring and Increasing Athletes' Mental Health Literacy (MHL): Cross-Cultural Validation of MHL Questionnaire and Evaluation of MHL Intervention Implementation*. Retrieved 13/03/2024 from https://olympics.com/ioc/news/2023-2025-advanced-olympic-research-grants-awarded

Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, *43*(2), 16.

Kroenke, K., Spitzer Rl Fau - Williams, J. B., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 8. https://doi.org/https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

MENTiS

Co-funded by the European Union

# NATIONAL REPORT SPAIN:

# MENTAL HEALTH OUTCOMES, LITERACY AND PROMOTION IN ATHLETES AND ENTOURAGE MEMBERS IN HIGH-PERFORMANCE SPORT

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"Promoting Mental health through the ENTourage in high-performance Sport" (MENTiS)

Loughborough University · INSEP · VUB Vrije Universiteit Brussel · NOC*NSF · UAB Universitat Autònoma de Barcelona

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## Consortium

We would like to express our gratitude to all the athletes and entourage members who participated in this study. We thank the entire MENTiS Consortium for their valuable contributions to the current study and report. The MENTiS consortium:

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## Key findings

- A total of 368 participants completed the survey, representing talented and elite athletes (n = 231; 63%) and entourage members of talented and elite athletes (n = 137; 37%) working in high-performance sport in Catalan sports organisations. In particular, the term "entourage" refers to all the people associated with athletes and included agents from three domains: athletic domain (e.g., coaches, sport psychologist, technical director; n = 48); academic/vocational domain (e.g., teachers, boarding school tutor, dual career support provider, n =45); and personal domain (e.g., parent, partner; n = 44).

Mental health outcomes,

- Athlete sample,
  - Mental health continuum: 50% were categorised as flourishing, 44% with moderate mental health, and 6% as languishing.
  - Mental ill-health: 37% reported moderate to severe symptoms of anxiety, and 33% reported moderate to severe symptoms of depression. 4% (n = 10) referred thoughts that they would be better dead more than half of the days. 40% had received professional help.
  - Mental health literacy: Athlete's mean score was 37.1, meaning that in general athletes had a good mental health literacy. It should be note that most athletes (80%) would seek professional help if they had a mental health problem, nevertheless 8% refer they would not do it. In addition, 33% of athletes would hide if they had a mental health problem, and 13% associated seeking for a mental health professional with weakness. Furthermore, 17% of athletes reported they would not know how and where to look for information about mental health.
- Entourage sample,
  - Mental health continuum: 54% were categorised as flourishing, 39% with moderate mental health, and 7% as languishing.
  - Mental ill-health: 15% reported moderate to severe symptoms of anxiety, and 17% reported moderate to severe symptoms of depression. 3% (n = 5) referred thoughts that they would be better dead more than half of the days. 46% had received professional help.
  - Mental health literacy: Entourage's mean score was 41.3, meaning that in general entourage had an excellent mental health literacy. In addition, 27% of entourage members would hide mental health problems. 11% believes that seeking a mental health professional means you are not strong enough, and 17% believes that most people with mental health problems do not have the potential to recover. Notably, 20% of entourage members would not know how and where to seek for mental health information.
- Overall, athletes reported that they are more likely to receive appropriate mental health support from parents, sport psychologist, friends, mental coaches, clinical psychologists, and partners. On the contrary, athletes would not expect to receive appropriate mental health support from dual career support providers, career advisors and data analyst.
- Entourage members who felt more likely to provide appropriate mental health support were sport psychologist, boarding and school tutor, and coach.
- Main predictors for a higher well-being in the athlete's sample were low depression, low anxiety, and team sports.
- Main predictors for a higher well-being in the entourage sample were low depression, high mental health literacy and low anxiety.

## Aims of the MENTiS survey

An online survey was developed by the MENTiS consortium for athletes and entourage members on mental health outcomes, mental health literacy, and mental health promotion.

The aim of the MENTiS survey was to:

1. Investigate the **prevalence of mental health indicators** (e.g., wellbeing, anxiety, depression) in athletes and entourage members from 6 European countries (i.e., Belgium, France, the Netherlands, Spain, Sweden, UK).
2. Investigate the perceptions about **mental health support** and ideas about how to improve mental health support.
3. Investigate the **role of potential influencing factors on mental health** (e.g., mental health literacy, mental ill-health, gender; for athletes specifically: the presence/absence of injuries; for entourage specifically: domain of support, job characteristics).
4. **Create an evidence base** for the development of workshops and (online) resources targeting entourage members in order to enhance their competencies in mental health promotion (WP2 and WP3 of the MENTiS project).

The results obtained with the survey are displayed in a European report and 6 national reports (i.e. Belgium, France, the Netherlands, Spain, Sweden, UK).

More information on the MENTiS project can be found here: https://spmb.research.vub.be/mentis

## Procedure & instruments

An online survey was administered to athletes and entourage members in the six participating countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.

Before administering the survey, ethical approval was granted by the Ethical Committee of Human Sciences of the Vrije Universiteit Brussel. Parental consent was required before minors could complete the survey.

The survey targeted two different groups:

1. Talented and elite athletes
2. Entourage members of talented and elite athletes belonging to the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors), or the personal domain (e.g., parents, partners, friends).

Data was collected in two phases: the first phase was April – August 2023, and the second phase was September – October 2023. During this 2nd phase, additional data were collected in Belgium and UK. The phase of data collection (i.e. 1 and 2) was included as a variable in the analysis. After collecting the data, data was analysed in SPSS and displayed in PowerBI. All consortium members had access to the PowerBI report, and received their national raw data.

The online survey was developed in Qualtrics and made available in 6 languages (English, French, Dutch, Spanish, Catalan, and Swedish).

The survey is available here: https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

The survey's content differs slightly between athlete and entourage participants. It was divided into five sections:

1. **Demographics**:
   i. **Demographics for athletes**: gender, age, sport characteristics, level of competition, dual career, income, employment, injury.
   ii. **Demographics for entourage members**: gender, age, domain (athletic, educational/vocational, personal), role in the entourage, sport characteristics, athletes' career stage, level of competition, number of athletes they work with, employment status.
2. **Mental health and well-being**
   i. Mental Health Continuum – Short Form (MHC-SF), (Keyes, 2002): 14-item scale that investigates general well-being, as well as social, psychological and emotional well-being; 6-point Likert scale from 0 (*never*) to 5 (*everyday*). Scores range from 0 to 70.
   ii. Patient-Health Questionnaire (PHQ-9), (Kroenke et al., 2001): 9-item scale that measures depression; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 27.

iii. Generalised Anxiety Disorder Assessment (GAD-7), (Spitzer et al., 2006): 7-item scale that measures anxiety; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 21.

iv. 1 item about receiving professional psychological help.

v. 2 items about lifetime and point prevalence of mental health problems; 1 item about age of onset of mental health problems.

**3. Mental health literacy**

i. Mental Health Literacy Questionnaire, developed during the E+ Dual Careers for Mental Health project (European Commission, 2023), and currently being validated as part of the Olympic Studies Advanced Research Grant: "Measuring and Increasing Athletes' Mental Health Literacy (REFS)" (International Olympic Committee, 2023): 12-item scale that measures mental health literacy; 5-point Likert scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). Scores range from 0 to 48.

**4. Mental health support**

i. **Perceived support (for Athletes)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of receiving support from different sources. The different sources in this case were an extensive list of roles in the entourage: for the roles that were not indicated, there was the possibility of adding an extra role in a text box. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

ii. **Support provision (for Entourage)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of offering adequate support to athletes facing mental health problems. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

**5. Competencies in mental health support**

i. **Athletes**: 1 item to explore what competencies entourage need to support athletes' mental health; 1 item to explore what competencies athletes' need to support their mental health; 2 open questions to further investigate the abovementioned topics.

ii. **Entourage**: 1 item to explore what competencies they need to support athletes' mental health; 1 item to explore what competencies they need to support their own mental health; 2 open questions to further investigate the abovementioned topics.

## Data collection in Spain

- **Who?** An online survey was administered to athletes and entourage members in private and public sport organisations from Catalunya. This was done directly by the Spanish partners who made face to face presentations explaining the project and send mails to managers from different sport organisations.
- **When?** The data was collected between April 2023 and September 2023 (Figure 1)
- **How?** Participant received an online link by mail to fill the survey. Depending on the participant, the link was received in different ways:
  - Athletes: In some cases, time was given in classroom to respond. Others received the link by email or directly from managers of the organization.
  - Academic domain: group sessions were organized for them to fill the survey.
  - Personal domain: received the link by email with the information about the project.
  - Sports domain: Someone via email and others directly from managers of the organization.
- **Survey link:** https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

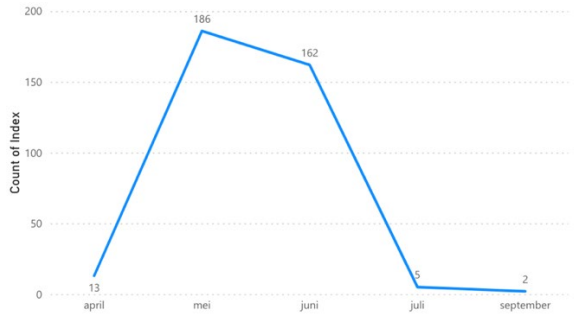



*Figure 1 Complete responses collected (N = 368) with the MENTiS survey between April and September 2023.*

## Participants

Add full sample characteristics.

- Figure 2 presents the sample characteristics.
- 368 participants in total; 231 athletes (63 %) and 137 entourage members (37%).
- The distribution between the organisations: the majority of the participants correspond to the High-Performance Centre of Sant Cugat (n = 191; 52%). Blume Technification Centre (n = 97; 26%) and a variety of high-level clubs (n = 70; 19%). More information about the distribution through the organisations can be found in Figures 2 and 3.
- Females and males were almost equally distributed in the Spanish sample (52% female; 48% males)

- The age distribution is similar between under 18 years and over 18 years (50%)
- Compared with the EU data (Figure 3), Spain have the most participants across countries (23% of the full sample). The distribution of gender from Spanish data is similar to EU data (48% females; 52% males). Spain had more athletes (63%) vs entourages participants (27%), similar to France (athletes = 61%). While UK (athletes, 52%) and Sweden (athletes, 51%) had a more equal distribution. Belgium (athletes, 28%) and Netherlands (athletes, 9%) had a more number of participants from the entourage.
- Compared with EU data, the distribution of age is very different, EU presenting 84% of 18 years or older participants, while Spain had a more equal distribution (female, 52%)

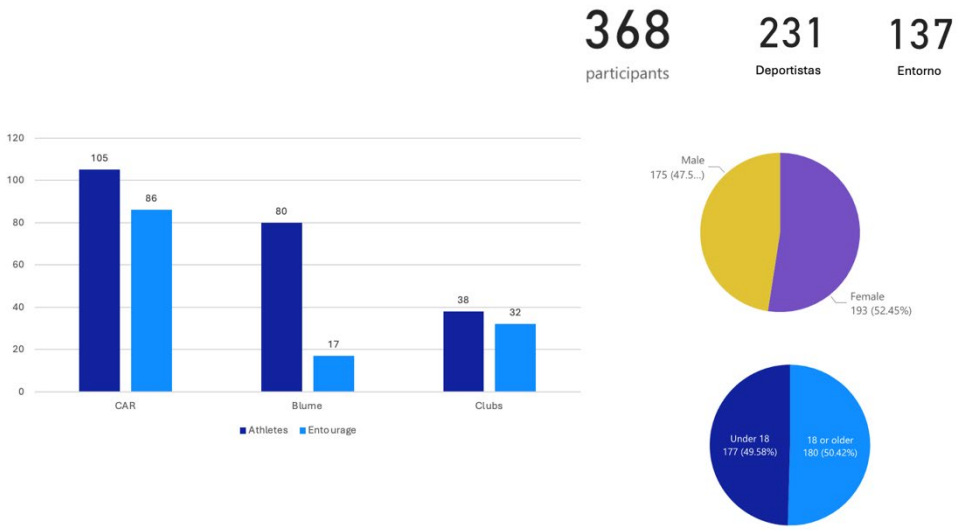



*Figure 2 Characteristics of Spanish Sample*

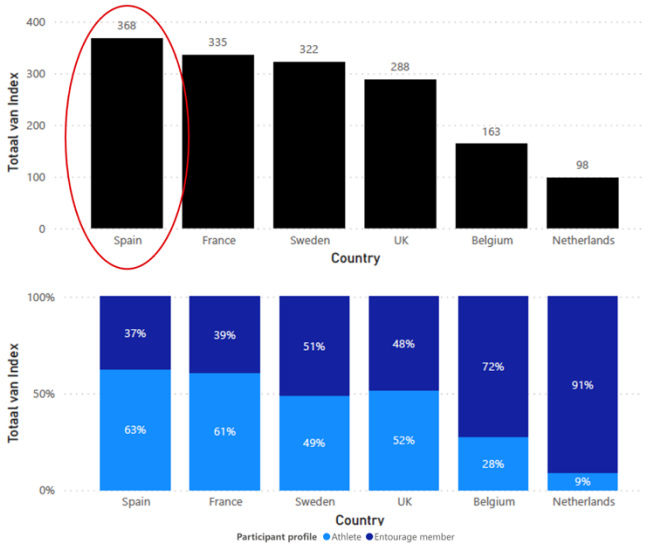



*Figure 3 Comparison of sample characteristics between EU.*

## Spain athlete sample (n = 231; 15% of full sample)

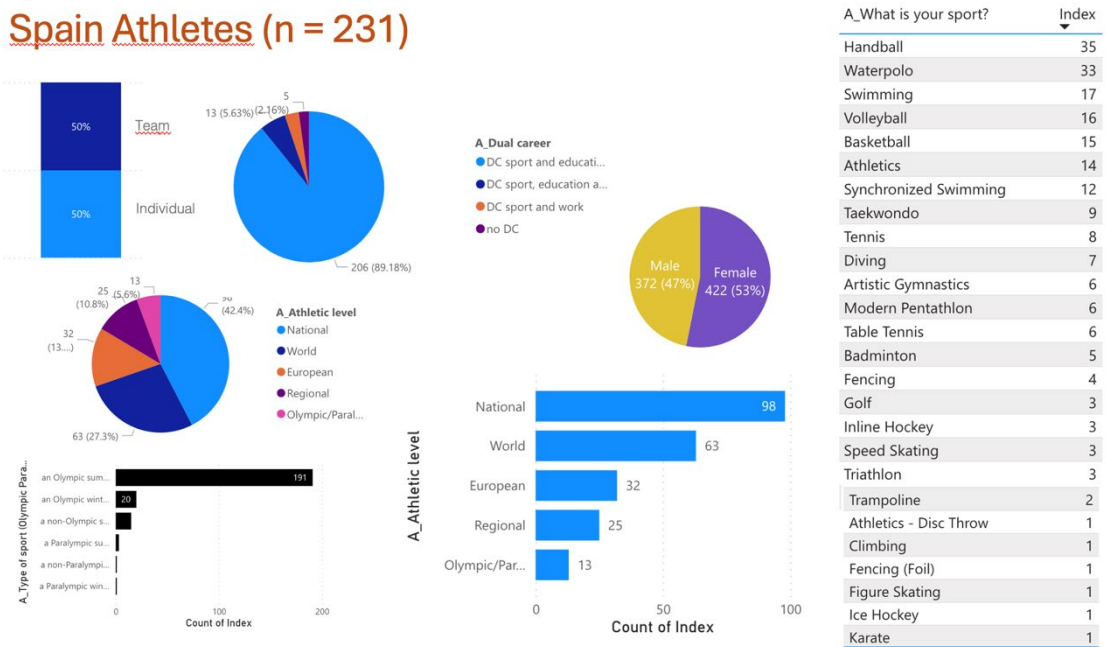
**Key findings athlete sample**

In total, 231 athletes completed the survey. The athlete sample characteristics are displayed in the figures below.

- Figure 4 displays athlete's sample characteristics.
- The sample included n = 123 (53%) females and n = 196 (47%) males. The age ranged from 14 to 38, and the mean age of 17.1 y.o (SD = 3.9).
- There were similar number of athletes from individual and team sports (50%)
- Athletes were mainly from Olympic summer sports (82%) followed by Olympic winter sports (9%). In total 4 para-athletes completed the survey
- Most athletes competed in national (n = 98; 42%) and world levels (n = 63; 27%)
- 98% were Dual Career athletes. Combining sport and education (n = 206; 89%), sport and education and work (n = 13; 6%); and sport and work (n = 7; 3%).
- 20 athletes were currently injured (9%).
- Most common sports were handball (n = 35; 15%), water polo (n = 33; 14%), swimming (n = 17; 7%) and volleyball (n = 16; 7%)

Compared to EU data,

- Spanish athletes were younger (EU mean age was 20.4 y.o.; Spain, 17.1 y.o.)
- Both, EU data and Spanish data were DC athletes (respectively, 96% vs 98%)
- France (n = 204), Sweden (n = 158) and the UK (n = 149) had a similar number of athlete's participants as Spain (Figure 5)




| A_What is your sport? | Index |
|---|---|
| Handball | 35 |
| Waterpolo | 33 |
| Swimming | 17 |
| Volleyball | 16 |
| Basketball | 15 |
| Athletics | 14 |
| Synchronized Swimming | 12 |
| Taekwondo | 9 |
| Tennis | 8 |
| Diving | 7 |
| Artistic Gymnastics | 6 |
| Modern Pentathlon | 6 |
| Table Tennis | 6 |
| Badminton | 5 |
| Fencing | 4 |
| Golf | 3 |
| Inline Hockey | 3 |
| Speed Skating | 3 |
| Triathlon | 3 |
| Trampoline | 2 |
| Athletics - Disc Throw | 1 |
| Climbing | 1 |
| Fencing (Foil) | 1 |
| Figure Skating | 1 |
| Ice Hockey | 1 |
| Karate | 1 |
| **Total** | **231** |

*Figure 4 Athlete sample characteristics.*

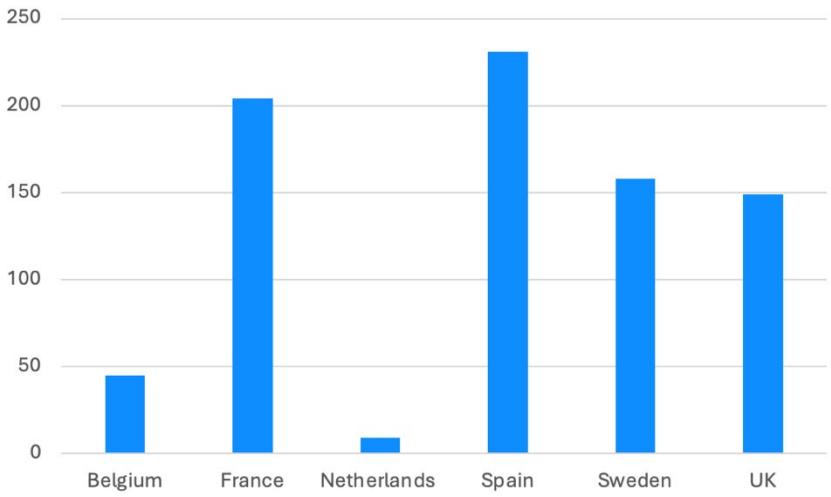



*Figure 5 N of athletes between EU countries*

## Spain entourage members sample (n = 137; 9% of full sample)

- Figure 6 shows the entourage characteristics.
- In total, 137 entourage members completed the survey. Of these, 35% (n = 48) belonged to the athletic domain (e.g., coaches, assistant coaches, psychologists, physicians, technical directors, …), 33% (n = 44) belonged to the educational/vocational domain (e.g., teachers, dual career support providers, boarding school tutors, …), and 32% (n = 44) to the personal domain (e.g., parents, partners, housemates, friends, …).
- Age ranged between 18 to 63. Mean age was 46.8 y.o (SD = 11.1).
- In the educational domain, the most common respondents were teachers (n = 32), tutors (n = 4) and career counsellors (n = 4). In the athletic domain they were coaches (n = 14), sport psychologists (n = 6), and technical directors (n = 6). In the personal domain they were parents/guardians (n = 40) and partners (n = 2).

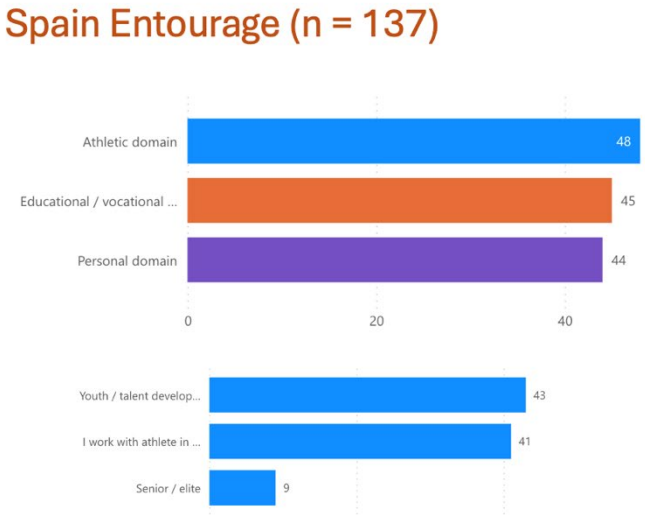
The following sample characteristics refers to participants from the athletic and educational vocational domain only:

- Most of the entourage members worked with athletes from different types of sport (66%), followed by working only with individual sport (23%), and team sport (12%).
- The majority of the entourage members worked with athletes from different disciplines (61%). Other entourage members worked mainly with athletes from Olympic summer sport (34%). One entourage member worked mainly with para-athletes.
- Of this sample, 46% worked in youth/ talent development, 44% in different levels, and 10% in senior/ elite levels.
- In average the entourage members have 14 years of professional experience.
- The majority of entourage members from the athletic domain and the educational domain worked with more than 51 athletes (respectively, 35%, 66%).
- Regarding the employment status, in the athletic and educational domain most of the entourage members were full-time employed (respectively, 92%, 96%). Only one entourage member worked in a voluntary basis.

Compared to the EU data:

- Spain had the most equally distributed across domains. In other countries, the majority of data were from the athletic domain. Only France had more sample from the personal domain (Figure 7).
- EU entourage members from athletic and educational domains worked more with individual sport athletes (42%), while in Spain they did with athletes from different types of sport (66%)
- EU entourage from athletic and academic domains worked mainly with athletes from Olympic summer sports (58%). In Spanish entourage they worked mostly with athletes from different disciplines (61%).
- The European entourage members worked mostly with athletes at both developmental and elite levels (47%). In the Spanish sample, the majority worked with youth/talent development (46%)

- Although in the EU, full-time employment was in the majority (60%), it was much lower than in Spain (athletic domain, 92%, academic/vocational, 96%).
- Spanish participants had slightly more years of professional experience on average (14 y.o.) than the European sample (12 y.o.).




| E_Primary role in the entourage | Count of Index | %GT Count of Index |
|---|---|---|
| **Athletic domain** | **48** | **35.04%** |
| Coach | 14 | 10.22% |
| Other (please specify) | 6 | 4.38% |
| Sport psychologist | 6 | 4.38% |
| Technical director | 6 | 4.38% |
| Physiotherapist | 4 | 2.92% |
| Physician | 3 | 2.19% |
| Strength and conditioning coach | 3 | 2.19% |
| Assistant coach | 2 | 1.46% |
| Agent / manager | 1 | 0.73% |
| Clinical (sport) psychologist | 1 | 0.73% |
| Logistic support personnel | 1 | 0.73% |
| Nutritionist | 1 | 0.73% |
| **Educational / vocational domain** | **45** | **32.85%** |
| Teacher / professor | 32 | 23.36% |
| Other (please specify) | 5 | 3.65% |
| Boarding school tutor | 4 | 2.92% |
| Dual career support provider | 4 | 2.92% |
| **Personal domain** | **44** | **32.12%** |
| Parent / guardian | 40 | 29.20% |
| Other (please specify) | 2 | 1.46% |
| Partner / spouse | 2 | 1.46% |
| **Total** | **137** | **100.00%** |

*Figure 6 Entourage sample characteristics.*

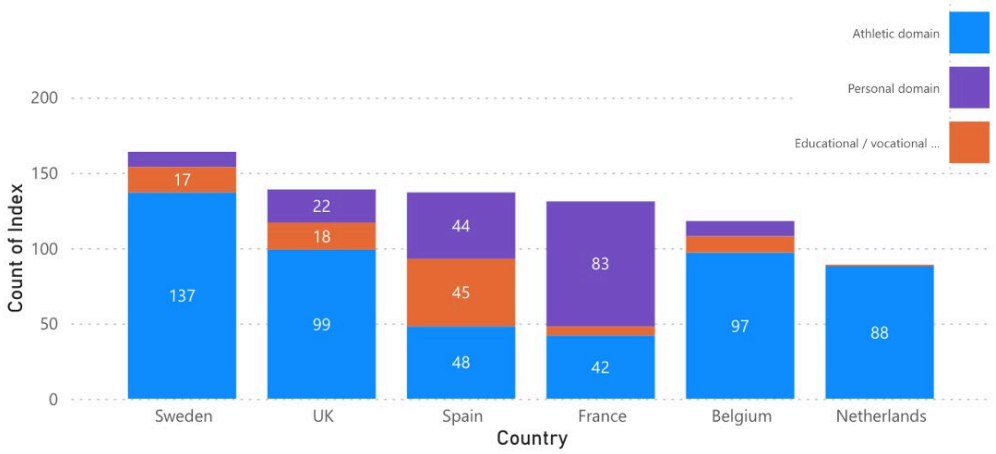



*Figure 7 Domains distribution through EU countries.*

## Results

**Study constructs:**

a. Mental health
b. Mental ill-health
c. Mental health literacy
d. Perceived support (athletes)
e. Provided support (entourage)
f. MH promotion competencies

**Link between study constructs:**

a. Correlation between study constructs
b. Key predictors of MH

## Mental health

***MENTAL HEALTH CONTINUUM – SHORT FORM (MHC-SF).***

Mental health was measured using the Mental Health Continuum Short form (MHC-SF), developed by Keyes (2002).

- The scale has 14 items
- The scores are on a 6-point scale (0 – never; 5 – Every day)
- Three subscales: emotional well-being, social well-being, and psychological well-being
- It can be scores according to the three subscales + the general well-being scale, or according to the Mental Health Continuum (Languishing, moderate MH, Flourishing)

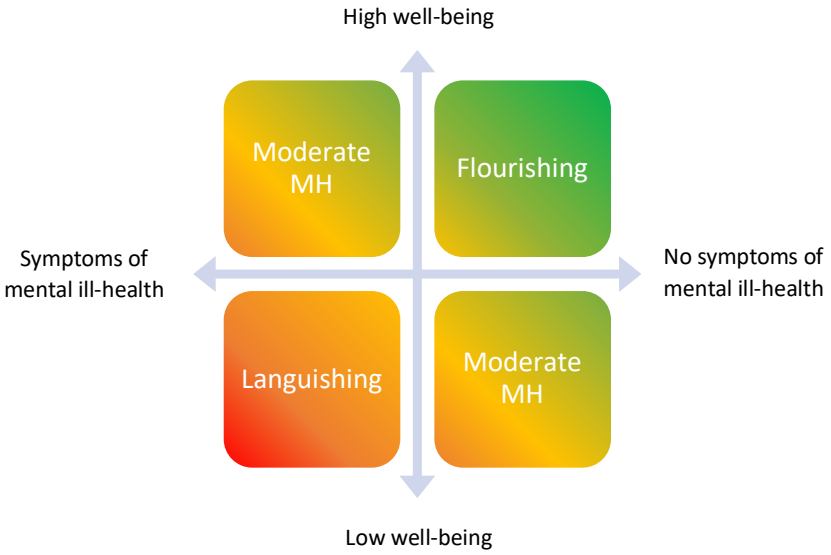



*Figure 8. Mental health dual continuum model (Keyes, 2002)*

**KEY FINDINGS**

Detailed results are displayed in the figures below.

- In total, 368 participants completed the MHC-SF.
- In the athlete population, 50% were categorised as flourishing, 44% with moderate mental health, and 6% as languishing.
- In the entourage population, 54% were categorised as flourishing, 39% with moderate mental health, and 7% as languishing.
- Both classifications are displayed in figure 9.
- Emotional well-being was the highest in both populations. Athletes scored slightly higher in this subscale. Psychological well-being was high and similar in both populations. Social well-being subscale was lower than emotional and psychological well-being in both populations. Results in the three subscales are displayed in the Figure 10.
- Findings at item level, displayed in figure 11, showed that 63% of **athletes** felt happy (item 1) almost every day, or every day. 71% also felt interested in life (item 2) and 59% satisfied with life (item 3) almost every day, or every day.

- In addition, 68% felt that they have warm and trusting relationship with others (item 11).
- In contrast, athletes have lower scores in the social subscales. 12% had never felt that they belonged to a community or social group (item 5), 12% had never felt that the society is a good place (item 6), and 9% have never felt that the way society works make sense to them (item 8).
- Findings from the **entourage** are displayed in figure 12. 54% of the entourage felt happy (item 1), 79% interested in life (item 2), and 71% satisfied with life (item 3) almost every day, or every day.
- As with athletes, entourage members social well-being subscale was the lowest. 19% of the entourage members had never felt that society is a good place (item 6), and 14% had never felt that society makes sense to them (item 8)

Compared to the EU data.

- In **athletes**, Spain (n = 231; 50%) had a similar flourishing mental health as in Sweden (n = 158; 54%), UK (n = 149; 52%), and better than France (n = 294; 43%). In contrast languishing mental health in Spain and Sweden were higher (both 6%), than France (4%) and UK (1%).
- In **entourage members**, Spain (n = 137; 54%) had a better flourishing mental health than France (n = 131; 48%) and UK (n = 139; 40%), but worst than Sweden (n = 164; 71%). Spain (7%) languishing mental health was similar to France (7%) but worst than UK (4%) and Sweden (2%).
- Similar to Spain, in all the countries social well-being subscale scores were lower than psychological and emotional well-being.

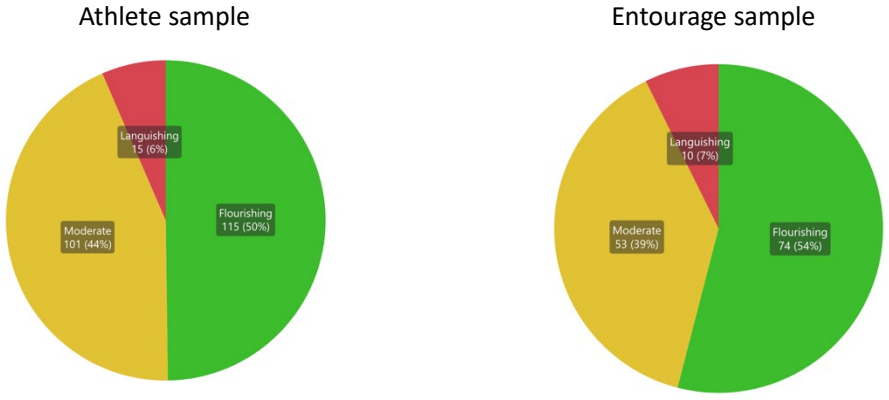



*Figure 9 Mental health classification for the two different groups in the Spanish sample.*

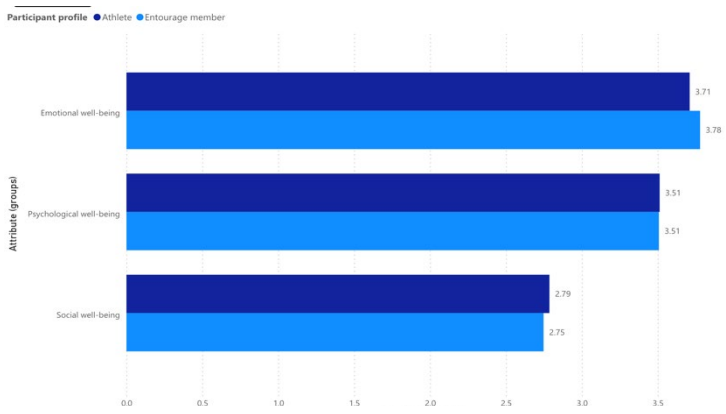



*Figure 10 Average MHC-SF scores for athletes and entourage members for the Spanish sample.*

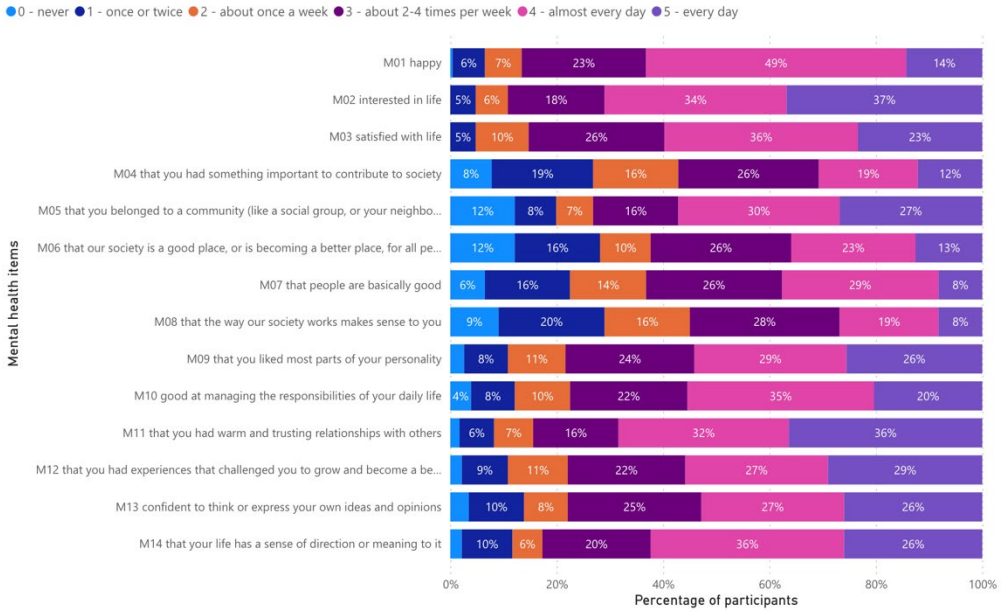



*Figure 11 Frequencies for the MHC-SF items in the athlete's sample.*

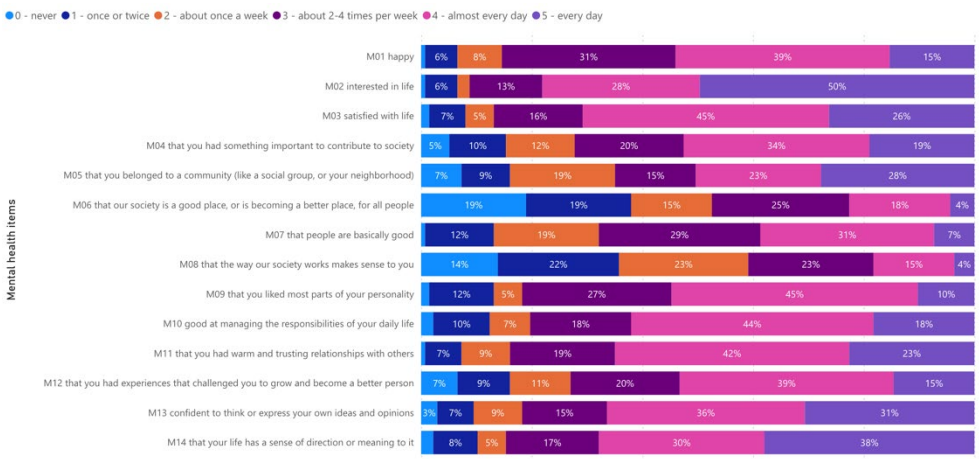



*Figure 12 Frequencies for the MHC-SF in the entourage sample.*

## Mental ill-health

### Generalized Anxiety Disorder Questionnaire (GAD-7)

The GAD-7 is a 7-item scale that measures symptoms of generalized anxiety disorder. Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 21.

### Patient-Health Questionnaire (PHQ-9)

The PHQ-9 is a 9-item scale that measures symptoms of depression in the last two weeks (e.g., "little interest or pleasure in doing things"). Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 27.

**KEY FINDINGS**

Detailed results are displayed in the figures below.

**ANXIETY AND DEPRESSION:**

- In the athlete population, 32% reported no symptoms of depression, 35% reported mild symptoms, 21% reported moderate symptoms, 9% reported moderately severe symptoms, and 3% reported severe symptoms. As for anxiety, 20% reported no symptoms of anxiety, 43% reported mild symptoms, 25% reported moderate symptoms, and 12% reported severe symptoms.
- In the entourage population, 55% reported no symptoms of depression, 31% reported mild symptoms, 7% reported moderate symptoms, 5% reported moderately severe symptoms, and 2% reported severe symptoms. As for anxiety, 36% reported no symptoms of anxiety, 47%reported mild symptoms, 13% reported moderate symptoms, and 4% reported severe symptoms.
- Findings at item level, showed that 24% of the **athletes** felt down, depressed, or hopeless (item 1), 47% felt tired or with low energy (item 4), 38% felt without appetite or overeating (item 5) more than half of the days or nearly every day. In addition, 4% (n = 10) had thoughts that they would be better dead (item 9).
- In **entourage**, 24% felt tired or with low energy. 3% (n = 5) had thoughts more than half of the days that they would be better dead (item 9).

Compared to EU data,

- in athletes Spain had the lowest percentage of no depression (Spain = 31%; France = 43%; Sweden = 47%; UK = 52%.) and a higher percentage of moderate/severe and severe depression (Spain = 12%; Sweden = 11%; UK = 9%; France = 5%). Comparing thoughts of death, Spain (n = 10) had a higher number of athletes than UK (n = 8), France (n = 7), and Sweden (n = 3) that think they would be better day more than half of days.
- In entourage members, Spain had a similar percentage of no depression compared to France and UK (both, 56%). Spain (6%) also had a similar percentage of moderate to

severe depression and severe depression compared to Sweden (6%) and UK (5%). In thoughts of death, Spain (n = 5) had a slightly higher number of entourage members that reported thinking of death more than half of days when compared to Sweden (n = 3), UK (n = 2), and France (n = 1).

- Regarding anxiety, in Spanish athletes (20%) had the lowest percentage of no anxiety compared to Sweden (35%), UK (36%), and France (39%). Spain (37%) had also the higher percentage of moderate to severe anxiety (UK = 20%; France = 21%; Sweden = 24%). In entourage members, Spain had similar percentages to the other European countries in no anxiety and moderate to severe anxiety, but higher in mild anxiety (Spain = 47%; UK = 43%; France = 37%; Sweden = 34%).

**DIAGNOSIS AND HELP-SEEKING**

- Regarding diagnosis, 40% of athletes indicated to have received professional help in relation to their mental health, and 7% reported having received a formal diagnosis of mental health disorder. 14% reported experiencing mental health problems at the time of filling out the survey. 29% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by athletes was 14 years old.
- In the entourage sample, 46% indicated to have received professional help in relation to their mental health, and 14% reported having received a formal diagnosis of mental health disorder. 5% reported experiencing mental health problems at the time of filling out the survey. 23% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by entourage members was 27 years old.

Compared to EU data,

- Spanish athletes (40%) had the highest percentage to had received professional help (Sweden = 38%; France = 34%; UK = 25%). Spanish athletes (7%) had received more formal diagnosis than France (4%), but less than Sweden (13%) and UK (14%). Spain (29%) followed Sweden (34%) in life prevalence. The years of onset of first episode was the youngest in Spanish athletes (14; France = 17; Sweden = 17; UK = 18). Regarding entourage members, similarly than with Spanish athletes, Spain (46%) had the highest percentage of receiving professional help (France = 35%; Sweden = 33%; UK = 30%). Spanish entourage members (14%) had received more formal diagnosis than France (7%) and Sweden (12%); and less than UK (17%). Spain had a similar life prevalence when compared to Sweden (22%), and less than UK (28%).

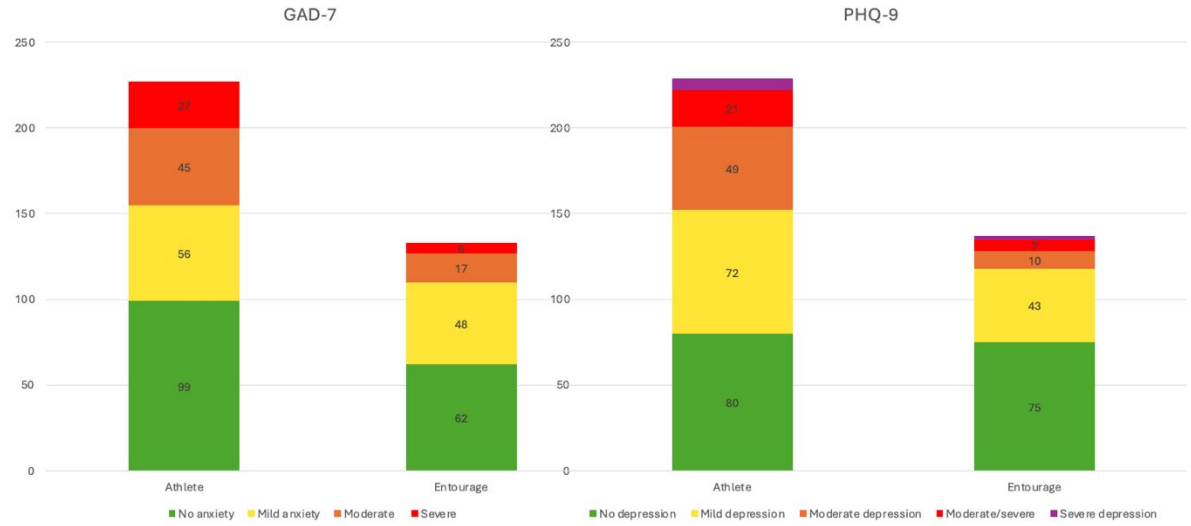



*Figure 13 Anxiety and depression prevalence in the two groups.*

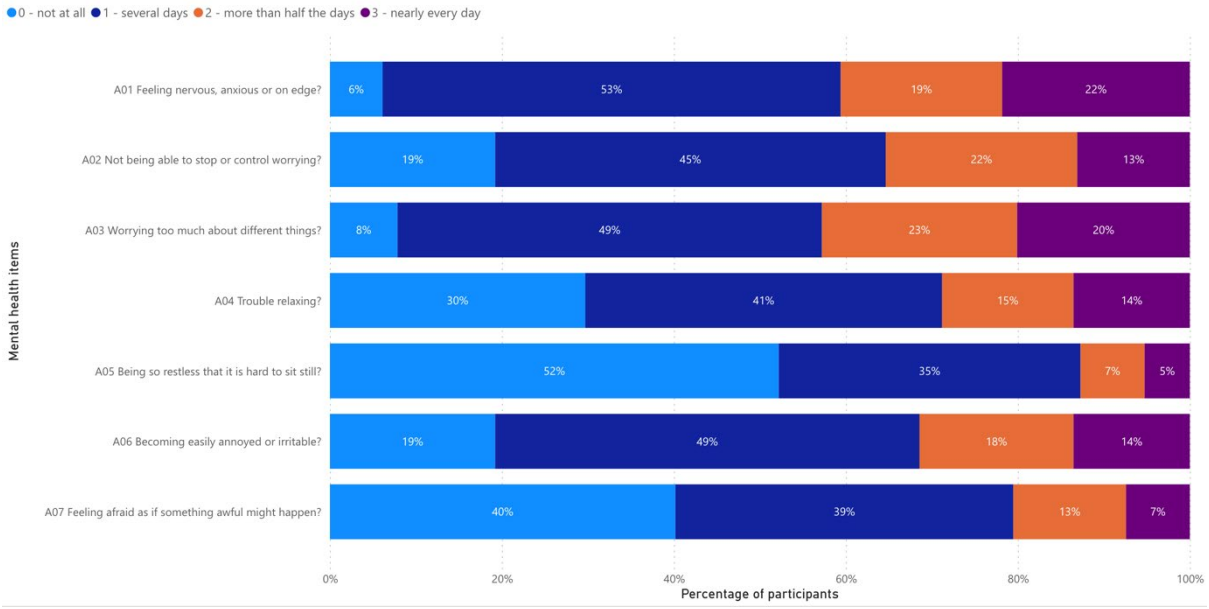



*Figure 14 Frequencies for the GAD-7 items in the athlete sample*

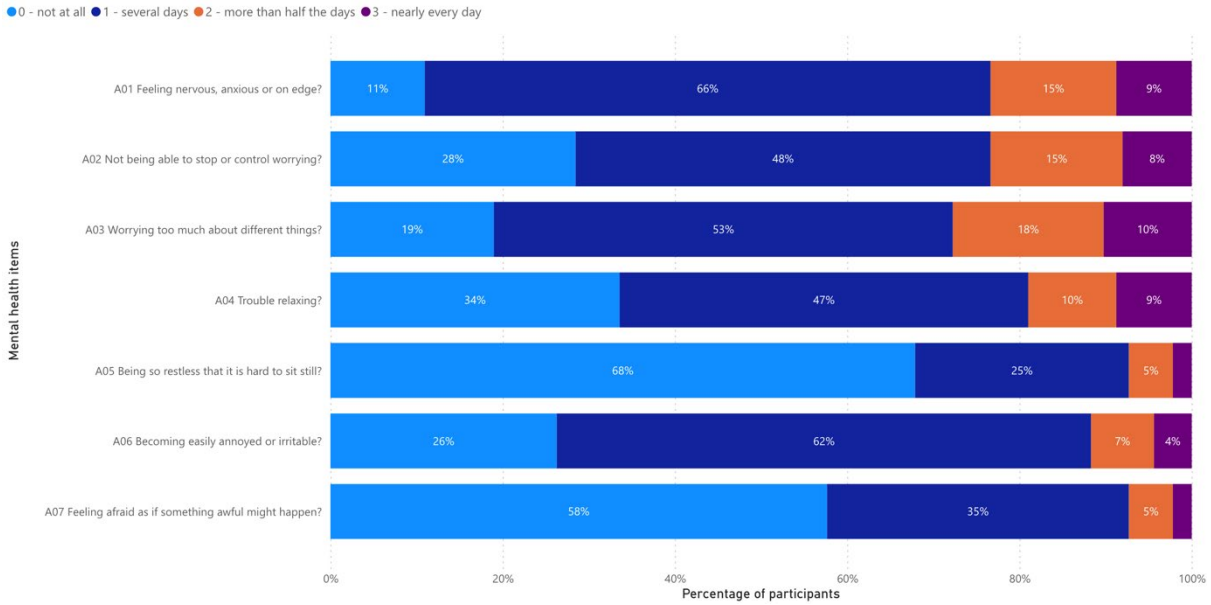



*Figure 15 Frequencies for GAD-7 in the entourage sample*

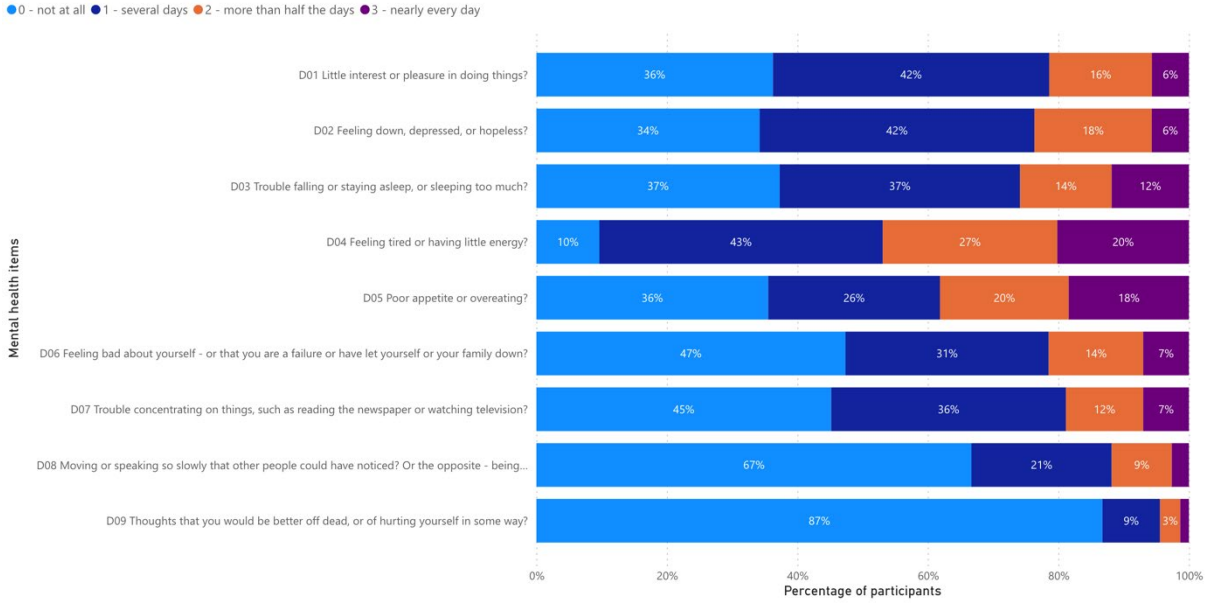



*Figure 16 Frequencies for the PHQ-9 for the athlete sample.*

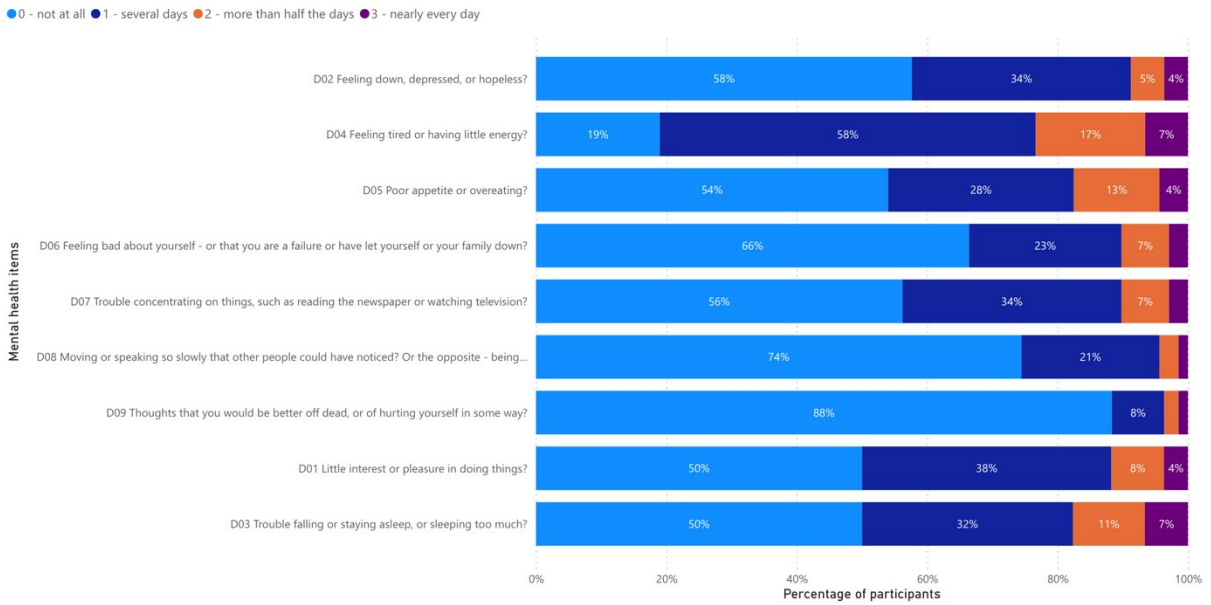



*Figure 17 Frequencies for the PHQ-9 for the entourage sample.*

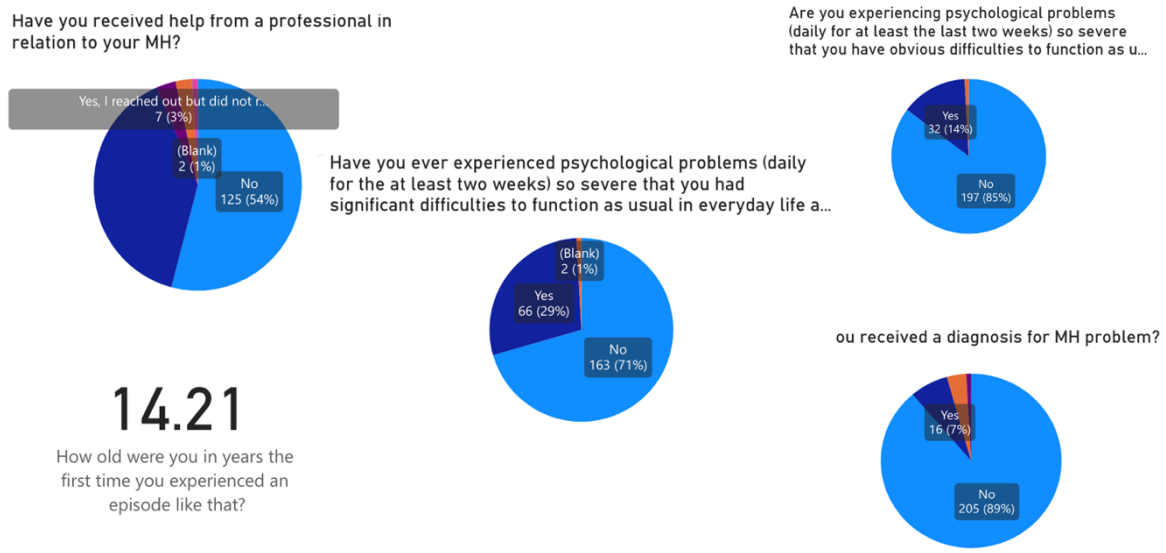



*Figure 18 Diagnosis, professional psychological help, history of mental health problems in the athlete population.*

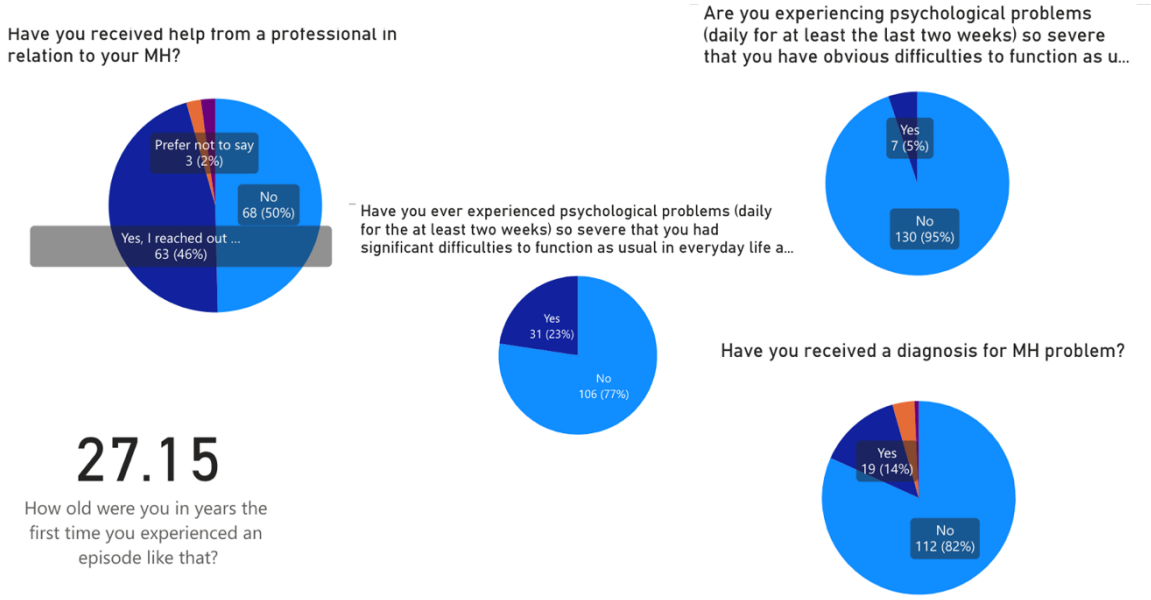



*Figure 19 Diagnosis, professional psychological help, history of mental health problems in the entourage population.*

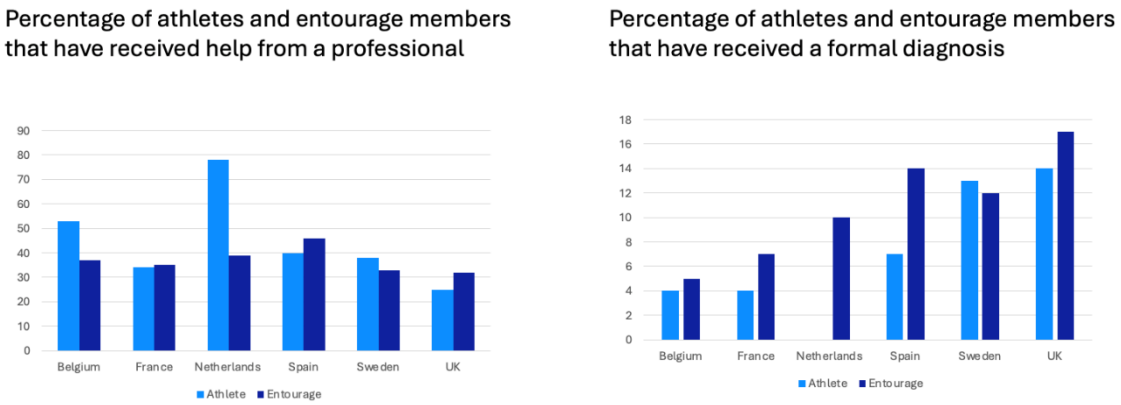



*Figure 20 Comparison of help received from a professional and formal diagnosis between EU data*

Mental Health Literacy

Mental Health Literacy Questionnaire

This scale consists of 12 items and was designed to explore different topics related to mental health, both in a positive (e.g., “doing something meaningful or enjoyable on a regular basis contributed to good mental health”) and a negative light (e.g., “if I had a mental health problem I would try to hide it from others”). Respondents rate each item on a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree), the total score representing the level of mental health literacy: the higher the score, the higher the level of mental health literacy. When calculating the total score, the negative items (item 9, 10 and 12) were scored in reverse. The total score ranges from 0 to 48.

**KEY FINDINGS**

- Mental health literacy of 368 participants (athletes = 231; entourage = 137) was investigated.
- Athletes had a mean of 37.12 points and entourage members had a mean of 41.29 points in the questionnaire.

- Most **athletes** (94%) agree that a good recovery (good habits) contributes to a good mental health (item1). The majority of athletes (60%) also agree that highly stressful situations on a regular basis may cause mental health problems (item 8).
- Although most athletes (80%) would seek professional help if they had a mental health problem, 8% refer they would not do it (item 5). In addition, 33% of athletes would hide if they had a mental health problem (item 9), and 13% associated seeking for a mental health professional with weakness (item 10).
- Furthermore, 17% of athletes reported they would not know how and where to look for information about mental health (item 7).
-
- The majority of **entourage members** (95%) agree or somewhat agree that an adequate recovery (good habits) contributes to a good mental health (item 1). 96% also agree with the mental health definition provided (item 2).
- Related to help seeking, 4% would not seek professional help if they had a mental health problem (item 5), Also, 27% of entourage members would hide mental health problems (item 9). 11% of entourage members believes that seeking a mental health professional means you are not strong enough, and 17% believes that most people with mental health problems do not have the potential to recover (item 11).
- Notably, 20% of entourage members would not know how and where to seek information about mental health (item 7).
-

Compared to EU data,

- Spanish athletes referred that an adequate recover contributed to a good mental health (item 1), similar to France (98%), Sweden (97%) and UK (96%). The south European athletes (Spain, 69%; France; 71%) believed less that engaging to social activities contributed to a good mental health (item 4), when compared to UK (88%) and Sweden (92%). Regarding help seeking behaviors, Spain is well positioned versus

the countries studied. Fewer Spanish athletes referred that they would not seek for professional help if they had a problem (item 5; Spain, 8%; Sweden 12%; France, 13%; UK, 17%); and fewer Spanish athletes would hide mental health problems when compared (item 9, Spain, 33%; France, 42%; UK, 47%; Sweden 56%).

- When comparing entourages, Spain had the higher mental health literacy score of all countries. Moreover, Spain and France had a different profile than Sweden and UK. The south European countries more intention to seek professional help if they had a mental health problem. 4% of Spanish and 3% of French entourages would not seek for professional help, versus 10% of Swedish and 12% of British. The same occurred with the intention to hide a mental health problem. France (23%) and Spain (27%), versus Sweden (45%) and UK (55%).

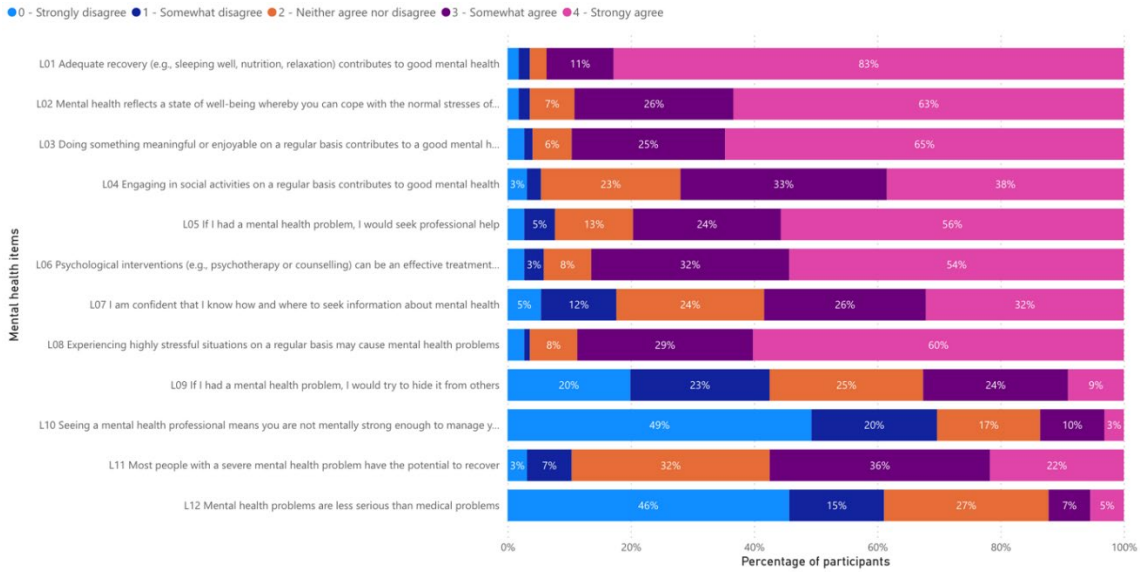



*Figure 21 Frequencies for the MHL questionnaire in the athlete sample.*

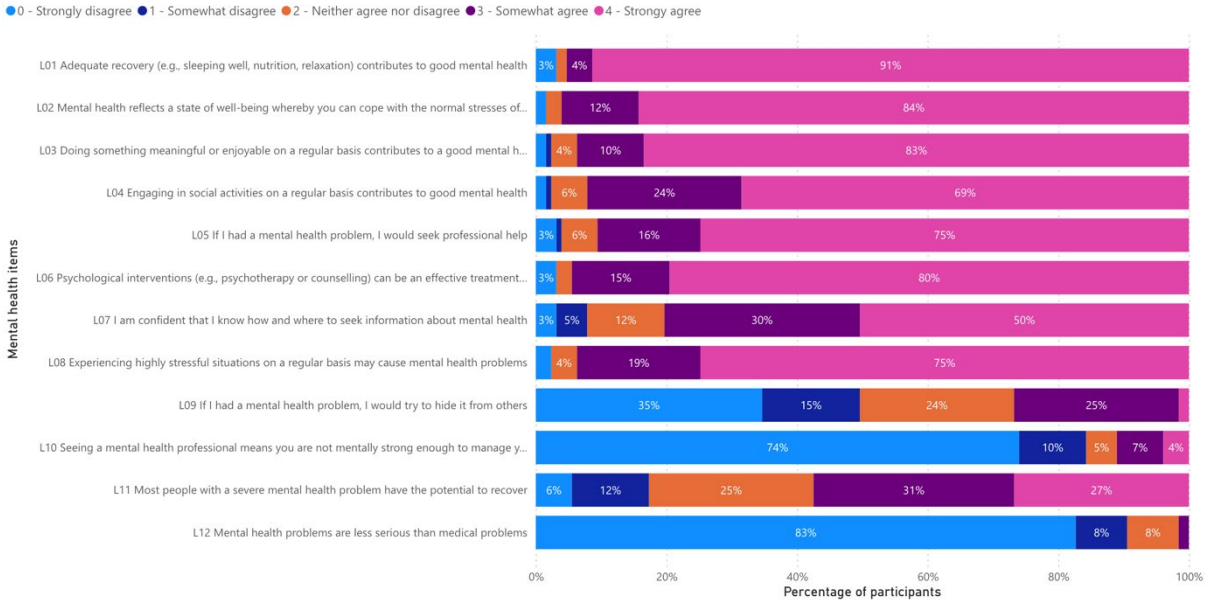



*Figure 22 Frequencies for the MHL questionnaire in the entourage sample.*

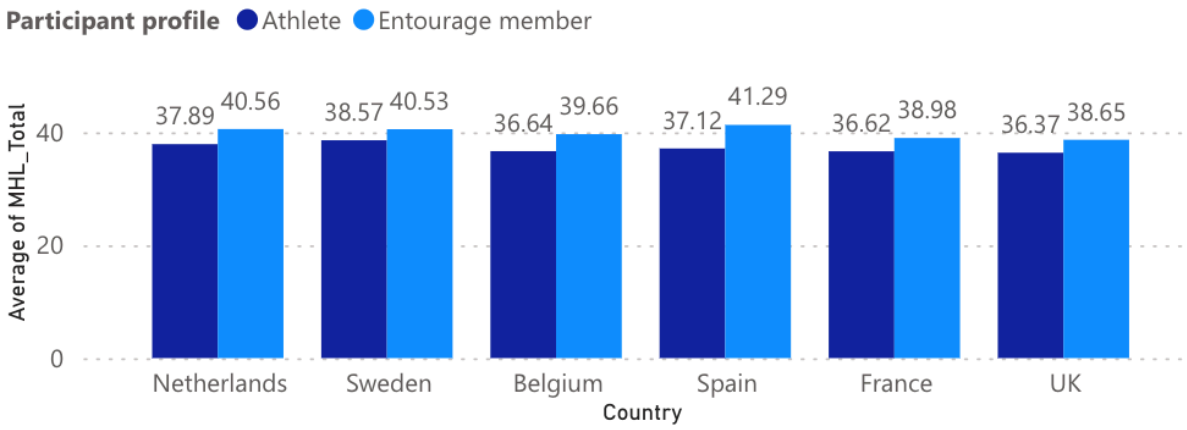



*Figure 23 Comparison of MHL-12 scores between EU countries*

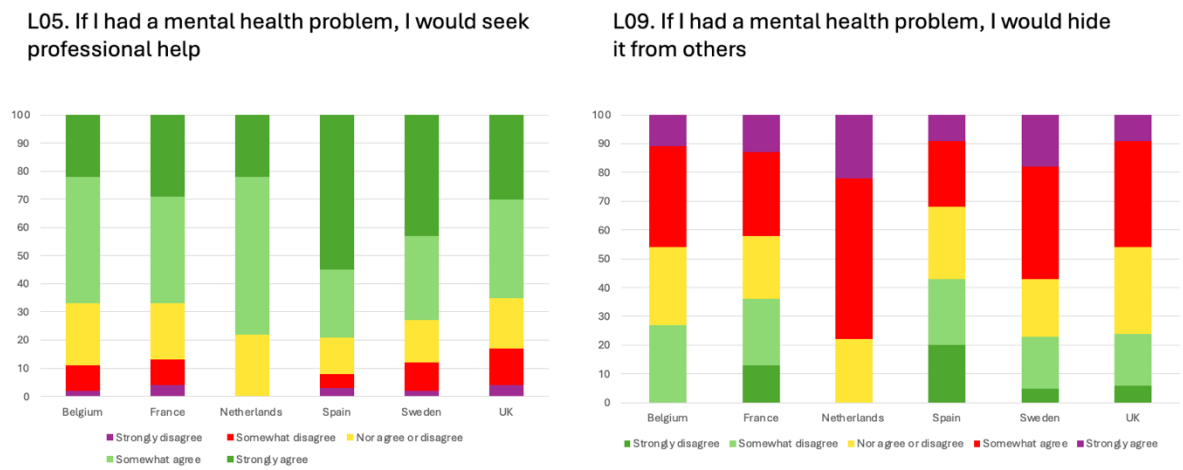



*Figure 24 Comparison of items answers between athlete sample in EU data*

## Perceived support (athletes)

**Adapted version of the General Help-Seeking Questionnaire (GHSQ)**

The GHSQ is a single itmem measure used to investigate how likely it is that athletes would receive appropriate mental health support from different persons in the entourage. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

Detailed results are displayed in figure 25.

- Parents scored the highest, making them the first source for asking for help.
- In general, the personal and sport domain roles scored better than the educational/vocational domain roles.
- In the sport domain, sport psychologist, mental coach and clinical psychologist scored higher. Meaning that athletes are more likely to seek for help in these roles.
- Dual career support providers, career advisors and data analysts scored the lowest. That means that athletes are less likely to seek help in these roles when they need it.

Compared to EU data

- In all countries the private domain scored higher.
- Spain and UK were the only countries were parents scored higher. Sport psychologist in Sweden, and France; mental coach in Belgium; partner in Netherlands.

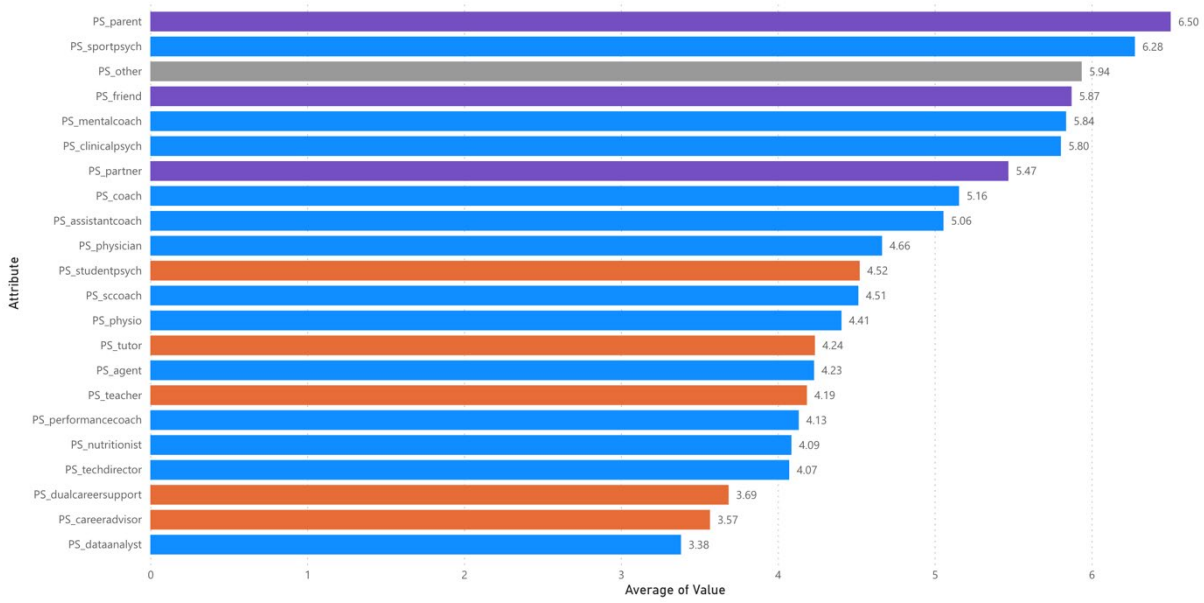



*Figure 25 Scores for the different roles in the entourage on the GHSQ from the athletes' perspective.*

## Mental health support provision (entourage)

One question aimed to investigate entourage members' confidence in providing adequate support to athletes dealing with mental health problems. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Entourage members were asked how likely it is that they would be able to offer appropriate mental health support to athletes. The scores are based on the average scores of the survey participants that declared working in each role.
- The members in the entourage that were ranked higher, meaning those people felt extremely confident in their mental health support competencies were parent, sport psychology, friend, mental coach, clinical psychologist, and partner.
- The roles that scored lowered, meaning those roles felt less competencies in supporting mental health were logistic support personnel, dual career support provider, career advisor and data analyst.
- Compared to the athlete's perception, certain roles scored higher. for example, the scores of dual career support providers were very low when asked to the athletes, and in contrast, among the highest in relation to the competencies felt by the professionals themselves.

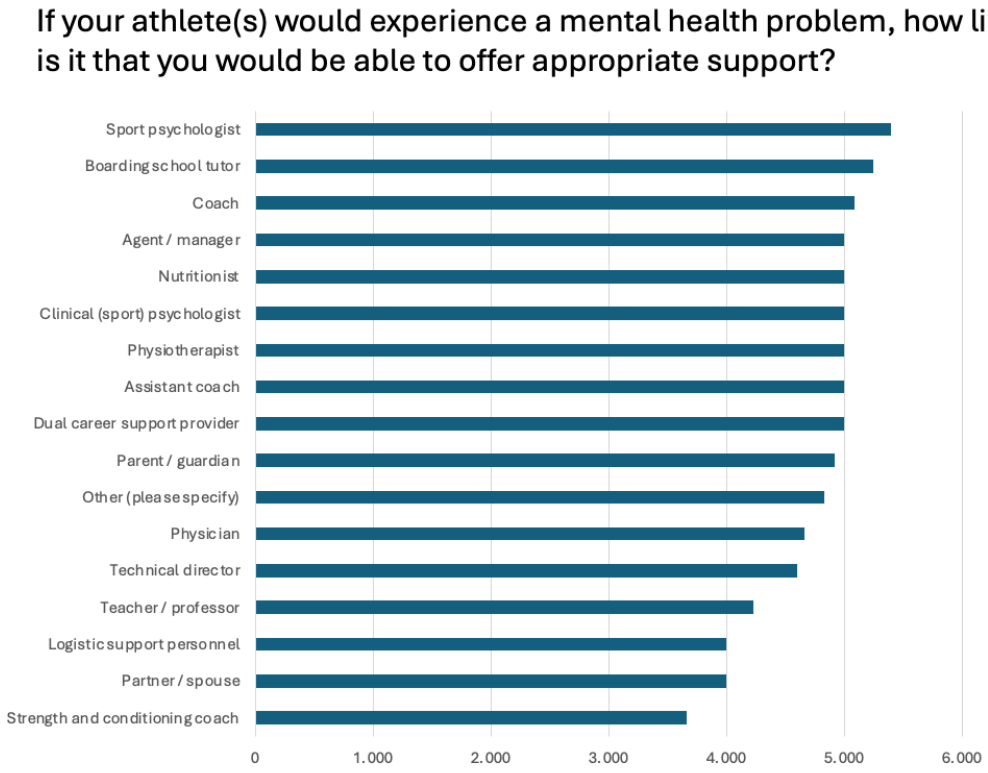



*Figure 26 Scores for the entourage members perception of their ability to help*

**KEY FINDINGS**

- Athletes and entourage members were asked to select the mental health promotion competencies that they felt were important to maintain mental well-being.

- The top three most important competencies according to athletes were (1) being empathetic and using active listening, (2) understanding mental health and mental health problems, and (3) knowing how to raise the topic of mental health with athletes. The results are shown in the figure 26.
- The top three most important competencies according to entourage members were (1) recognizing signs of mental health problems, (2) knowing where and how to refer athletes, and (3) being empathetic and using active listening. The results are shown in the figure 27.
- 6% of athletes, and 2% of entourage members thought it's not the role of the entourage members to support the mental health of the athletes.

Athletes' graph:

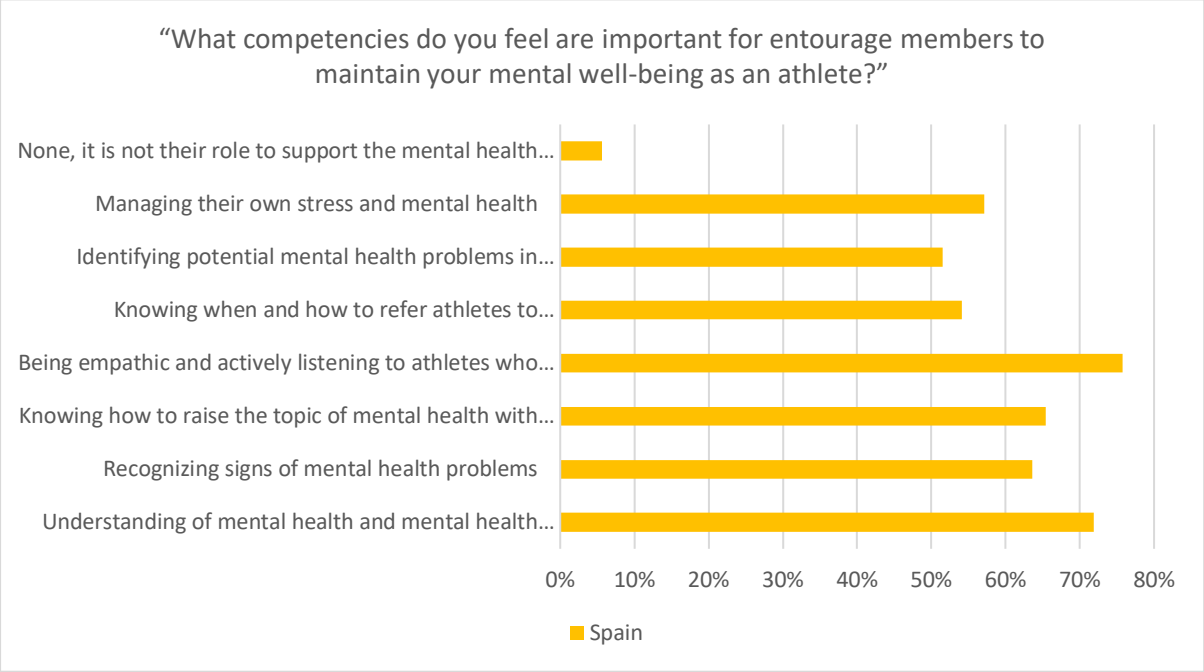



*Figure 27 Percentage of the total athlete sample that chose each mental health support competence.*

Entourage graph:

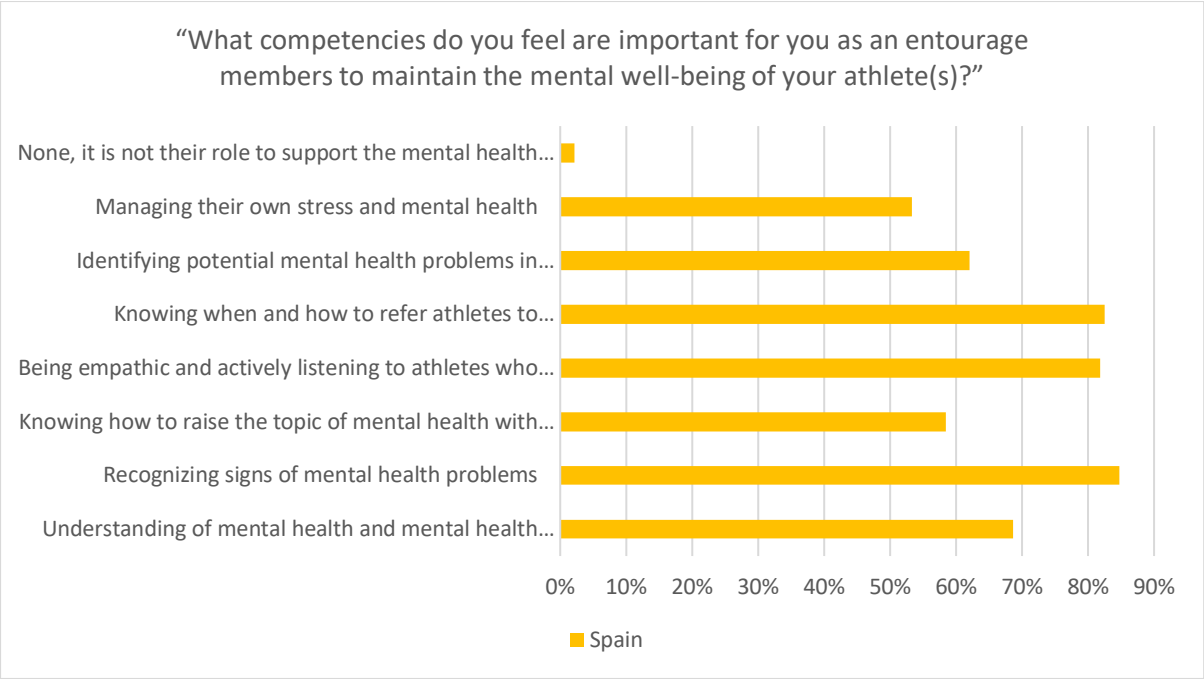



*Figure 28 Percentage of the total entourage sample that chose each mental health support competence.*

Link between study constructs.

a. Correlation between study constructs
b. Key predictors of MH

**KEY FINDINGS**

**MENTAL HEALTH & WELL-BEING – ATHLETE SAMPLE**

- Regarding the relation between mental ill-health and wellbeing, 12% of athletes report having a flourishing mental health without symptoms of mental illness, 26% having a moderate mental health with mild symptoms, 27% a moderate mental health with symptoms of mental illness, and 6% having a languishing mental health with symptoms of mental illness (Figure 29)
- Moderate relationships between athletes' general well-being and anxiety scores (*r = .50*) and between general well-being and depression scores (*r = .48*) were observed.
- The main predictors for **general well-being** in the athlete sample were low depression and anxiety. Together with high mental health literacy, type of sport (individual vs team), absence of injury, age, gender, and Dual Career status, the model predicted 37% of the variance in mental health scores.

**MENTAL HEALTH & WELL-BEING – ENTOURAGE SAMPLE**

- In entourage members, 24% reported having a flourishing mental health without symptoms of mental illness, 26% having a moderate mental health with mild symptoms, 27% a moderate mental health with symptoms, and a 6% a languishing mental health with symptoms of mental illness (Figure 29).
- Moderate relationships between athletes' general well-being and anxiety scores (*r = .44*) and between general well-being and depression scores (*r = .54*) were observed.
- The main predictors for **general well-being** in the entourage sample were low depression, high mental health literacy and low anxiety. Together with gender, age, employment status, and years of experience in the role, the model predicted 23% of the variance in the mental health scores.

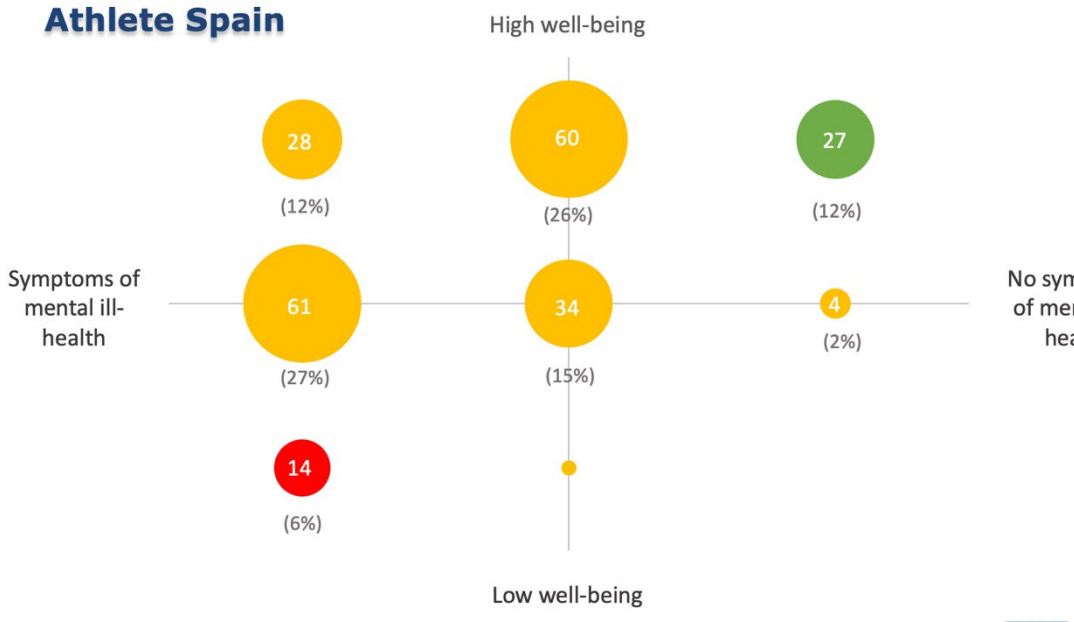



*Figure 29 Relation between wellbeing and mental ill-health in athlete's sample.*

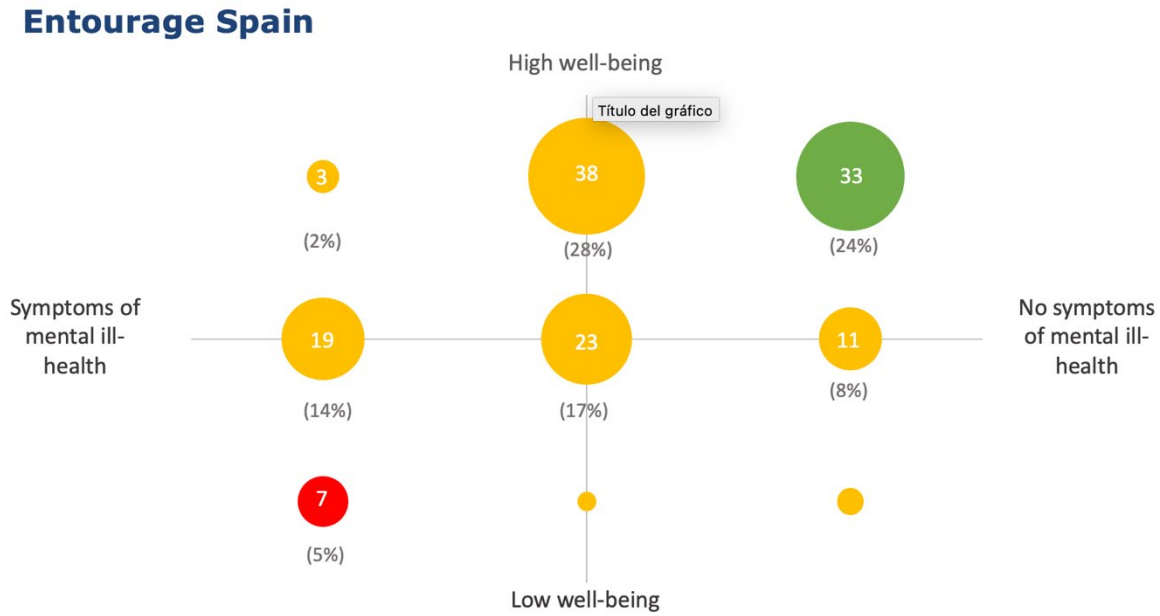



*Figure 30 Relation between wellbeing and mental ill-health in entourage's sample.*

## Qualitative data results

Athletes were asked (1) what skills entourage need to support their mental well-being, and (2) what skills athletes need to promote their own mental health.

Entourage members were asked what skills they need to (1) maintain the mental well-being of their athletes, and (2) maintain their own mental well-being.

**KEY FINDINGS**

**Athlete sample:**

A total of 110 Athletes (47% of the total Spanish athlete sample) answers the open question regarding mental health support and promotion.

- **Entourage member's resources to maintain athlete's mental wee-being:** The main themes emerging from the qualitative analysis are.
  - Mental health perspective.
  - Mental health professionals.
  - Supportive and safe environment.
  - Mental health literacy

**Entourage sample:**

A total of 73 Entourage members (53% of the total Spanish entourage sample) answers the open question regarding mental health support and promotion.

- **Entourage member's resources to maintain athlete's mental wee-being**: The main themes from the qualitative analysis are.
  - Holistic view of athletes
  - Mental health professionals
  - First aid competencies
  - Mental health literacy
  - Supportive entourage

- **Entourage member's resources to maintain their own mental well-being**. The main themes from the qualitative analysis are.
  - Organizational conditions and support
  - Life balance
  - Self-care
  - Supportive team/entourage

## Next steps

### Practical implications

**Recommendation for future research.**

- Investigate how sports organisations can care and promote the mental health of athletes and their environment (from an evidence-based perspective). Explore the competencies of the managers and people in charge of these institutions and their decision-making.
- Further investigation in entourage members mental health. Considering the beliefs and barriers of the entourage members about caring for their own mental health.
- Investigate the existing and necessary policies in order to take care of the mental health of athletes and the people of their entourages.
- Develop research that take into account the context and culture of the athletes and their environments.

**Recommendation for practice.**

- Design interventions that take care of the hole environment. Promoting resources and competencies into athletes and entourage members, while considering their context.
- Improve athletes and entourage mental health literacy. Contemplate beliefs that act as barriers to help-seeking behaviour.
- It is recommended that sports organisations consider that some of their athletes and environments will have mental health problems. These need to be identified and addressed in an informed and responsible manner.

## References

European Commission. (2023). *Dual Careers for Mental Health*. Retrieved 13/03/2024 from https://erasmus-plus.ec.europa.eu/projects/search/details/622178-EPP-1-2020-1-BE-SPO-SCP

International Olympic Committee. (2023, 12/07/2023). *Measuring and Increasing Athletes' Mental Health Literacy (MHL): Cross-Cultural Validation of MHL Questionnaire and Evaluation of MHL Intervention Implementation*. Retrieved 13/03/2024 from https://olympics.com/ioc/news/2023-2025-advanced-olympic-research-grants-awarded

Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, *43*(2), 16.

Kroenke, K., Spitzer Rl Fau - Williams, J. B., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 8. https://doi.org/https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

MENTiS

Co-funded by the European Union

# NATIONAL REPORT SWEDEN

# MENTAL HEALTH OUTCOMES, LITERACY AND PROMOTION IN ATHLETES AND ENTOURAGE MEMBERS IN HIGH-PERFORMANCE SPORT

Freja Jernstig Göran Kenttä Liselotte Ohlson

*Swedish Sport Confederation*

**April 2024**

This report is an output of the first work package of the Erasmus+ Sport project

"Promoting Mental health through the ENTourage in high-performance Sport" (MENTiS)

Loughborough University · INSEP · VUB Vrije Universiteit Brussel · NOC*NSF · UAB Universitat Autònoma de Barcelona

# Table of contents

## Consortium

We would like to express our gratitude to all the athletes and entourage members who participated in this study. We thank the entire MENTiS Consortium for their valuable contributions to the current study and report. The MENTiS consortium:

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## Key findings

- In Sweden, a total of 322 participants completed the survey, representing talented and elite athletes (N = 158, 49%) and entourage members of talented and elite athletes (N = 164; 51%). In particular, the term “entourage” refers to all the people associated with athletes. Exploring the sample further it can be noted that coaches and assistant coaches constituted more than 50% of the entourage sample. The athlete sample consisted of 23 different sports. The average age for an episode of mental health problems for an athlete was 16.5 years. Regarding clinical diagnosis, 13% of athletes indicated to have received professional help in relation to their mental health, and 38% reported having received a formal diagnosis of mental health disorder.

Add some key findings based on your national data

## Aims of the MENTiS survey

An online survey was developed by the MENTiS consortium for athletes and entourage members on mental health outcomes, mental health literacy, and mental health promotion.

The aim of the MENTiS survey was to:

1. Investigate the **prevalence of mental health indicators** (e.g., wellbeing, anxiety, depression) in athletes and entourage members from 6 European countries (i.e., Belgium, France, the Netherlands, Spain, Sweden, UK).
2. Investigate the perceptions about **mental health support** and ideas about how to improve mental health support.
3. Investigate the **role of potential influencing factors on mental health** (e.g., mental health literacy, mental ill-health, gender; for athletes specifically: the presence/absence of injuries; for entourage specifically: domain of support, job characteristics).
4. **Create an evidence base** for the development of workshops and (online) resources targeting entourage members in order to enhance their competencies in mental health promotion (WP2 and WP3 of the MENTiS project).

The results obtained with the survey are displayed in a European report and 6 national reports (i.e. Belgium, France, the Netherlands, Spain, Sweden, UK).

More information on the MENTiS project can be found here: https://spmb.research.vub.be/mentis

## Procedure & instruments

An online survey was administered to athletes and entourage members in the six participating countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.

Before administering the survey, ethical approval was granted by the Ethical Committee of Human Sciences of the Vrije Universiteit Brussel. Parental consent was required before minors could complete the survey.

The survey targeted two different groups:

1. Talented and elite athletes
2. Entourage members of talented and elite athletes belonging to the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors), or the personal domain (e.g., parents, partners, friends).

Data was collected in two phases: the first phase was April – August 2023, and the second phase was September – October 2023. During this 2nd phase, additional data were collected in Belgium and UK. The phase of data collection (i.e. 1 and 2) was included as a variable in the analysis. After collecting the data, data was analysed in SPSS and displayed in PowerBI. All consortium members had access to the PowerBI report, and received their national raw data.

The online survey was developed in Qualtrics and made available in 6 languages (English, French, Dutch, Spanish, Catalan, and Swedish).

The survey is available here: https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

The survey's content differs slightly between athlete and entourage participants. It was divided into five sections:

1. **Demographics**:
   i. **Demographics for athletes**: gender, age, sport characteristics, level of competition, dual career, income, employment, injury.
   ii. **Demographics for entourage members**: gender, age, domain (athletic, educational/vocational, personal), role in the entourage, sport characteristics, athletes' career stage, level of competition, number of athletes they work with, employment status.
2. **Mental health and well-being**
   i. Mental Health Continuum – Short Form (MHC-SF), (Keyes, 2002): 14-item scale that investigates general well-being, as well as social, psychological and emotional well-being; 6-point Likert scale from 0 (*never*) to 5 (*everyday*). Scores range from 0 to 70.
   ii. Patient-Health Questionnaire (PHQ-9), (Kroenke et al., 2001): 9-item scale that measures depression; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 27.

iii. Generalised Anxiety Disorder Assessment (GAD-7), (Spitzer et al., 2006): 7-item scale that measures anxiety; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 21.

iv. 1 item about receiving professional psychological help.

v. 2 items about lifetime and point prevalence of mental health problems; 1 item about age of onset of mental health problems.

**3. <u>Mental health literacy</u>**

i. Mental Health Literacy Questionnaire, developed during the E+ Dual Careers for Mental Health project (European Commission, 2023), and currently being validated as part of the Olympic Studies Advanced Research Grant: "Measuring and Increasing Athletes' Mental Health Literacy (REFS)" (International Olympic Committee, 2023): 12-item scale that measures mental health literacy; 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 12 to 60.

**4. <u>Mental health support</u>**

i. **Perceived support (for Athletes)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of receiving support from different sources. The different sources in this case were an extensive list of roles in the entourage: for the roles that were not indicated, there was the possibility of adding an extra role in a text box. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

ii. **Support provision (for Entourage)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of offering adequate support to athletes facing mental health problems. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

**5. <u>Competencies in mental health support</u>**

i. **Athletes**: 1 item to explore what competencies entourage need to support athletes' mental health; 1 item to explore what competencies athletes' need to support their mental health; 2 open questions to further investigate the abovementioned topics.

ii. **Entourage**: 1 item to explore what competencies they need to support athletes' mental health; 1 item to explore what competencies they need to support their own mental health; 2 open questions to further investigate the abovementioned topics.

## Data collection in Sweden

- **Who?** An online survey was administered to athletes and entourage members, with most responses from a national elite sports conference in May
- **When?** Data was collected between April – August 2023
- **How?** Participants received an online link by email to fill out the survey and some got the link via a QR-code after a lecture at the national elite sports conference
- **Survey link:** https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

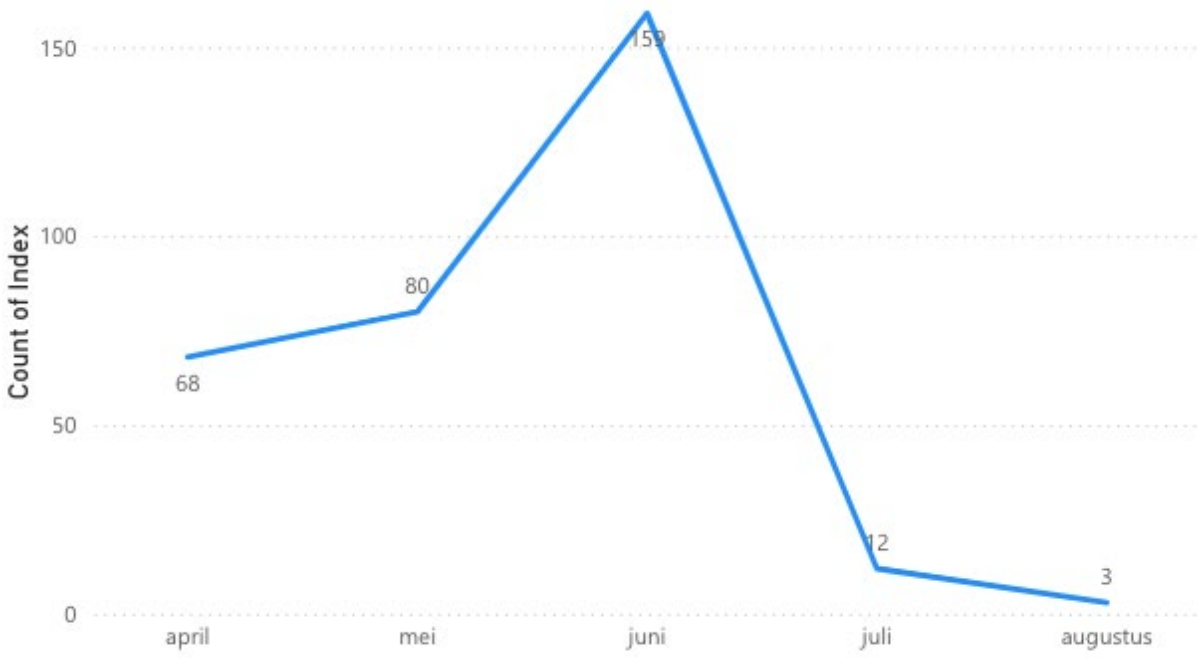



*Figure 1. Complete responses collected (N = 322) with the MENTiS survey between April and August 2023.*

## Participants

Figure 2 presents the sample characteristics

- 322 participants in total completed the questionnaire: including 158 athletes (49 %) and 164 entourage members (51 %).
- Males and females where almost equally distributed in the Swedish sample (49% females vs. 51% males)
- Sweden data did not show any differences compared to the European data regarding the sample

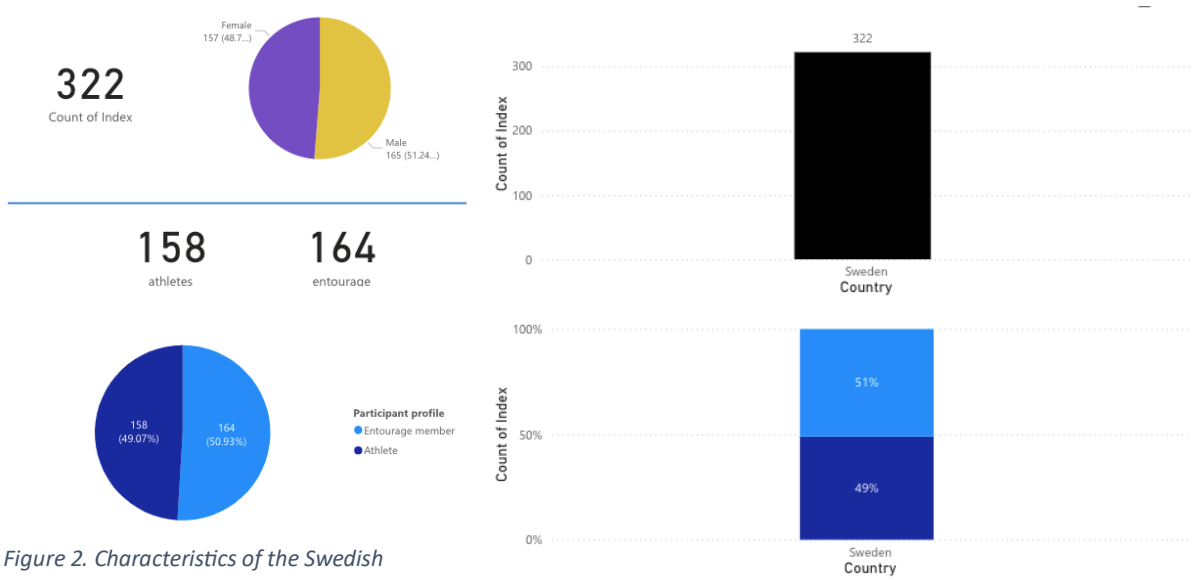



*Figure 2. Characteristics of the Swedish sample.*

## Sweden athlete sample (N = 158, 49% of full sample)

**Key findings athlete sample**

In total, 158 athletes completed the survey. The athlete sample characteristics are displayed in the figures below.

- The sample included N = 97 (61%) females and N= 61 (39%) males. The age ranged from 15-58, and the mean age was 34.
- The sample included more athletes from individual sports (78 %, N= 123) compared to team sports (22% N=35)
- Athletes were mainly active in an Olympic summer sport or a non-Olympic sport. In total, 6 para-athletes participated in the survey.
- Most athletes competed at world level, compared to the European data where national level was most common.
- 25% of the athletes in Sweden had an income from their sport, compared to 20% of the European sample.
- 92 % were dual career athletes (combined work and/or education with their sport)
- Most common sports were athletics (7%), biathlon (5%) and orienteering (4%).
- 11% of the athletes were currently injured, equivalent to the European sample.

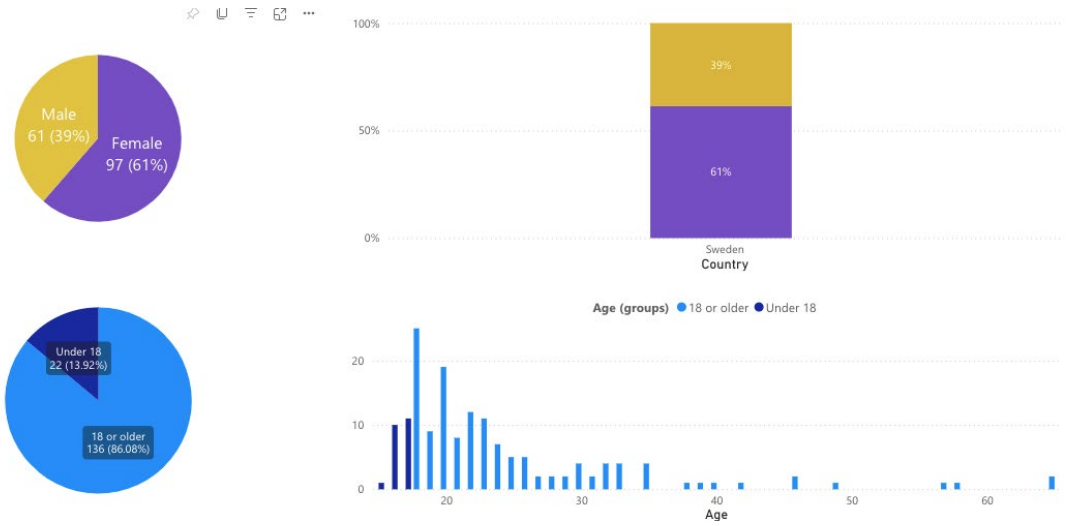



*Figure 4. Athlete sample characteristics (gender and age distribution)*

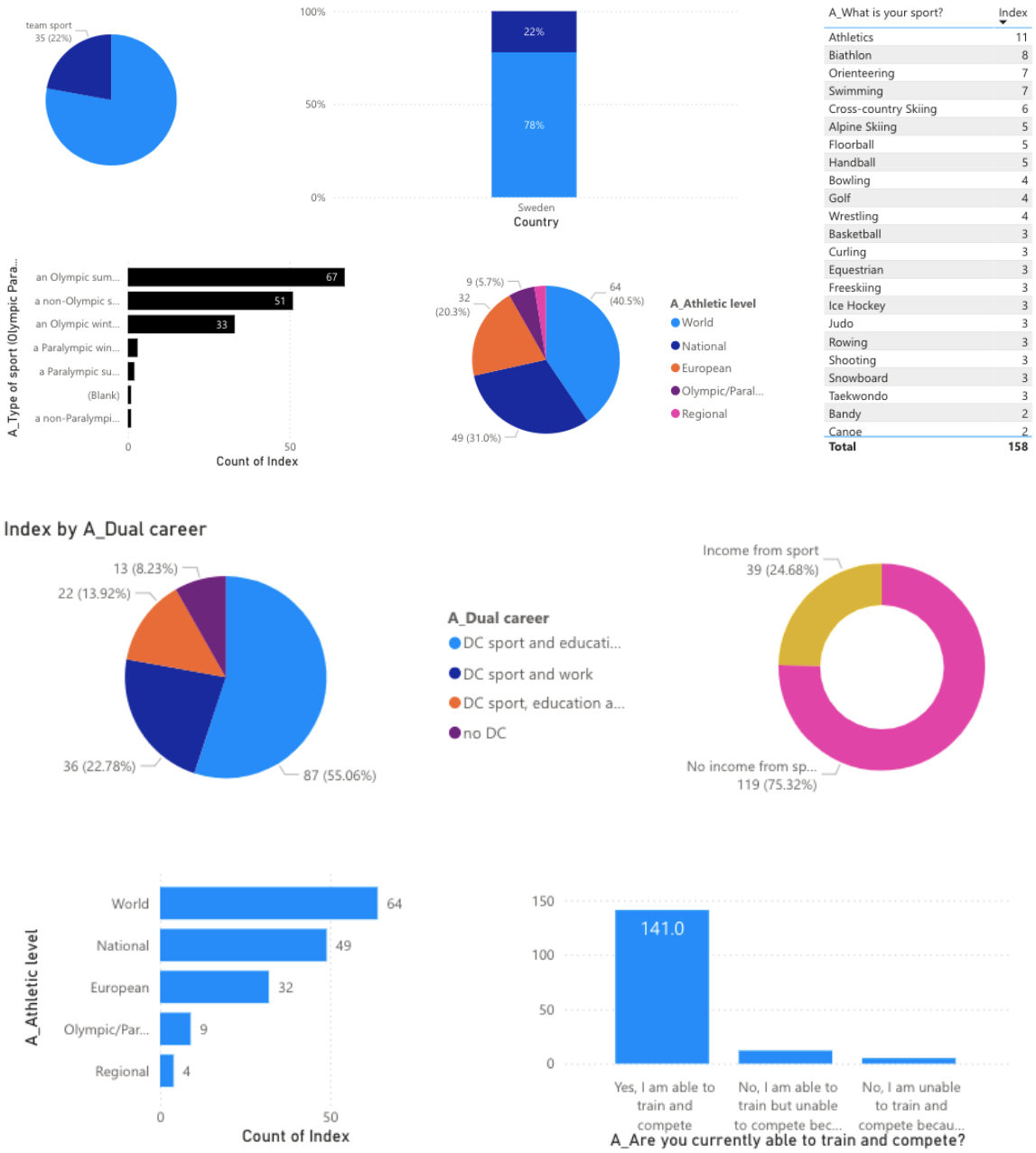



*Figure 5,6. Sport characteristics of the Swedish athlete sample Sweden entourage members sample (N = 164; 51% of full sample)*

- In total, 164 entourage members completed the survey. Of these, 84% (N = 137) belonged to the athletic domain (e.g., coaches, assistant coaches, psychologists, physicians, technical directors), 10% (N =17) belonged to the educational/vocational domain (e.g., teachers, dual career support providers, boarding school tutors), and finally 6% (N = 10) to the personal domain (e.g., parents, partners, housemates, friends).

- Age ranged between 22 & 67, and the mean age was 44

The following sample characteristics refers to participants from the athletic and educational domains:

- Of this sample 57% worked with individual sport athletes, 36 % with team sport athletes and 6% with different types of sports. Compared to European data, Sweden had more entourage members in individual sport.
- Regarding the sport disciplines, entourage members mainly worked with athletes from Olympic sports (77%), 20% more than the European data.
- The majority (38%) worked with youth/talented athletes and 28% with senior athletes. 35% worked with athletes in both career stages. At the European level, the majority worked with athletes in both career stages.
- Our participants hade 11 years of experience in their role on average.
- Regarding employment status, 17% were self-employed and 82% were employed, 50% full time, 32% part time, and 17%voluntary basis.
- Sample characteristics are displayed in Figure 6 & 7.

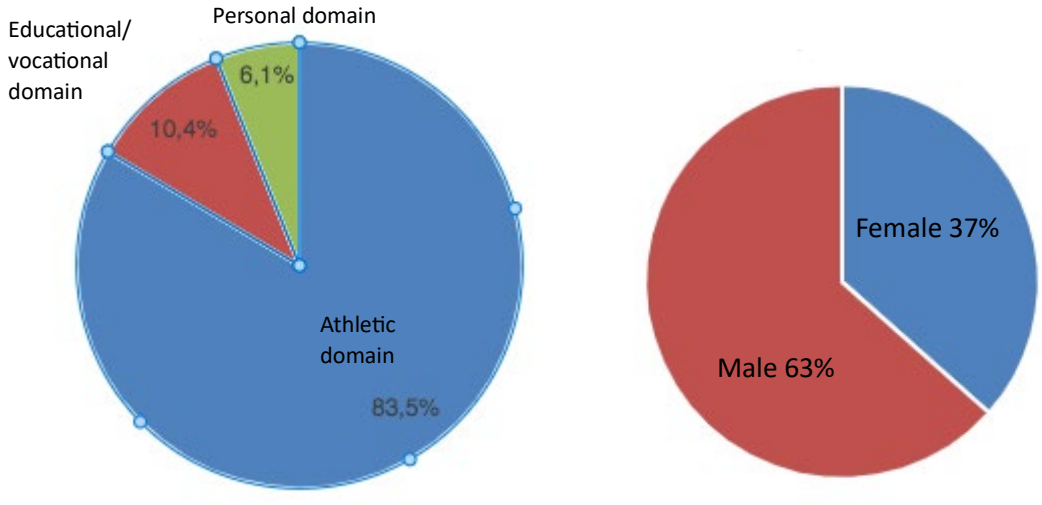



*Figure 7. Entourage sample characteristics*

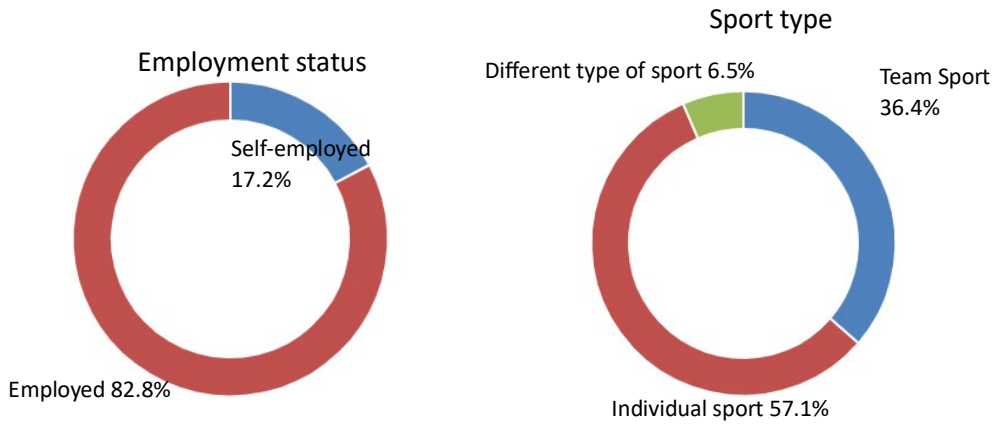



*Figure 8. Sport and contract characteristics of the entourage sample.*

## Results

**Study constructs:**

a. Mental health
b. Mental ill-health
c. Mental health literacy
d. Perceived support (athletes)
e. Provided support (entourage)
f. MH promotion competencies

**Link between study constructs:**

a. Correlation between study constructs
b. Key predictors of MH

## Mental health

***MENTAL HEALTH CONTINUUM – SHORT FORM (MHC-SF).***

Mental health was measured using the Mental Health Continuum Short form (MHC-SF), developed by Keyes (2002).

- The scale has 14 items
- The scores are on a 6-point scale (0 – never; 5 – Every day)
- Three subscales: emotional well-being, social well-being, and psychological well-being
- It can be scores according to the three subscales + the general well-being scale, or according to the Mental Health Continuum (Languishing, moderate MH, Flourishing)

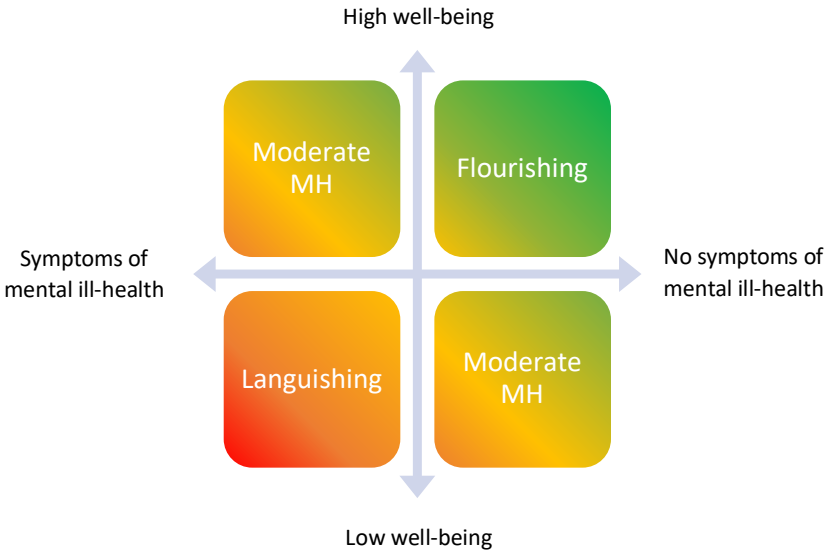



*Figure 1. Mental health dual continuum model (Keyes, 2002)*

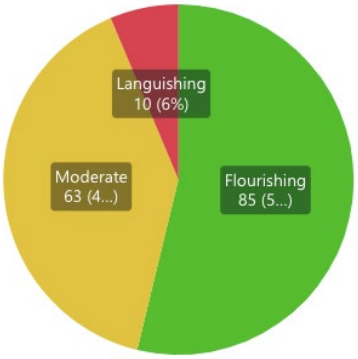
**KEY FINDINGS**

Detailed results are displayed in the figures below.

- In the athlete population, 54% were categorised as flourishing, 40% with moderate mental health, and 6% as languishing.
- In the entourage population, 7% were categorised as flourishing, 27% with moderate mental health, and 2% as languishing.
- In both populations, scores on the social well-being subscale were lower compared to the psychological and emotional well-being subscales. The Swedish populations scored higher on the social well-being compared to the European sample. Scores in the three subscales are displayed in figure 10.

- Findings at item level show that **athletes** felt less often satisfied with life (item3) than happy (item1 or interested in life (item 2), just as in the European sample. 34% of the athletes in Sweden felt that they are good at managing the responsibilities of their daily life, compared to 21% in the European sample. See all the items in figure 11.
- Findings at item level shows that 77% of the Swedish **entourage** felt happy with life, compared to 64% in the European sample**.** See all the items in figure 12.

ATHLETE SAMPLE




ENTOURAGE SAMPLE

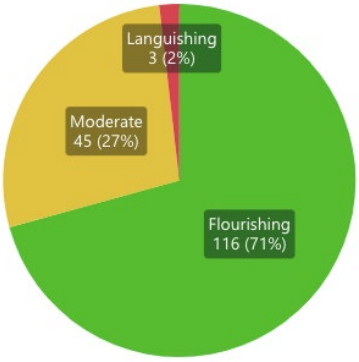



*Figure 9. Mental health classification for the different groups in the Swedish sample*

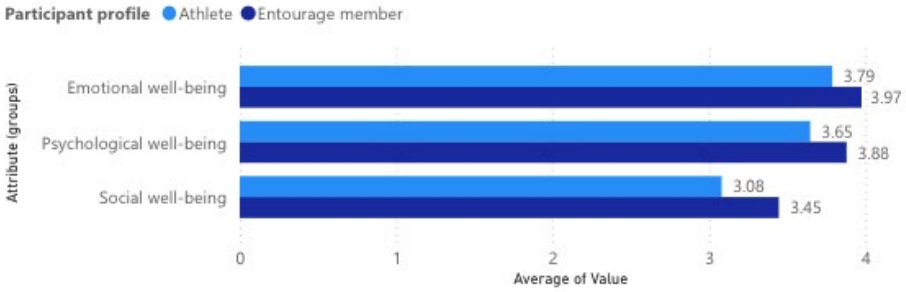



*Figure 10. Average MHC-SF scores for the two different groups in the Swedish sample.*

## Mental ill-health

### Patient-Health Questionnaire (PHQ-9)

The PHQ-9 is a 9-item scale that measures symptoms of depression in the last two weeks (e.g., "little interest or pleasure in doing things"). Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 27.

### Generalized Anxiety Disorder Questionnaire (GAD-7)

The GAD-7 is a 7-item scale that measures symptoms of generalized anxiety disorder. Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 21.

**KEY FINDINGS**

Detailed results are displayed in the figures below.

**ANXIETY AND DEPRESSION**

- In the athlete population, 47% reported no symptoms of depression, 27% reported mild symptoms, 16% reported moderate symptoms, 8% reported moderately severe symptoms, and 3% reported severe symptoms. As for anxiety, 38% reported no symptoms of anxiety, 37%reported mild symptoms, 16% reported moderate symptoms, and 10% reported severe symptoms.
- These results are displayed in Figure 13.
- Findings at item level show that 35% of the European athletes felt tired or had little energy more than half the days or nearly every day, compared to 22% for the Swedish athletes. 21% of the European athletes reported that they worrying to much about different things nearly every day or more than half of the days, compared to 12% of the Swedish athletes.
- In the entourage population, 66% reported no symptoms of depression, 23% reported mild symptoms, 6% reported moderate symptoms, 4% reported moderately severe symptoms, and 2% reported severe symptoms. As for anxiety, 48% reported no symptoms of anxiety, 40%reported mild symptoms, 6% reported moderate symptoms, and 6% reported severe symptoms.
- 22% of the European entourage felt that they are worrying too much about different things nearly every day or more than half of the days. In the Swedish sample that number were 12%.
- 16% of the Swedish entourage felt tired or had little energy more than half the days or nearly every day, compared to 22% for the European entourage.
- These results are displayed in Figure 13.

**DIAGNOSIS AND HELP-SEEKING**

- Regarding clinical diagnosis, 13% of athletes indicated to have received professional help in relation to their mental health, and 38% reported having received a formal diagnosis of mental health disorder. 9% reported experiencing mental health problems at the time of filling out the survey. 34% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by athletes was 16.5 years old.

- 34% of the Swedish athletes reported that they sometime in life have experienced psychological problems so severe that they had significant difficulties to function as usual in everyday life, compared to 26% of the European athletes.
- In the entourage sample, 12% indicated to have received professional help in relation to their mental health, and 33% reported having received a formal diagnosis of mental health disorder. 5% reported experiencing mental health problems at the time of filling out the survey. 22% indicated having experienced mental health problems in their life, and the average age of onset of mental health problems reported by entourage members was 23 years old, three years younger than the entourage members in the European sample. The Swedish sample and the European sample had overall similar results regarding diagnosis and help-seeking for entourage members.

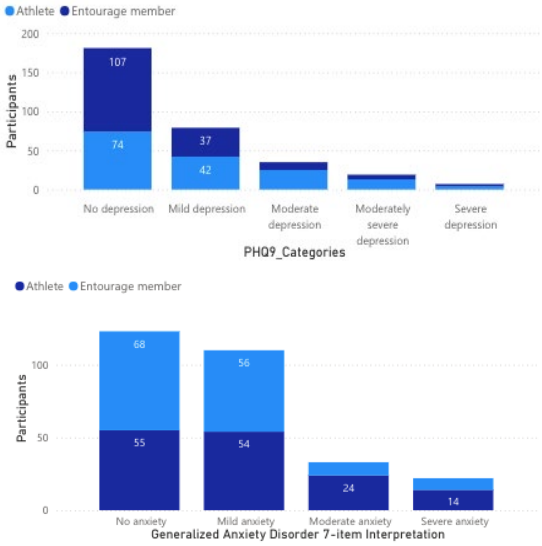



*Figure 13. Anxiety and depression prevalence in the two groups.*

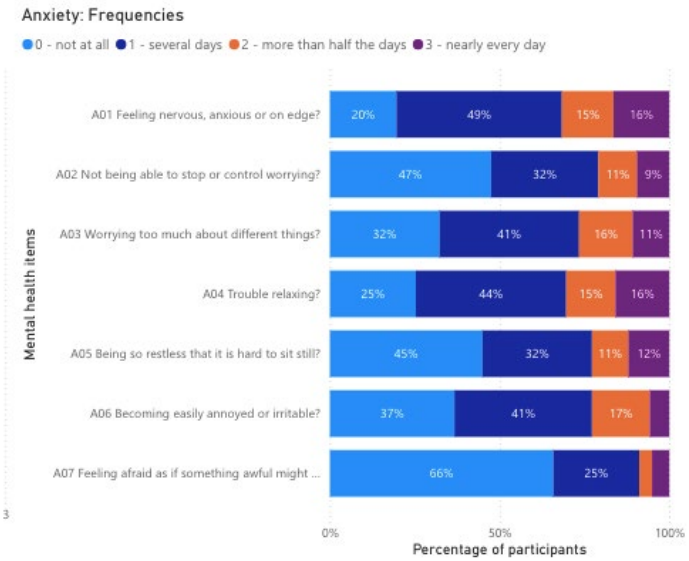



*Figure 14. Frequencies for the GAD-7 items in the **entourage** sample*

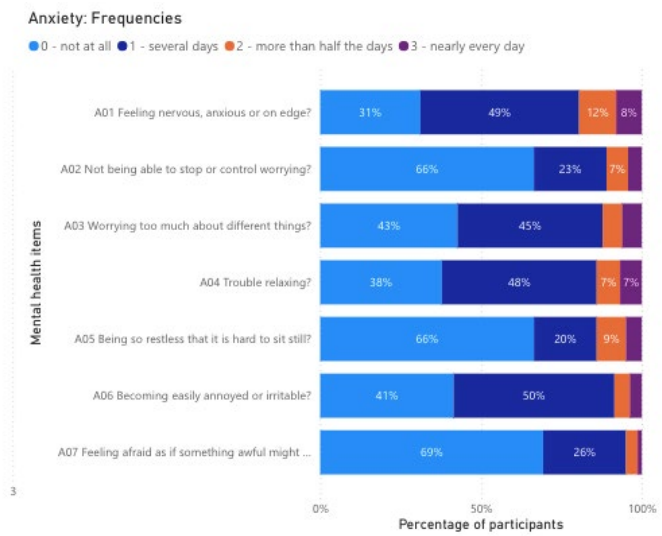



*Figure 15. Frequencies for the GAD-7 items in the **athlete** sample*

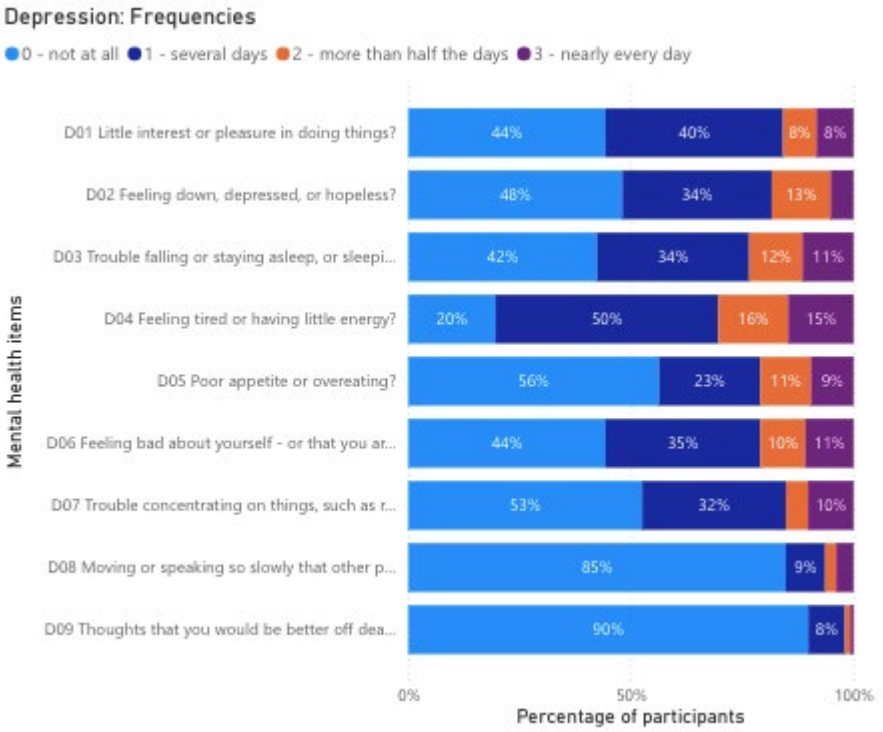



*Figure 16. Frequencies for the PHQ-9 items in the **athlete** sample.*

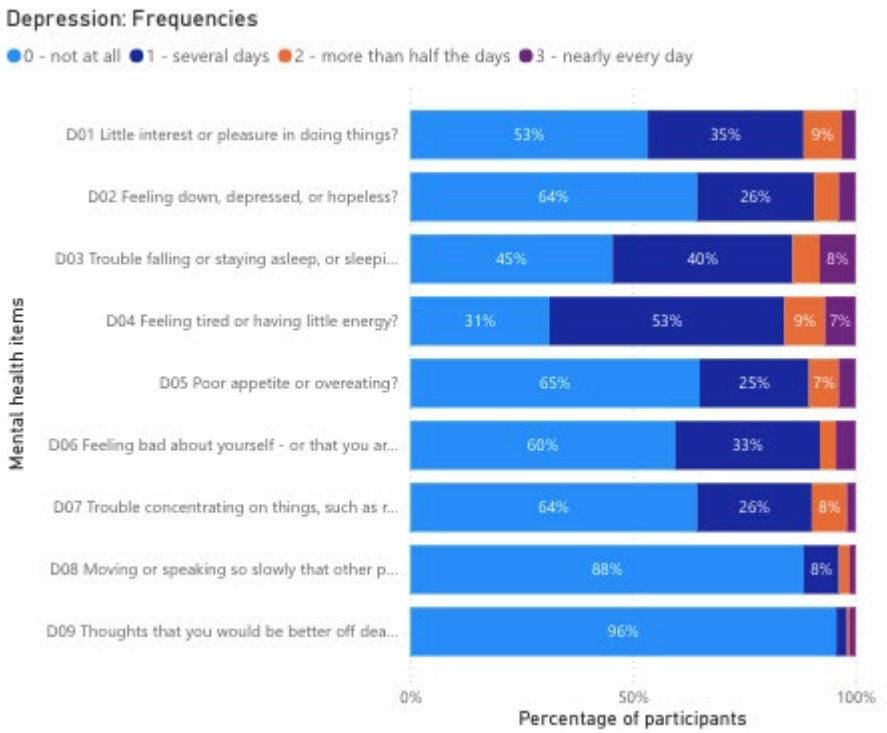



*Figure 17 Frequencies for the PHQ-9 items in the **entourage** sample.*


*Figure 18. diagnosis, lifetime and point prevalence for **athlete** members*

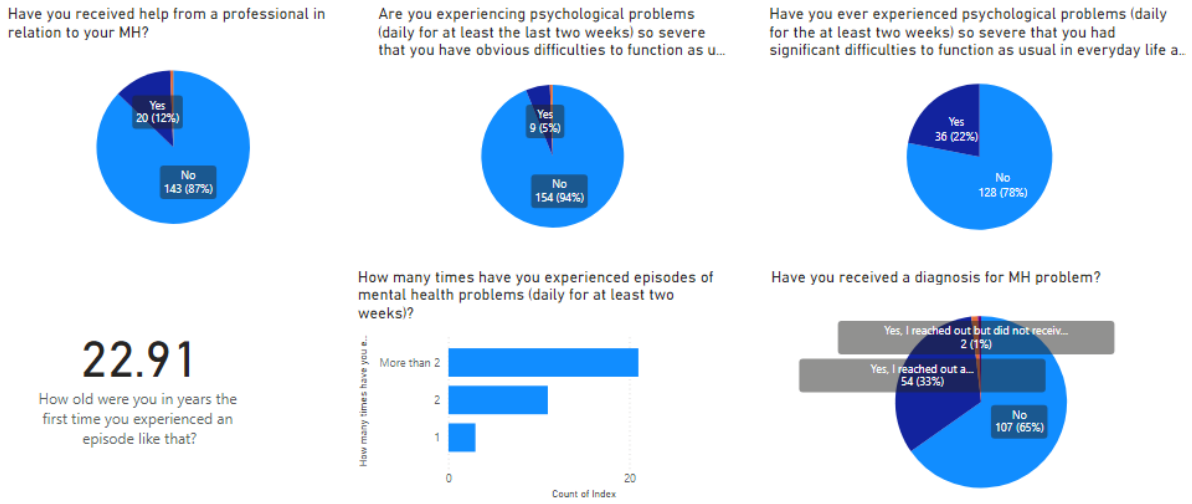



*Figure 19. diagnosis, lifetime and point prevalence for **entourage** members*

## Mental Health Literacy

### Mental Health Literacy Questionnaire

This scale consists of 12 items and was designed to explore different topics related to mental health, both in a positive (e.g., “doing something meaningful or enjoyable on a regular basis contributed to good mental health”) and a negative light (e.g., “if I had a mental health problem I would try to hide it from others”). Respondents rate each item on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the total score representing the level of mental health literacy: the higher the score, the higher the level of mental health literacy. When calculating the total score, the negative items (item 9, 10 and 12) were scored in reverse. The total score ranges from 12 to 60.

**KEY FINDINGS**

- Mental health literacy of 322 participants (athletes N=158; entourage N=164) was investigated.
- In the athletes 'sample, 73% would seek help if they were experiencing mental health problems (item 5). In the entourage sample, 83% agree, or somewhat agree with this statement.
- 19% of athletes reported that they would not know where to look for information on mental health (item 7), similar to what the European athletes answered.
- On the reversed items we can see that less of the Swedish athletes would not hide a mental health problem (23% compared to 32% in the European sample). 40% of the European athletes and 32% of the Swedish athletes agreed with the statement (item 9). On the other hand, 80% of the Swedish athletes do not (completely) agree with item 10 compared to 70% of the European athletes.
- 45% of the Swedish entourage members would hide a mental problem (item 9), and 43% would not. At the same time, 75% completely disagree and 16% somewhat disagree with item 10 about seeing a mental health professional.

To which extent do you agree to the following statements relating to mental health?

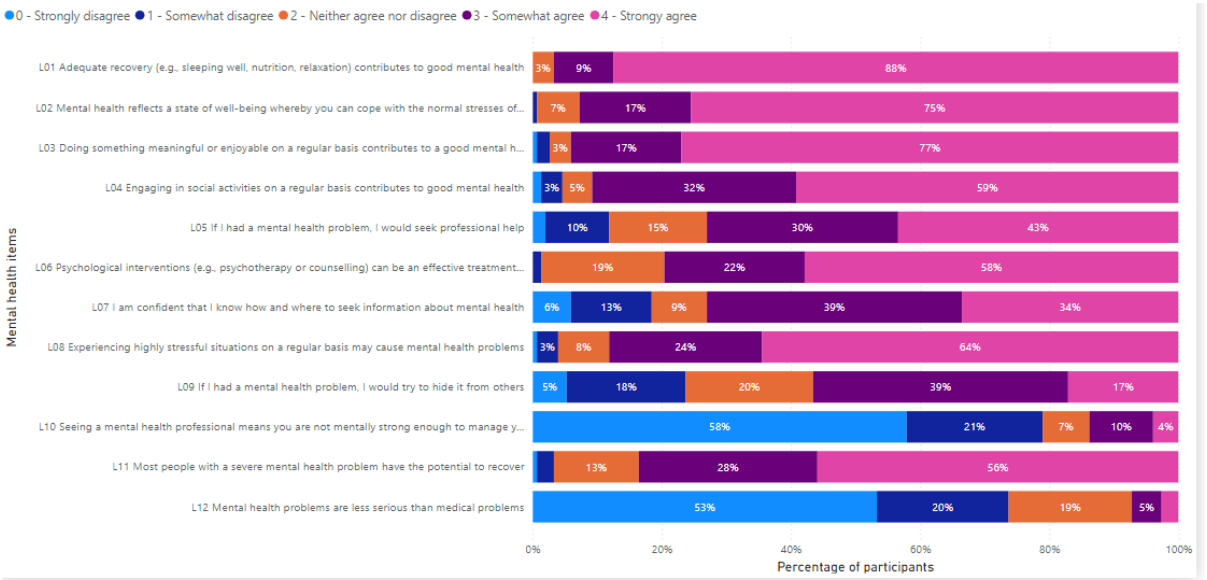



*Figure 20. Frequencies for the MHL questionnaire in the **athlete** sample. Items 9,10 & 12 are reversed*

To which extent do you agree to the following statements relating to mental health? (Entourage)

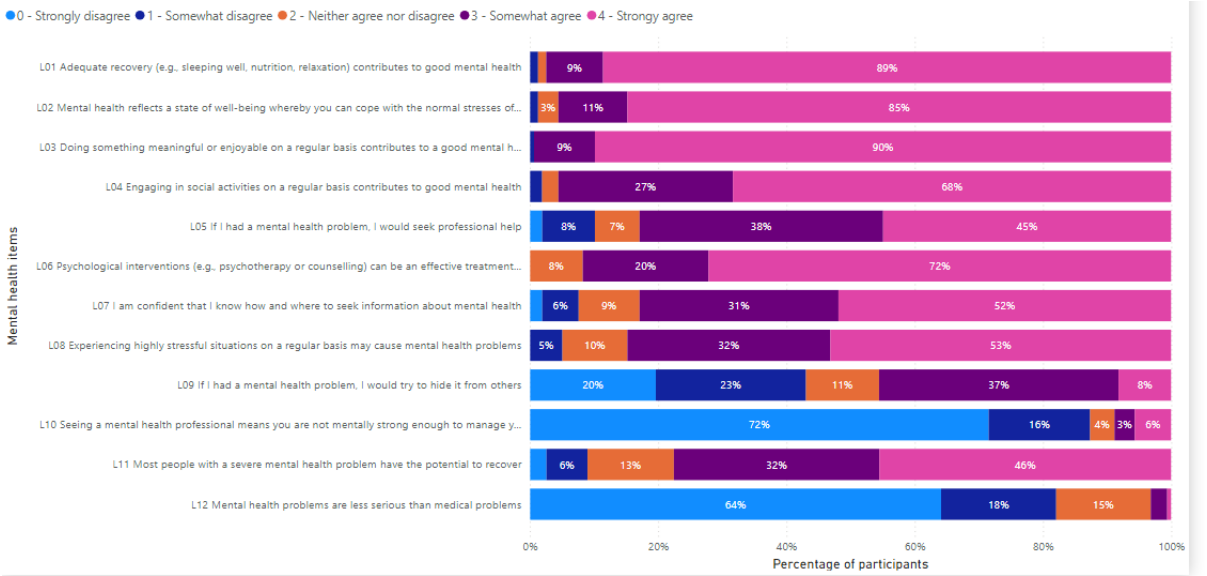



*Figure 21. Frequencies for the MHL questionnaire in the **entourage** sample. Items 9,10 & 12 are reversed*

## Perceived support (athletes)

**Adapted version of the General Help-Seeking Questionnaire (GHSQ)**

The GHSQ is a 1-item scale used to investigate how likely it is that athletes would receive appropriate mental health support from different persons in the entourage. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Overall, roles in the athletic domain obtained the highest scores, meaning that athletes find it very likely to turn to them when facing mental health problems. In the European sample, the personal domain (parents, partners, friends) was higher than in the Swedish sample.
- Both in the Swedish and European sample the educational/vocational domain scored lower (e.g. school tutors, dual career support and teachers).
- Sport psychologist, clinical psychologist and mental coach were ranked high, while data analyst and Tech director were ranked low, all of them in the athletic domain.
- Details about how each role ranked can be found in figure 22.

If you were experiencing a mental health problem, how likely is it that you would receive support from the following people?

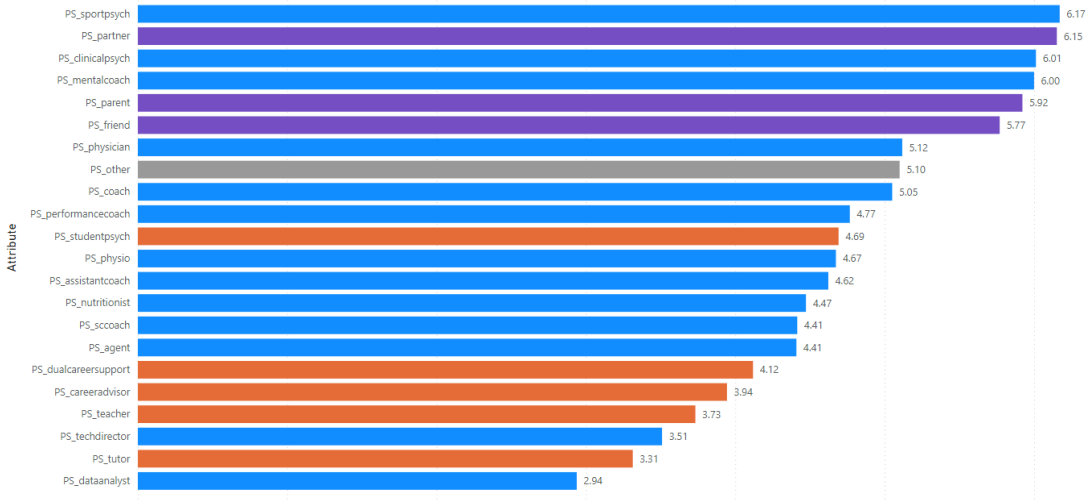



*Figure 22. Scores for the different roles in the entourage on the GHSQ from the **athletes'** perspective.*

## Mental health support provision (entourage)

One question aimed to investigate entourage members' confidence in providing adequate support to athletes dealing with mental health problems. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Entourage members were asked how likely it is that they would be able to offer appropriate mental health support to athletes. The scores are based on the average scores of the survey participants that declared working in each role.
- The members in the entourage that were ranked higher, meaning that those people felt confident in their mental health support competencies were dual career support provider, physician and parent
- The roles that scored lower, meaning that those entourage members felt less likely to be able to offer appropriate mental health support to athletes were clinical psychologist, physiotherapist and coach.
- Compared to the athletes' perceptions certain roles scored higher (Dual career support provider, Physician and logistic support personnel). This means that, on average the people belonging to these roles feel more likely to provide appropriate mental health support compared to the athletes' perception of support received by those same roles.
- Compared with the European data, the Swedish entourage scored dual career support provider and physician higher. Notable that clinical psychologist was the lowest ranked in the Swedish data, compared to the fourth highest ranked in the European data
- Full results, see in figure 23.

If your athletes were experiencing a mental health problem, how likely is it that you would be able to offer appropriate support?

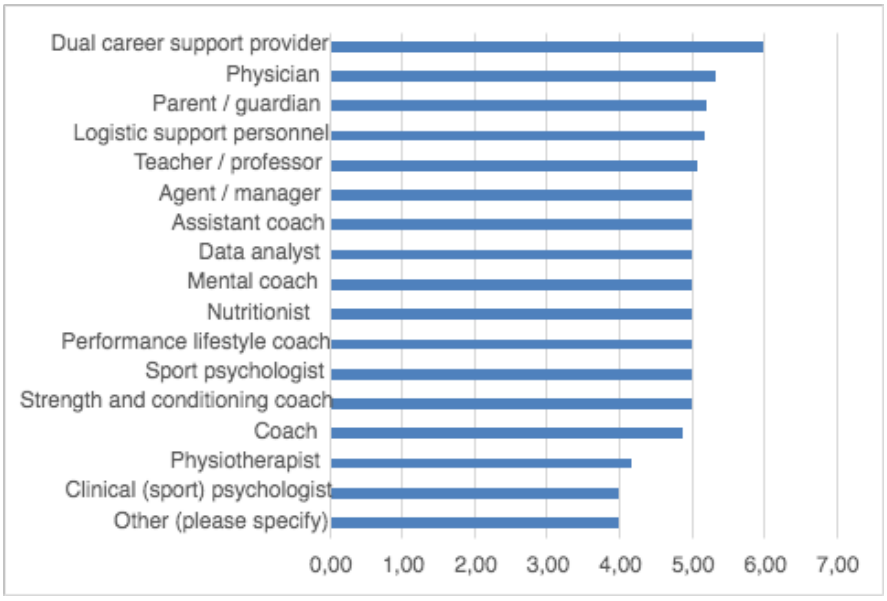



*Figure 23. Scores of the **entourage** sample on the GHSQ.*

## Competencies in mental health promotion

**KEY FINDINGS**

- Athletes and entourage members were asked to select the mental health promotion competencies that they felt were important to maintain mental well-being.
- The top three most important competencies according to athletes were (1) Understanding of mental health and mental health problems (2) Knowing when and how to refer athletes to professional support (3) Being empathic and actively listening to athletes who are experience mental health problems. The full results are shown in Figure 24.
- The top three most important competencies according to entourage members were (1) Knowing when and how to refer athletes to professional support (2) recognizing signs of mental health problems and (3) Understanding of mental health and mental health problems. The full results are shown in Figure 25.
- None of the athletes and or entourage members thought that mental health support was not an important mental health support competence.
- Comparisons between the two populations can be found in Figure 26. The biggest difference was in the competencies recognizing signs of mental health problems and managing their own stress and mental health. These two items scored 10% higher in entourage members
- Only 26% of the Swedish entourage and 29% of the Swedish athletes thought that identifying potential mental health problem in themselves was an important competence, compared to 49% (entourage) and 40% (athletes) in the European entourage.
- Knowing when and how to refer athletes to professional support was an important competency for 78% of the Swedish athletes, compared to 58% of the European athletes.

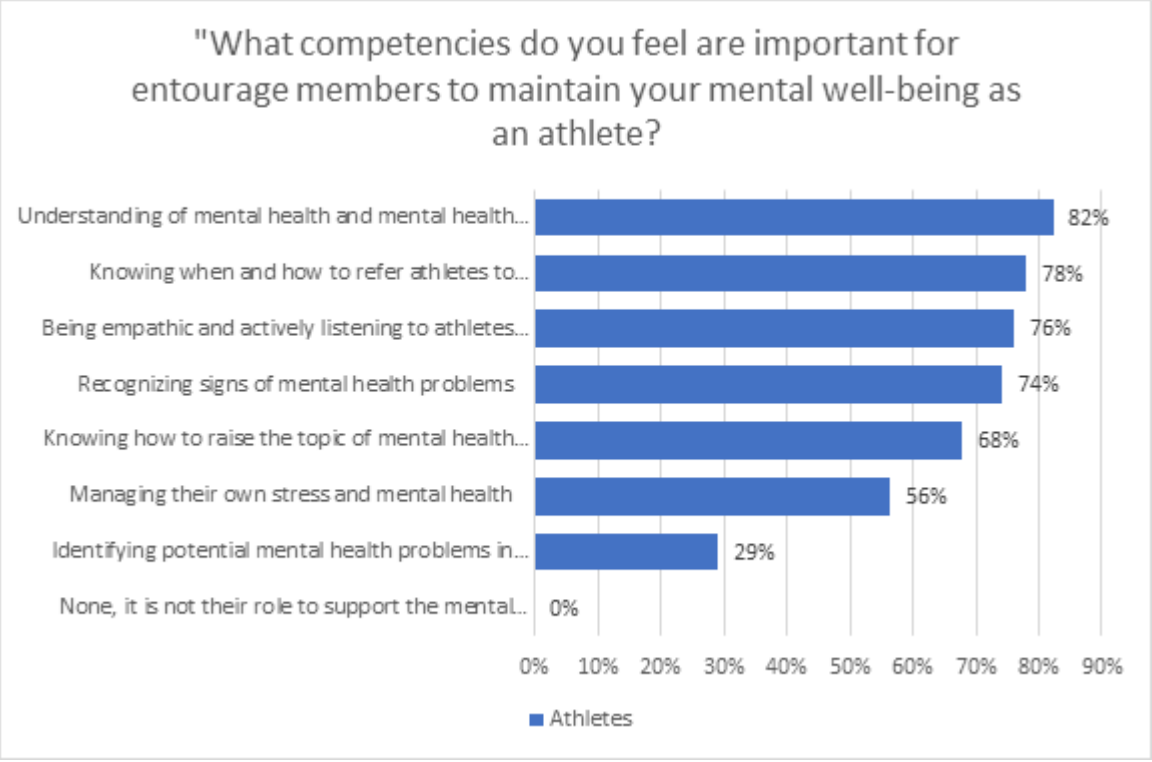



*Figure 24. Percentage of the total **athlete** sample that chose each mental health support competence.*

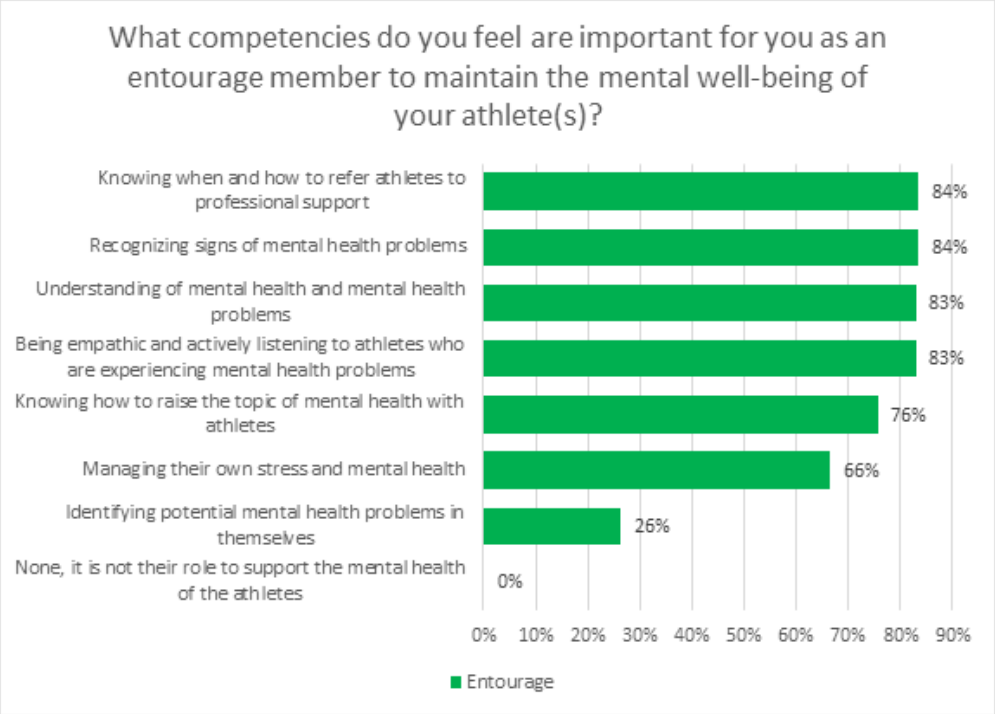



*Figure 25. Percentage of the total **entourage** sample that chose each mental health support competence.*

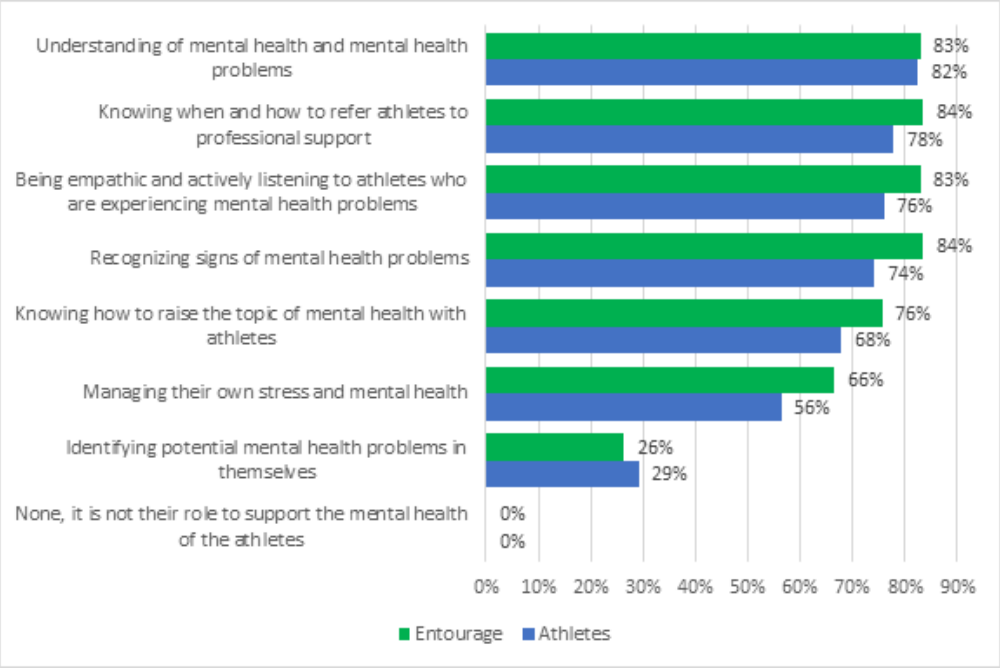



*Figure 26. Comparison between the two populations.*

## Link between study constructs

a. Correlation between study constructs
b. Key predictors of MH

**KEY FINDINGS**

**MENTAL HEALTH & WELL-BEING – ATHLETE SAMPLE**

- Moderate negative correlation was found regarding athletes' general well-being and anxiety scores (*r = .56*) and between general well-being and depression scores (*r = .50*) were observed.
- Correlation graphs are shown in Figure 27.
- The main predictors for **general well-being** in the athlete sample were **low depression and anxiety.** Together with age, gender, mental health literacy level, and injury status and Dual Career status, the model predicted 54% of the variance in mental health scores.
- The main predictors for **anxiety** in the athlete sample were **high depression and mental health literacy.** Together with age, gender, type of sport, presence of injuries and Dual career status the model predicted 69% of the variance in anxiety scores.
- The main predictors for **depression** in the athlete sample were **high anxiety, low mental health literacy and presence of injuries.** Together with age, female gender, type of sport, gender, Dual Career status, and presence of injuries, the model predicted 70% of the variance in depression scores.

- **MENTAL HEALTH & WELL-BEING – ENTOURAGE SAMPLE**
- No significant relationship between entourage members' general well-being and anxiety scores were found. Between general well-being and depression scores a strong negative correlation were observed. The correlation graphs are displayed in Figure 28.
- The main predictors for **general well-being** in the entourage sample were **low depression and level of competition** Together with anxiety scores, gender, age, employment status, and years of experience in the role, the model predicted 33% of the variance in the mental health scores.
- The main predictors for **anxiety** in the entourage sample were **high depression**. Together with gender, age, employment status, and level of competition, the model predicted 56% of the variance observed in the anxiety scores.
- The main predictors for **depression** in the entourage sample were **high anxiety, low well-being and level of competition and lower age.** Together with gender, employment status, years of experience, and level of competition, the model predicted 69% of the variance observed in the depression scores.

**MENTAL HEALTH & WELL-BEING – FULL SAMPLE**

- Participants in Sweden scored in line with other countries in MHL but scored higher than all the others in general well-being. Average scores of MHL and general well-being per country can be found in Figure 30.

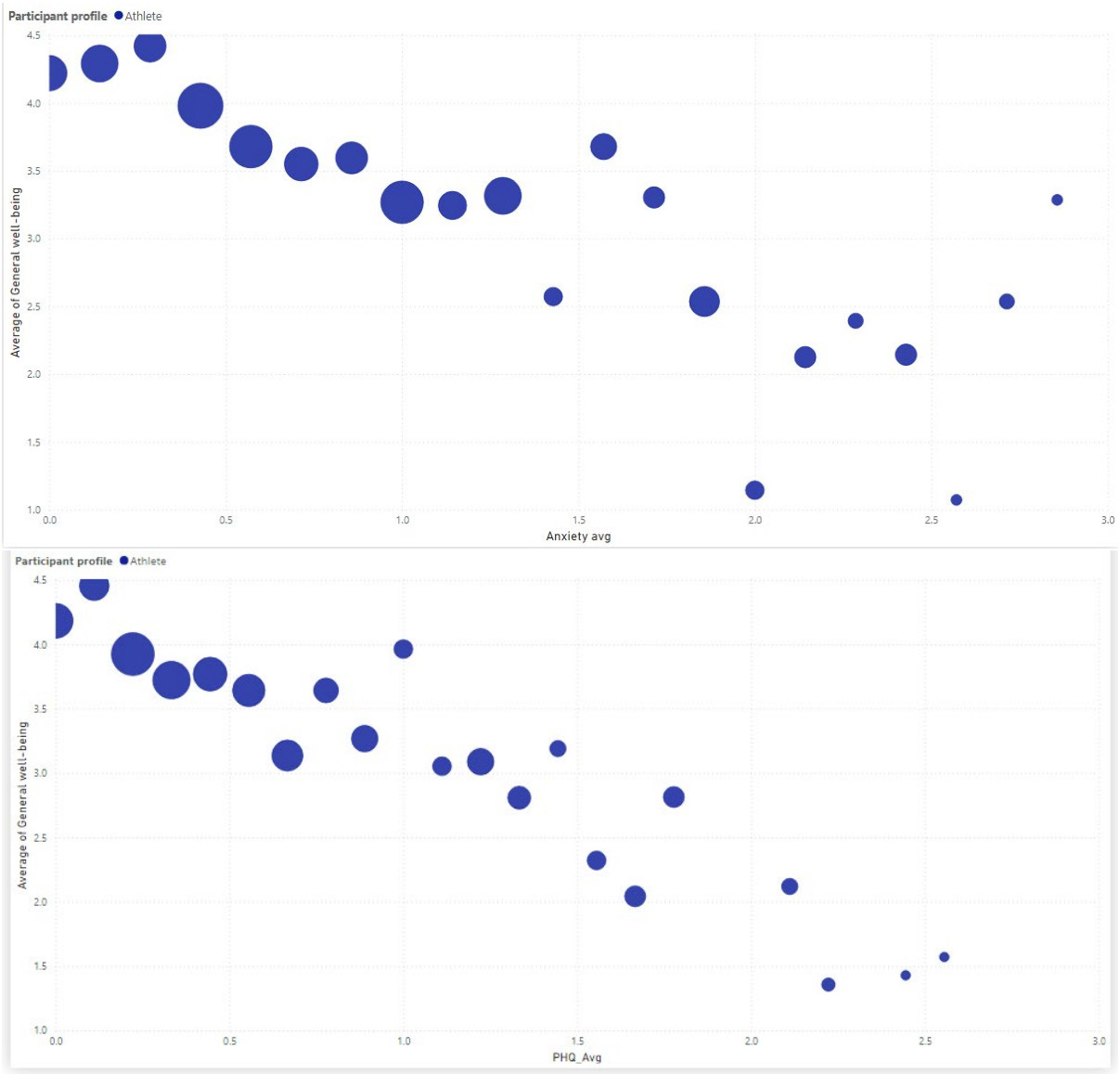



*Figure 26 & 27. Correlations between general well-being and mental health in the athlete sample.*

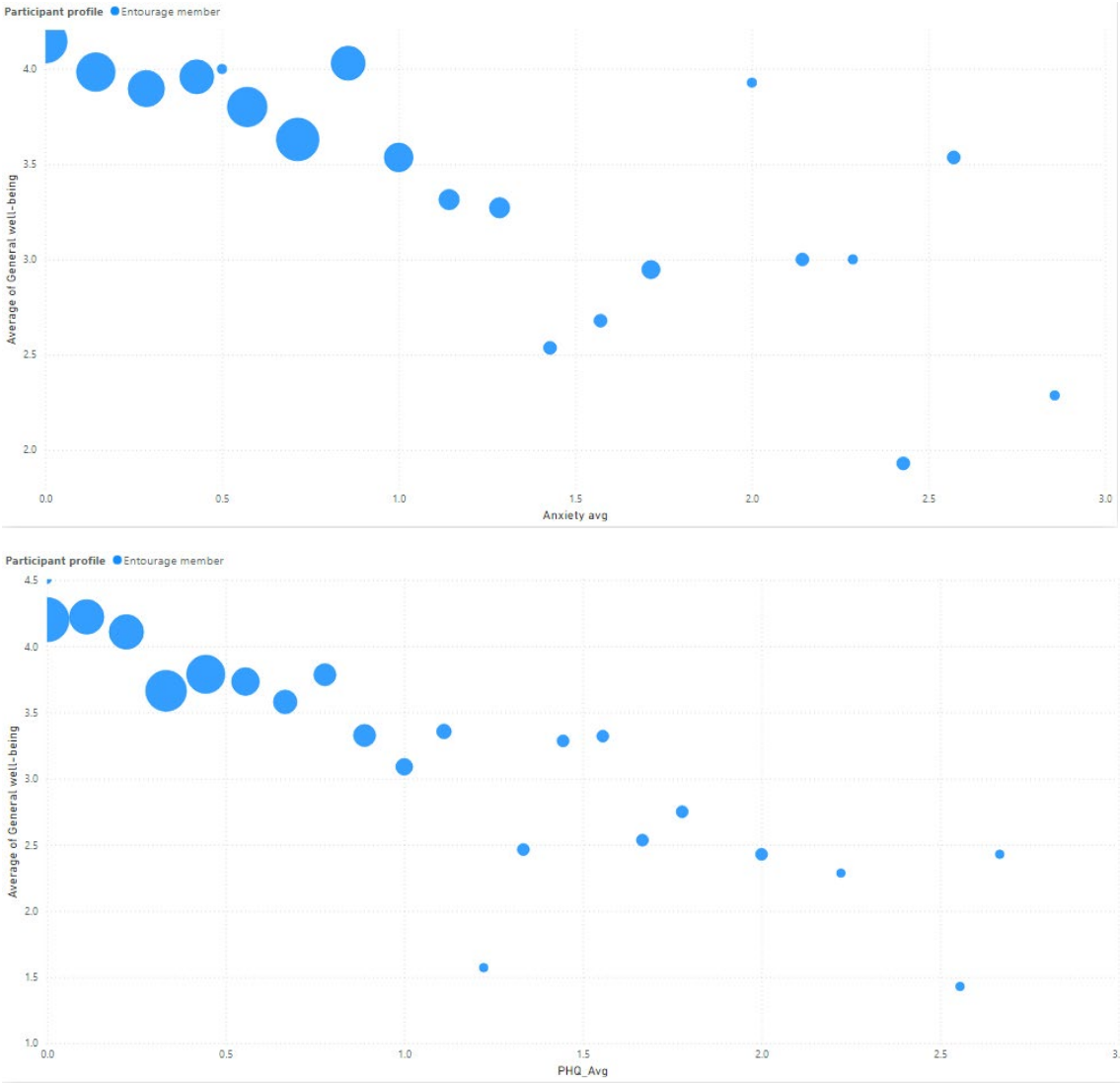



*Figure 28 & 29 Correlations between general well-being and mental health in entourage members*

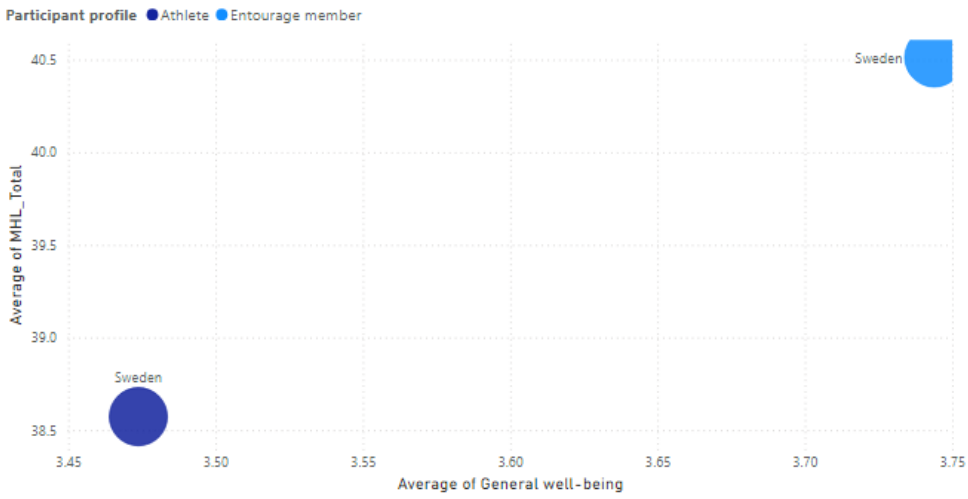



*Figure 30. Average general well-being and MHL scores in Sweden*

## Qualitative data results

Athletes were asked (1) what skills entourage need to support their mental well-being, and (2) what skills athletes need to promote their own mental health.

Entourage members were asked what skills they need to (1) maintain the mental well-being of their athletes, and (2) maintain their own mental well-being.

**KEY FINDINGS**

**Athlete sample:**

**Entourage members skills to maintain athletes´mental well-being:** the main themes emerging from the qualitative data collected are:

- Treat different individuals equally.
- Continuing education on mental health.
- Balance between training and everyday life
- Show compassion and support when athletes are unwell.
- Make sure that psychologists or psychiatrists are available for those who need help
- Minimize stress by managing logistics and organizing support.

**Athletes' skills to maintain their own mental well-being:** the main themes emerging from the qualitative data collected are:

- Access to Mental Health Resources
- Normalization of Mental Health Conversations
- Awareness and Education
- Balance between training and everyday life

**Entourage members skills to maintain athletes´mental well-being:** the main themes emerging from the qualitative data collected are:

- Emotional Intelligence and Composure
- Education and knowledge
- Open dialogue and safe relationships
- Active listening and understanding
- Professional network and expertise

**Entourage skills to maintain their own mental well-being:** the main themes emerging from the qualitative data collected are:

- Self-awareness and listening to signals
- Experience and knowledge
- Show compassion to yourself and others.
- Prioritize your own health and well-being.
- Make sure the workload is reasonable.
- Build a supportive network of colleagues, and professionals.

## Next steps

### Practical implications

Based on the research findings

**Recommendations for practice:**

- Create a broader understanding for athletes when it comes to recognizing signs of mental illness, as well as how they take care of themselves in the context of elite sport.
- Educate entourage members on how to respond to athletes' needs and what type of leadership promotes mental health.

## References

European Commission. (2023). *Dual Careers for Mental Health*. Retrieved 13/03/2024 from https://erasmus-plus.ec.europa.eu/projects/search/details/622178-EPP-1-2020-1-BE-SPO-SCP

International Olympic Committee. (2023, 12/07/2023). *Measuring and Increasing Athletes' Mental Health Literacy (MHL): Cross-Cultural Validation of MHL Questionnaire and Evaluation of MHL Intervention Implementation*. Retrieved 13/03/2024 from https://olympics.com/ioc/news/2023-2025-advanced-olympic-research-grants-awarded

Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, *43*(2), 16.

Kroenke, K., Spitzer Rl Fau - Williams, J. B., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 8. https://doi.org/https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

MENTiS

Co-funded by the European Union

# Promoting Mental health through the ENTourage in high-performance Sport (MENTiS)

United Kingdom: NATIONAL REPORT WORK PACKAGE 1

## Mental health and mental health promotion in United Kingdom athletes and entourage members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## Key findings

**Demographics:**

- A total of 288 UK participants completed the survey, representing talented and elite athletes (N = 149; 51.74%) and entourage members of talented and elite athletes (N = 139; 48.26%). The term "entourage" refers to all the people associated with supporting the athletes from three domains: the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists); the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors), and the personal domain (e.g., parents, partners, friends)

**Mental Health Outcomes**:

**Within the Athlete sample**:

o Mental health continuum: 47% were categorised as flourishing, 52% with moderate mental health, and 1% as languishing

o Mental ill-health: 22% reported moderate to severe symptoms of anxiety and 21% reported moderate to severe symptoms of depression.

o Mental health literacy: 20% of the athlete sample would not know where to look for information about mental health, 47% agreed or somewhat agreed that they would try to hide a mental health problem, and 11% somewhat agreed that mental health problems were less serious than medical problems.

**Within the Entourage sample:**

o Mental health continuum: 40.3% were categorised as flourishing, 55.4% with moderate mental health, and 4.3% as languishing

o Mental ill-health: 23% reported moderate to severe symptoms of anxiety and 20% reported moderate to severe symptoms of depression.

o Mental health literacy: 55% agreed or somewhat agreed that they would try to hide a mental health problem, 30% showed ambivalence or disagreed about seeking professional help for mental health problems if they experienced them.

**Mental Health indices, well-being and support availability:**

- Moderate negative relationships between athletes' general well-being and anxiety scores ($r = .50$) and between general well-being and depression scores ($r = .55$) were observed. As anxiety levels increased, average general wellbeing scores of athletes decreased. Similarly, as athlete depression scores increased, general wellbeing scores decreased. Such relationships between anxiety, depression and well-being trended in the same direction for the entourage though were not as clear as the athlete findings.
- Athletes perceived parents, partners, and friends (members of the entourage in the 'personal role' domain) as those most providing mental health support. Sport psychologists and coaches were also viewed as prominent support sources for athletes facing mental health challenges.
- Entourage members – namely parents, friends, partners, clinical and sport psychologists felt highly confident in their mental health support competencies to athletes, with coaches reporting moderate levels of confidence in this nature of support.
- Athletes and entourage members offered a range of congruent recommendations to improving mental health and well-being levels and support to all stakeholders. A range of individual, educational and environmental strategies are forwarded through open ended answers.

## Aims of the MENTiS survey

An online survey was developed by the MENTiS consortium (https://spmb.research.vub.be/mentis - *link to the project website*) on mental health, mental health literacy, and mental health promotion.

The aim of the MENTiS survey was to:

1. Investigate the **prevalence of mental health indicators** (e.g., wellbeing, anxiety, depression) in athletes and entourage members from 6 European countries (i.e., Belgium, France, the Netherlands, Spain, Sweden, UK).
2. Investigate the **mental health support perceptions** and ideas about how to improve mental health support.
3. Investigate the **role of potential influencing factors on mental health** (e.g., for athletes, the presence/absence of injuries; for entourage, job characteristics; for everyone, mental health literacy).
4. **Create an evidence base** for the development of workshops and online resources targeting entourage members, to enhance their competencies in mental health promotion.

The results obtained with the survey are displayed in a European report and 6 national reports (i.e. Belgium, France, the Netherlands, Spain, Sweden, UK)

## Procedure & instruments

An online survey was administered to athletes and entourage members in the six participating countries. This was done directly by the partners of the MENTiS consortium and indirectly through the networks of the MENTiS partners.

Before administering the survey, ethical approval was granted by the Ethical Committee of Human Sciences of the Vrije Universiteit Brussel. Parental consent was required before minors could complete the survey.

The survey targeted two different groups:

1. Talented and elite athletes
2. Entourage members of talented and elite athletes belonging to the athletic domain (e.g., coaches, physiotherapists, technical directors, psychologists), the educational/vocational domain (e.g., teachers, dual career support providers, academic tutors, career counsellors), or the personal domain (e.g., parents, partners, friends).

Data was collected in two phases: the first phase was April – August 2023, and the second phase was September – October 2023. During this 2nd phase, additional data were collected in Belgium and UK. The phase of data collection (i.e. 1 and 2) was included as a variable in the analysis. After collecting the data, data was analysed in SPSS and displayed in PowerBI. All consortium members had access to the PowerBI report, and received their national raw data.

The online survey was developed in Qualtrics and made available in 6 languages (English, French, Dutch, Spanish, Catalan, and Swedish).

The survey is available here: https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

The survey's content differs slightly between athlete and entourage participants. It was divided into five sections:

1. **Demographics**:
   i. **Demographics for athletes**: gender, age, sport characteristics, level of competition, dual career, income, employment, injury.
   ii. **Demographics for entourage members**: gender, age, domain (athletic, educational/vocational, personal), role in the entourage, sport characteristics, athletes' career stage, level of competition, number of athletes they work with, employment status.
2. **Mental health and well-being**
   i. Mental Health Continuum – Short Form (MHC-SF), (Keyes, 2002): 14-item scale that investigates general well-being, as well as social, psychological and emotional well-being; 6-point Likert scale from 0 (*never*) to 5 (*everyday*). Scores range from 0 to 70.
   ii. Patient-Health Questionnaire (PHQ-9), (Kroenke et al., 2001): 9-item scale that measures depression; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 27.

iii. Generalised Anxiety Disorder Assessment (GAD-7), (Spitzer et al., 2006): 7-item scale that measures anxiety; 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*); scores range from 0 to 21.

iv. 1 item about receiving professional psychological help.

v. 2 items about lifetime and point prevalence of mental health problems; 1 item about age of onset of mental health problems.

**3. <u>Mental health literacy</u>**

i. Mental Health Literacy Questionnaire, developed during the E+ Dual Careers for Mental Health project (European Commission, 2023), and currently being validated as part of the Olympic Studies Advanced Research Grant: "Measuring and Increasing Athletes' Mental Health Literacy (REFS)" (International Olympic Committee, 2023): 12-item scale that measures mental health literacy; 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores range from 12 to 60.

**4. <u>Mental health support</u>**

i. **Perceived support (for Athletes)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of receiving support from different sources. The different sources in this case were an extensive list of roles in the entourage: for the roles that were not indicated, there was the possibility of adding an extra role in a text box. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

ii. **Support provision (for Entourage)** – General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005): 1-item scale that measures the likelihood of offering adequate support to athletes facing mental health problems. 7-point Likert scale that ranges from 1 (*extremely unlikely*) to 7 (*extremely likely*).

**5. <u>Competencies in mental health support</u>**

i. **Athletes**: 1 item to explore what competencies entourage need to support athletes' mental health; 1 item to explore what competencies athletes' need to support their mental health; 2 open questions to further investigate the abovementioned topics.

ii. **Entourage**: 1 item to explore what competencies they need to support athletes' mental health; 1 item to explore what competencies they need to support their own mental health; 2 open questions to further investigate the abovementioned topics.

## Data collection in United Kingdom

- **Who?** An online survey was administered to athletes and entourage members in the UK.
- **How?** Loughborough Sport staff recruited participants via email, social media, and specific network events in the Loughborough Sport calendar, including “Athlete Induction days”, “Anti-doping workshops”, and “World Mental Health Day”.
- **When?** Data was collected between April 2023 to October 2023.
- **Survey link:** https://vub.fra1.qualtrics.com/jfe/form/SV_dhvN2zgxDOyIJfM

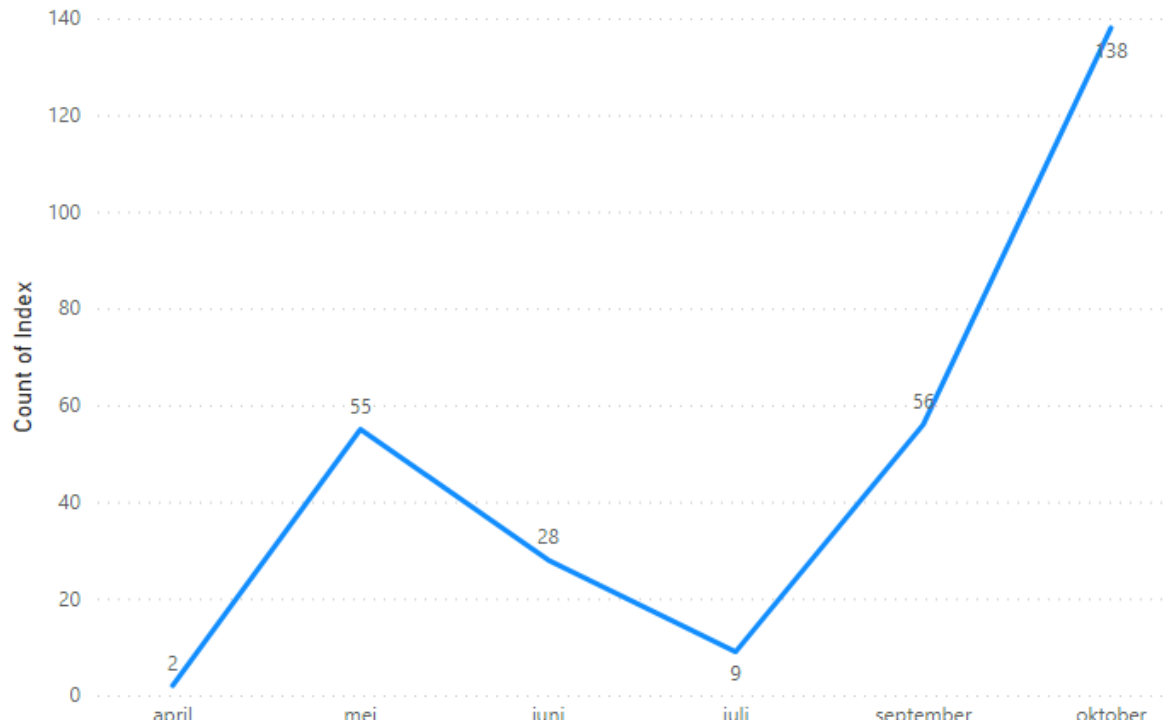


Figure 1. Complete responses collected (N = 288) with the MENTiS survey between April and October 2023.

## Participants: United Kingdom total sample (N = 288)

### United Kingdom athlete sample (N = 149; 51.74% of full sample)

**Key findings - athlete sample**

The athlete sample comprised 66 females (44.3%) and 83 males (55.7%). All but 3% of the athletic sample was over 18 at the time of the survey. Athletes were recruited from a range of team (56%) and individual (44%) sports, as well as various competitive levels (see figure 2 below). 107 (71.81%) athletes were "dual career" sport and education, 29 (19.46%) sport, education, and work, and 8 (5.37%) sport and work. 5 (3.36%) athletes were not dual career. 29 (19.46%) of athletes earned an income from their athletic pursuits, 120 (80.54%) received no income. At the time of the survey, 135 athletes (90.6%) were able to train and compete, 9 athletes (6.04%) were unable to train due to injury, 5 athletes (3.05%) were unable to train or compete due to injury.

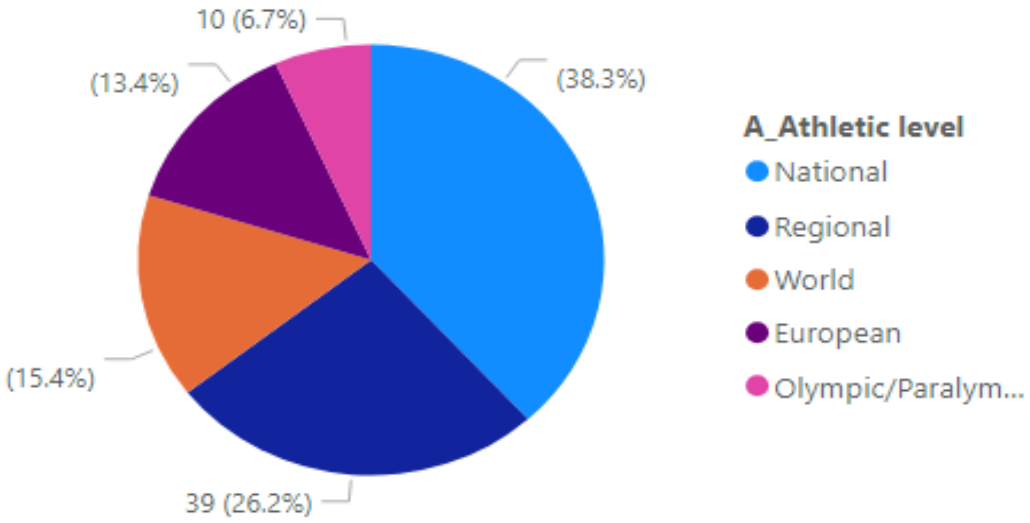


Figure 2: Athlete competitive levels across the UK sample

United Kingdom entourage members sample (N = 139; 48.26% of full sample)

In total, 139 entourage members completed the survey. Of this sample, there were 64 females (46%) and 75 males (54%). Entourage members belonged to three primary domains, athletic (71.22%), personal (15.83%), and educational/vocational (12.95%). A full list of entourage roles is provided in Table 1. From all entourage respondents, 38 worked with team sport athletes, 38 with individual sport athletes, and 40 worked with athletes from different sports. 23 entourage members were connected to athletes in youth sport/talent development, 30 were connected to senior and elite athletes, and 64 were connected to both youth sport/talent development and connected to senior/elite sport. Years of experience ranged from less than 1 year to 30 years with an average of 8.43 years (SD 7.1). Of the 114, 87 were employed full time and 25 were employed part-time. 5 did not have a contract or were working on a voluntary basis. 105 were employed and 12 were self-employed.

| | | |
|---|---|---|
| **Athletic domain** | **99** | **71.22%** |
| Coach | 32 | 23.02% |
| Strength and conditioning coach | 23 | 16.55% |
| Physiotherapist | 12 | 8.63% |
| Other (please specify) | 8 | 5.76% |
| Nutritionist | 7 | 5.04% |
| Agent / manager | 3 | 2.16% |
| Assistant coach | 3 | 2.16% |
| Logistic support personnel | 3 | 2.16% |
| Technical director | 3 | 2.16% |
| Data analyst | 2 | 1.44% |
| Performance lifestyle coach | 1 | 0.72% |
| Physician | 1 | 0.72% |
| Sport psychologist | 1 | 0.72% |
| **Personal domain** | **22** | **15.83%** |
| Parent / guardian | 18 | 12.95% |
| Friend / housemate | 2 | 1.44% |
| Partner / spouse | 2 | 1.44% |
| **Educational / vocational domain** | **18** | **12.95%** |
| Other (please specify) | 10 | 7.19% |
| Dual career support provider | 6 | 4.32% |
| Career advisor / counsellor | 1 | 0.72% |
| Teacher / professor | 1 | 0.72% |
| **Total** | **139** | **100.00%** |

Table 1: Entourage roles across UK sample

## Results

**Study constructs:**

a. Mental health
b. Mental ill-health
c. Mental health literacy
d. Perceived support (athletes)
e. Provided support (entourage)
f. MH promotion competencies

**Link between study constructs:**

a. Correlation between study constructs
b. Key predictors of MH

### Mental health

Mental health was measured using the **Mental Health Continuum Short form** (MHC-SF), developed by Keyes (2002).

- The scale has 14 items
- The scores are on a 6-point scale (0 – never; 5 – Every day)
- Three subscales: emotional well-being, social well-being, and psychological well-being
- It can be scores according to the three subscales + the general well-being scale, or according to the Mental Health Continuum (Languishing, moderate MH, Flourishing)

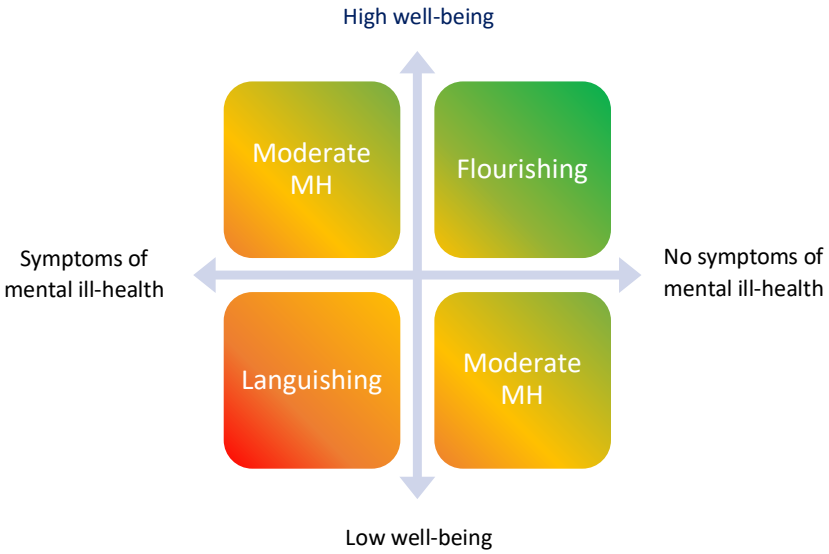


Figure 3: Mental health dual continuum model (Keyes, 2002)

**KEY FINDINGS**

Detailed results are displayed in the figures below.

- In total, 288 people completed the MHC-SF
- In the athlete population, 51.68 % were categorised as flourishing, 46.98 % with moderate mental health, and 1.34% as languishing (see Figure 4 below)
- In the entourage population, 40.29% were categorised as flourishing, 55.4% with moderate mental health, and 4.32% as languishing (see Figure 4 below).
- In both populations, scores on the social well-being subscale were lower compared to the psychological and emotional well-being subscales (see Figure 5 for subscale mean values and Figure 6 for indicative mean item comparisons between athletes and entourage).

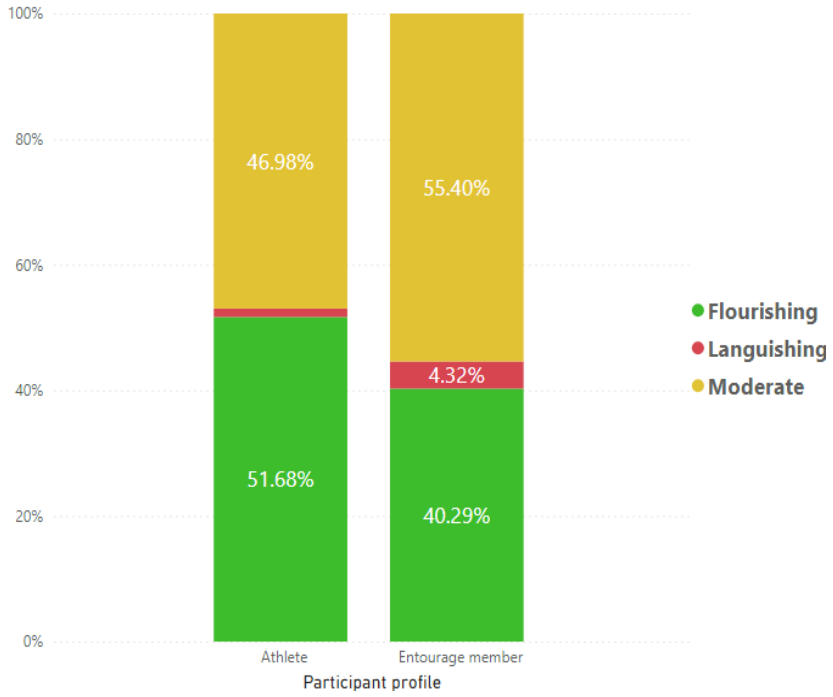


Figure 4: Athlete and entourage mental health classification in the UK sample

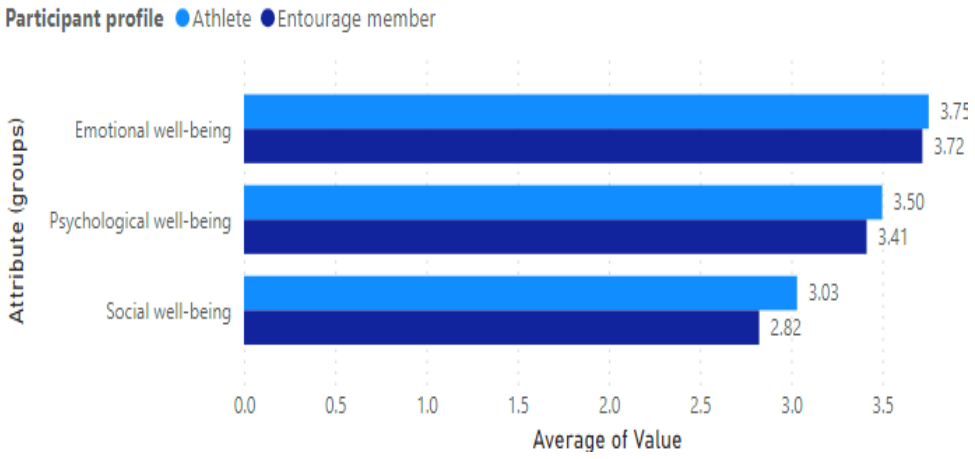


Figure 5: Athlete and entourage MHC-SF subscale scores for the UK sample

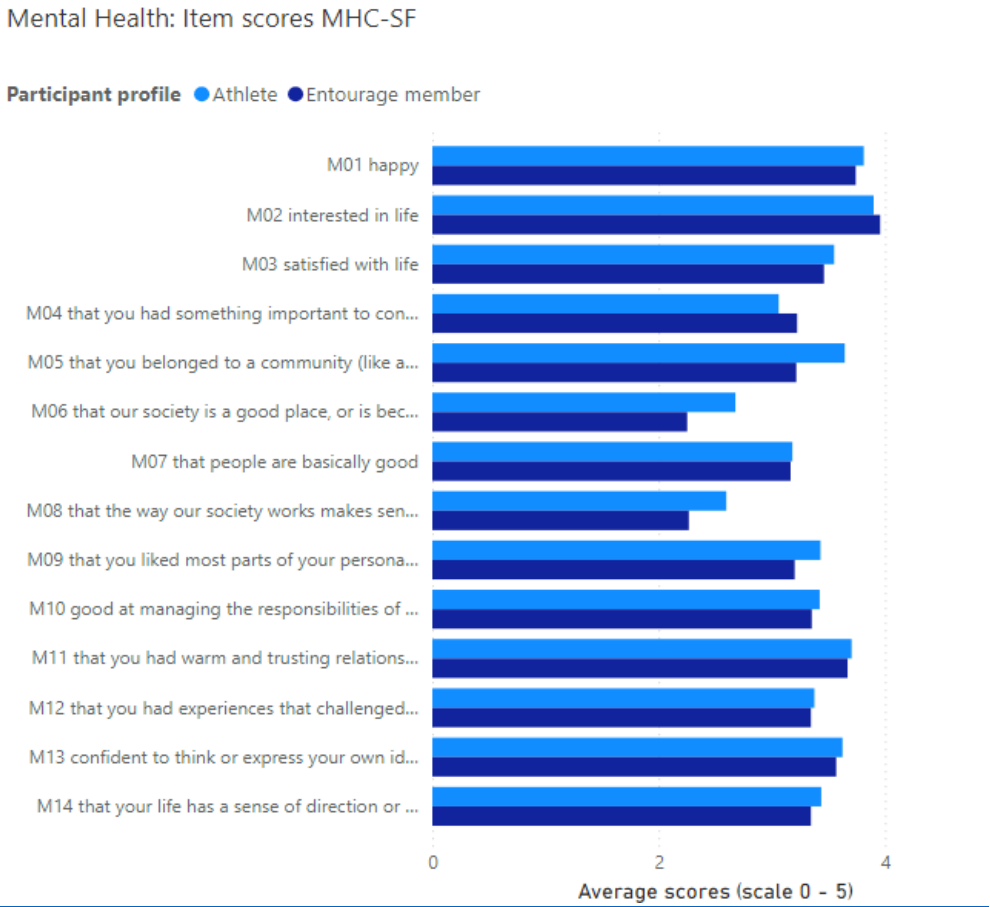


Figure 6: Item level scores for Athlete and Entourage MHC-SF for the UK sample

Mental ill-health

**Patient-Health Questionnaire (PHQ-9)**

The PHQ-9 is a 9-item scale that measures symptoms of depression in the last two weeks (e.g., "little interest or pleasure in doing things"). Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 27.

**Generalized Anxiety Disorder Questionnaire (GAD-7)**

The GAD-7 is a 7-item scale that measures symptoms of generalized anxiety disorder. Each item is scored 0-4 (not at all – nearly every day) and the total score ranges from 0 to 21.

**KEY FINDINGS FOR THE UK SAMPLE**

Detailed results are displayed in Figures 7-12 below.

**ANXIETY AND DEPRESSION:**

- In the athlete population, 51% reported no symptoms of depression, 27.52% reported mild symptoms, 12.08% reported moderate symptoms, 7.38% reported moderately severe symptoms, and 2.01% reported severe symptoms. As for anxiety, 39.13% reported no symptoms of anxiety, 39.13% reported mild symptoms, 10.14% reported moderate symptoms, and 11.59% reported severe symptoms.

- In the entourage population, 56.12% reported no symptoms of depression, 23.74% reported mild symptoms, 15.83% reported moderate symptoms, 3.6% reported moderately severe symptoms, and 0.72% reported severe symptoms. As for anxiety, 30% reported no symptoms of anxiety, 46.92% reported mild symptoms, 13.08% reported moderate symptoms, and 10% reported severe symptoms.

- Figures 9, 12 and 13 offer more detailed information at item level in terms of athlete and entourage experiences of anxiety and depression.

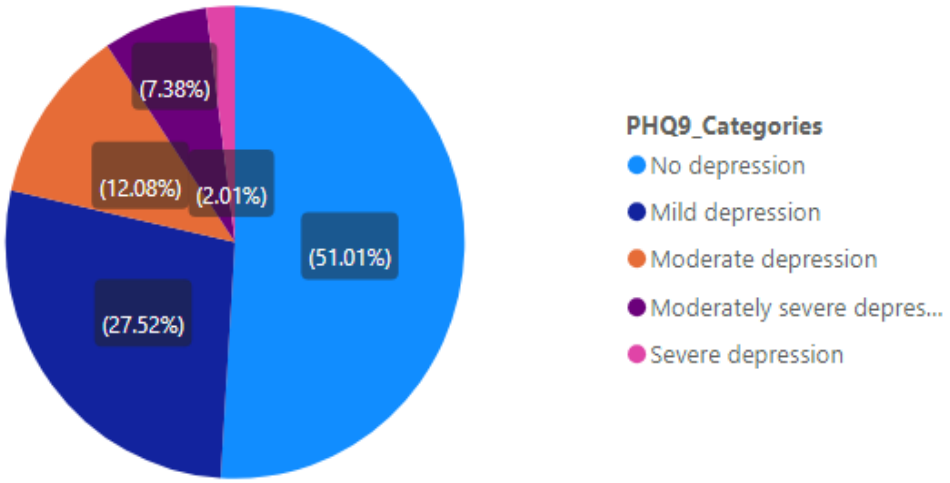


Figure 7: Athlete PHQ-9 categories for the UK sample

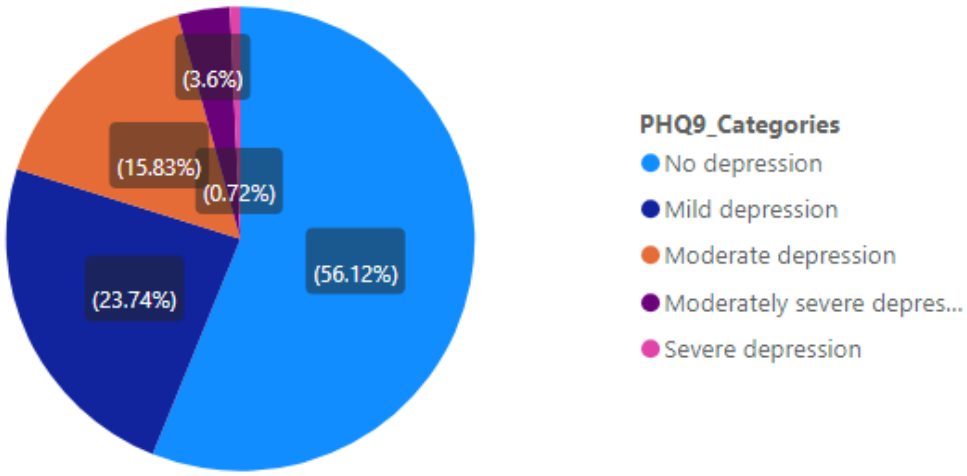


Figure 8: Entourage PHQ-9 categories for the UK sample

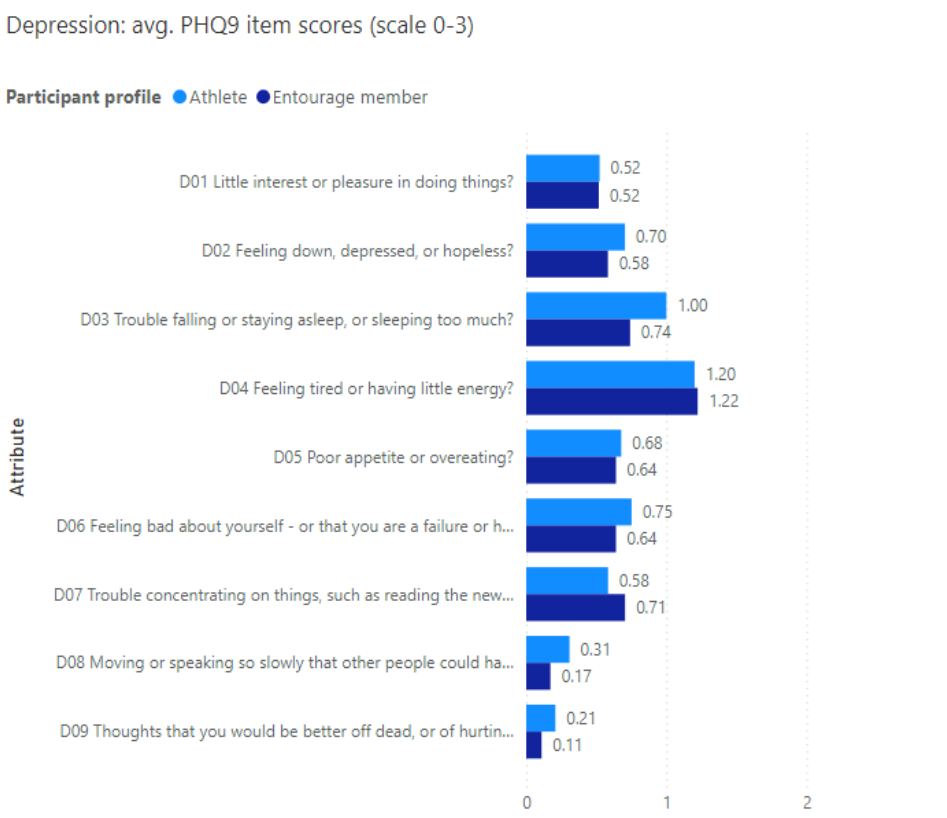


Figure 9: Athlete and Entourage PHQ-9 item scores for the UK sample

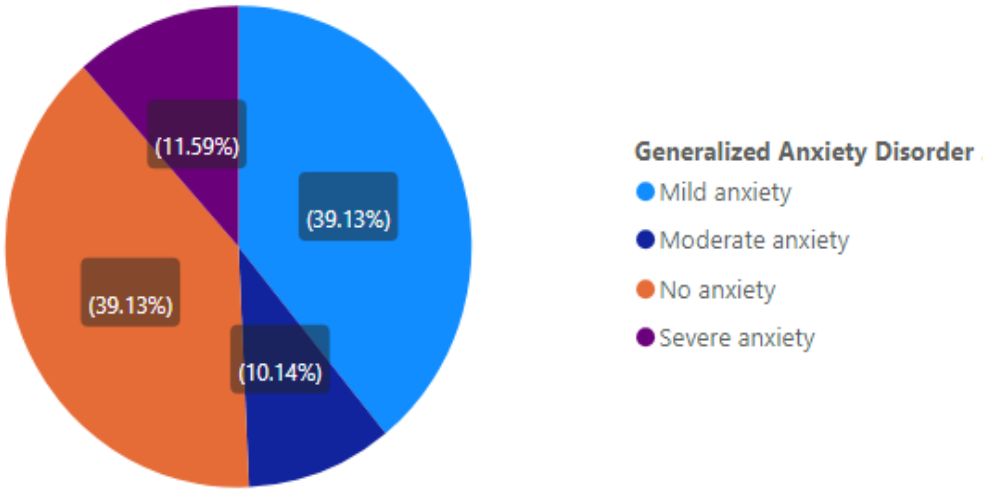


Figure 10: Athlete GAD categories for the UK sample

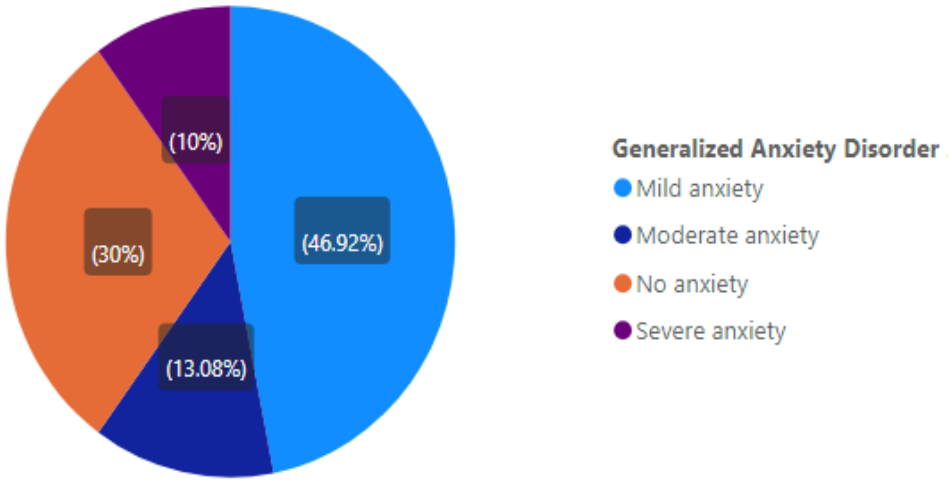


Figure 11: Entourage GAD categories for the UK sample

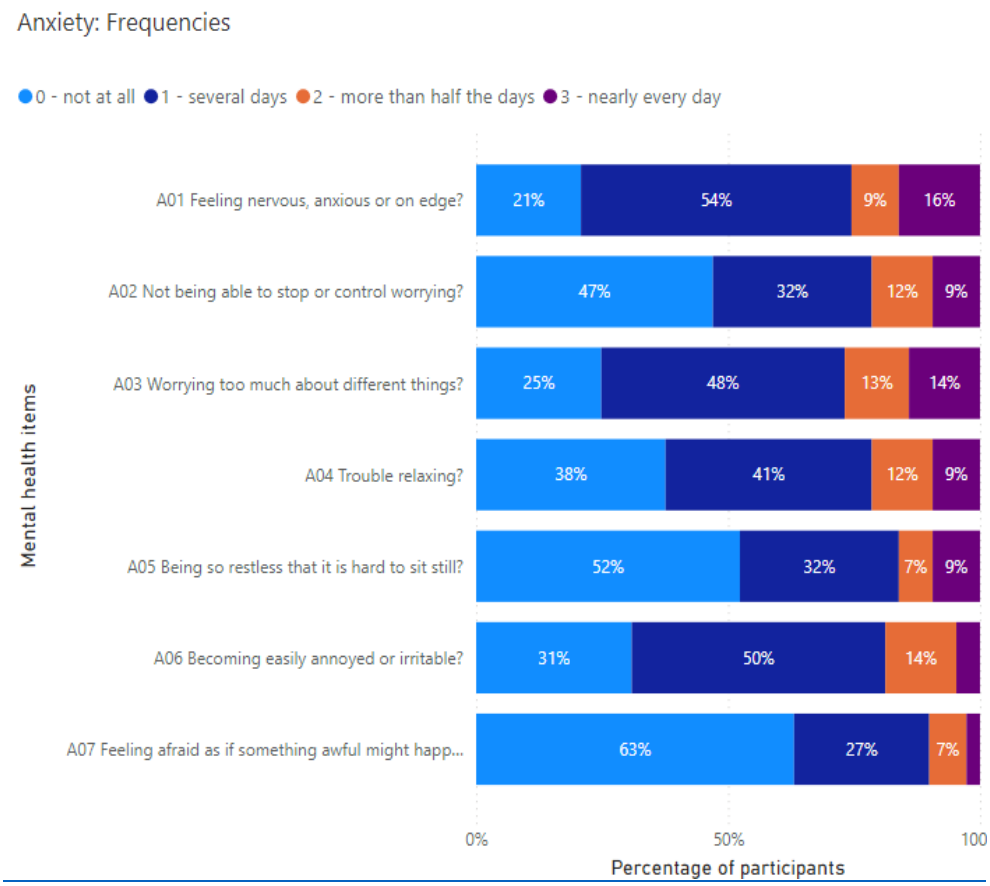


Figure 12: Athlete GAD item frequency for the UK sample

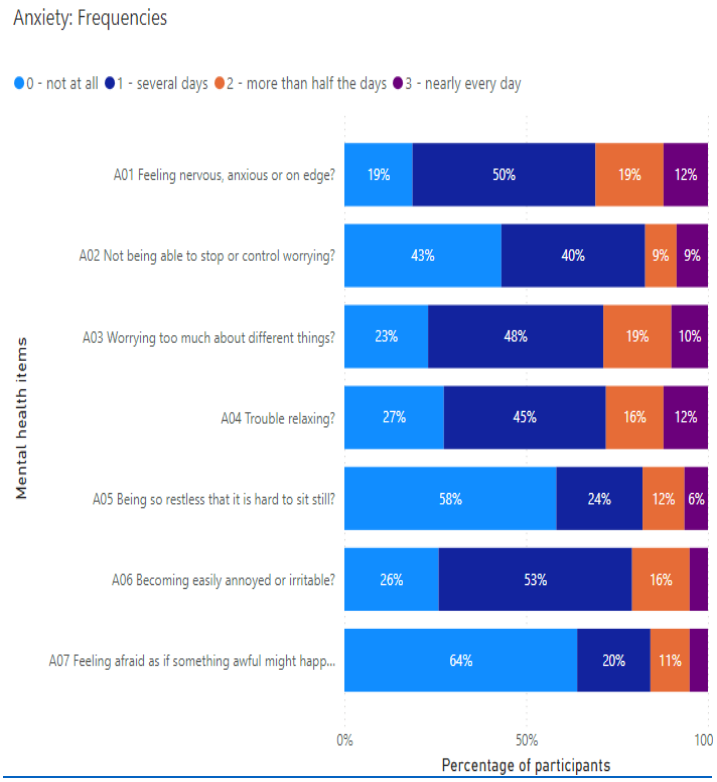


Figure 13: Entourage GAD item frequency for the UK sample

## PROFESSIONAL HELP-SEEKING AND CURRENT EXPERIENCE

- 14% of athletes indicated to have received professional help in relation to their mental health and 68% had never reached out to any mental health professional. 13% reported experiencing mental health problems at the time of filling out the survey. 24% indicated having experienced mental health problems in their life. The average age of onset of mental health problems reported by athletes was 17.8 years old.
- In the entourage sample, 17% indicated to have received professional help in relation to their mental health, and 62% had never reached out to any mental health professional. 9% reported experiencing mental health problems at the time of filling out the survey. 28% indicated having experienced mental health problems in their life. The average age of onset of mental health problems reported by entourage members was 23.9years old.

## Mental Health Literacy

Mental Health Literacy Questionnaire

This scale consists of 12 items and was designed to explore different topics related to mental health, both in a positive (e.g., “doing something meaningful or enjoyable on a regular basis contributed to good mental health”) and a negative light (e.g., “if I had a mental health problem I would try to hide it from others”). Respondents rate each item on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the total score representing the level of mental health literacy: the higher the score, the higher the level of mental health literacy. When calculating the total score, the negative items (item 9, 10 and 12) were scored in reverse. The total score ranges from 12 to 60.

**KEY FINDINGS**

- On the Mental Health Literacy Questionnaire, athletes scored 36.37 out of 60 and entourage scored 38.65 out of 60. This would indicate a moderately high level of literacy, but there were some notable findings.
- In the athletes’ sample, 64% would seek help if they were experiencing mental health problems, with 36% being ambivalent or disagreeing (item 5). In the entourage sample, 70% agreed, or somewhat agreed with this statement, leaving 30% showing ambivalence or disagreeing about seeking professional help for mental health problems if they experienced them.
- 20% of the athlete sample would not know where to look for information about mental health and 47% agreed or somewhat agreed that they would try to hide a mental health problem. Interestingly, in the entourage sample, only 12% would not know where to look for key mental health information but 55% agreed or somewhat agreed that they would try to hide a mental health problem.
- 11% of athletes somewhat agreed that mental health problems were less serious than medical problems, whereas less than 5% of the entourage agreed with this statement.

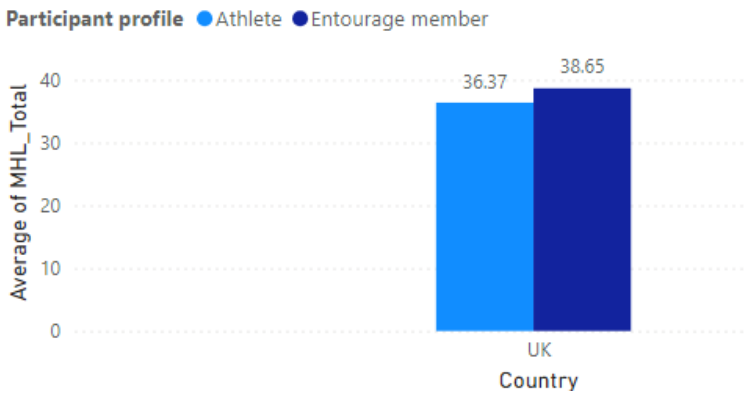


Fig 14. Mental Health Literacy in UK Sample

Perceived support (athletes)

**Adapted version of the General Help-Seeking Questionnaire (GHSQ)**

The GHSQ is a 1-item scale used to investigate how likely it is that athletes would receive appropriate mental health support from different persons in the entourage. The score ranges from 1 (extremely unlikely) to 7 (extremely likely).

**KEY FINDINGS**

- Overall, in terms of athlete perceptions of receiving mental health support, roles in the personal domain (e.g. parents, partners, friends) obtained the highest scores (mean: 5.98). This means that athletes find it very likely to turn to them when facing mental health problems.
- In contrast, roles in the educational/vocational domain scored (mean: 3.89) consistently lower (e.g. school tutors, dual career support providers, teachers, career advisors), meaning that athletes reported finding it less likely to turn to them for mental health support compared to the personal domain.
- Among the roles in the athletic domain, psychologists and coaches tended to rank highly (i.e. >4.8), while more distal support personnel were ranked lower.
- See below in Figure 15 for details about how each role ranked.

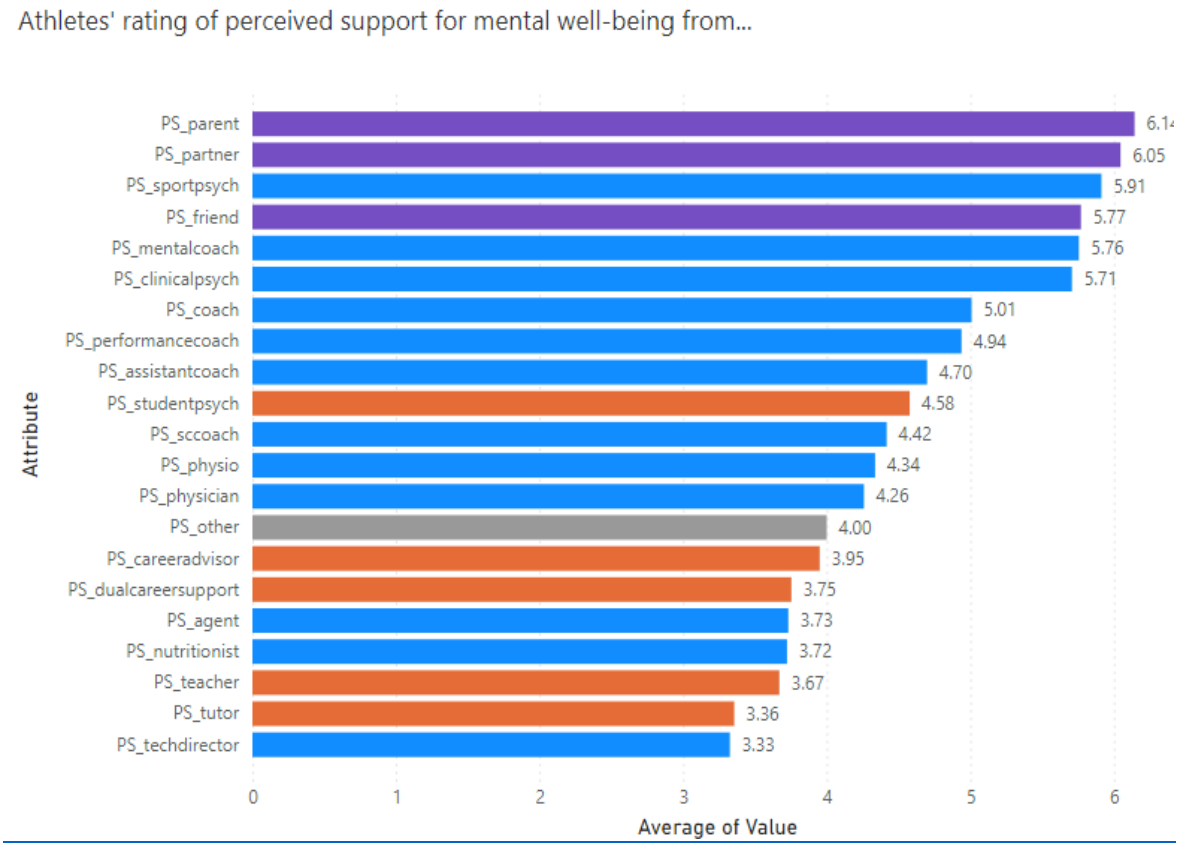


Figure 15 Athletes' rating of perceived support availability from various sources for mental health

## Mental health support provision (by entourage)

In comparison to athletes' perceptions of support availability, a congruent question aimed to investigate entourage members' confidence in providing adequate support to athletes dealing with mental health problems. The score again ranges from 1 (extremely unlikely) to 7 (extremely likely).

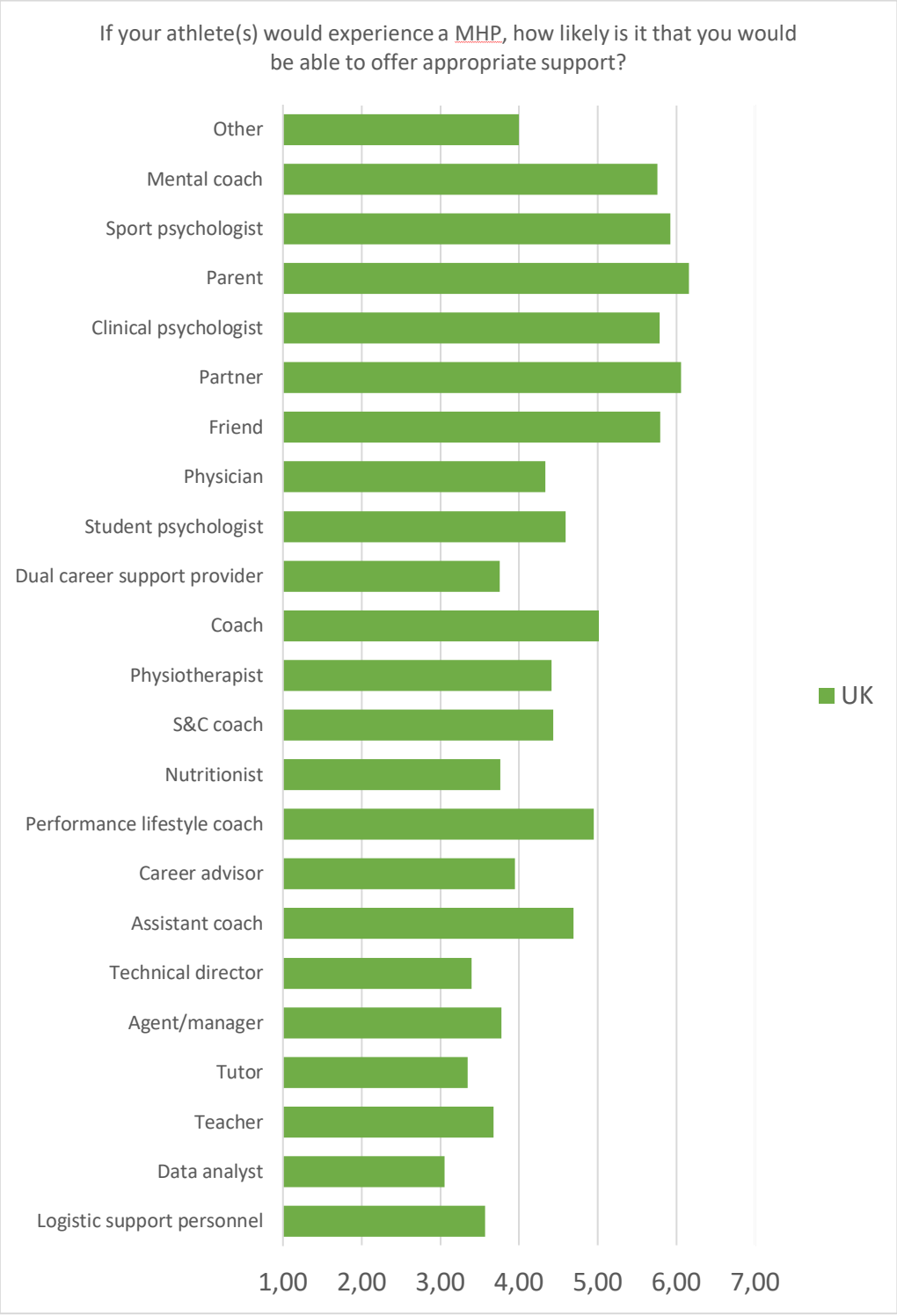


Figure 16 Entourage members rating of confidence in appropriate mental health support provision

**KEY FINDINGS**

- Entourage members were asked how likely it is that they would be able to offer appropriate mental health support to athletes. The scores are based on the average scores of the survey participants that declared working in each role.
- As seen in Figure 16, the members in the entourage that were ranked higher (meaning that those people felt extremely confident in their mental health support competencies), were parents, mental coaches, friends, partners, clinical and sport psychologists. Coaches were also moderately confident in general.
- The roles that scored lower, meaning that those entourage members who felt less likely to be able to offer appropriate mental health support to athletes were tutors, nutritionists, teachers, technical directors and data analysts.
- Compared to the athletes' perceptions, there was therefore quite a high degree of congruence between the athletes' perception of support receivable by those entourage roles and the confidence that people belonging to these roles felt in terms of being likely to provide appropriate mental health support.

**KEY FINDINGS**

Athletes and entourage members were asked to select the mental health promotion competencies that they felt were important to maintain mental well-being.

In terms of the our findings for the UK:

- The top three competencies most chosen by **athletes** were: (1) being empathetic and using active listening, (2) understanding mental health, and (3) recognising signs of mental health problems. The full results are shown in Figure 17.
- The top three competencies most chosen by **entourage members** were: (1) recognising signs of mental health problems, (2) being empathetic and using active listening, and (3) understanding mental health. Knowing when and how to refer athletes to MH professionals was also a competency that scored highly. The full results are shown in Figure 18, and in summary, illustrate congruence between athletes and the entourage.
- Only 3% of athletes and 1% of entourage members thought that mental health support was not an important mental health support competence.

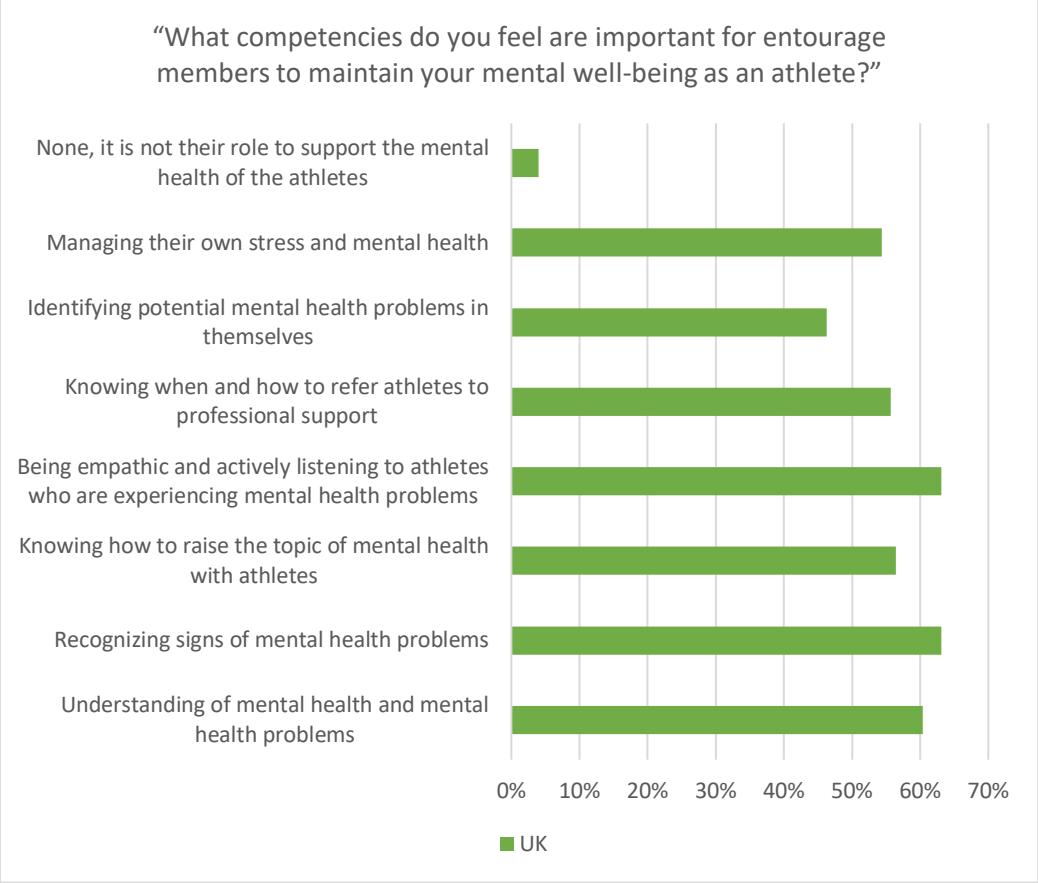


Figure 17 –Athletes' perceptions of required Entourage competencies for Mental health promotion

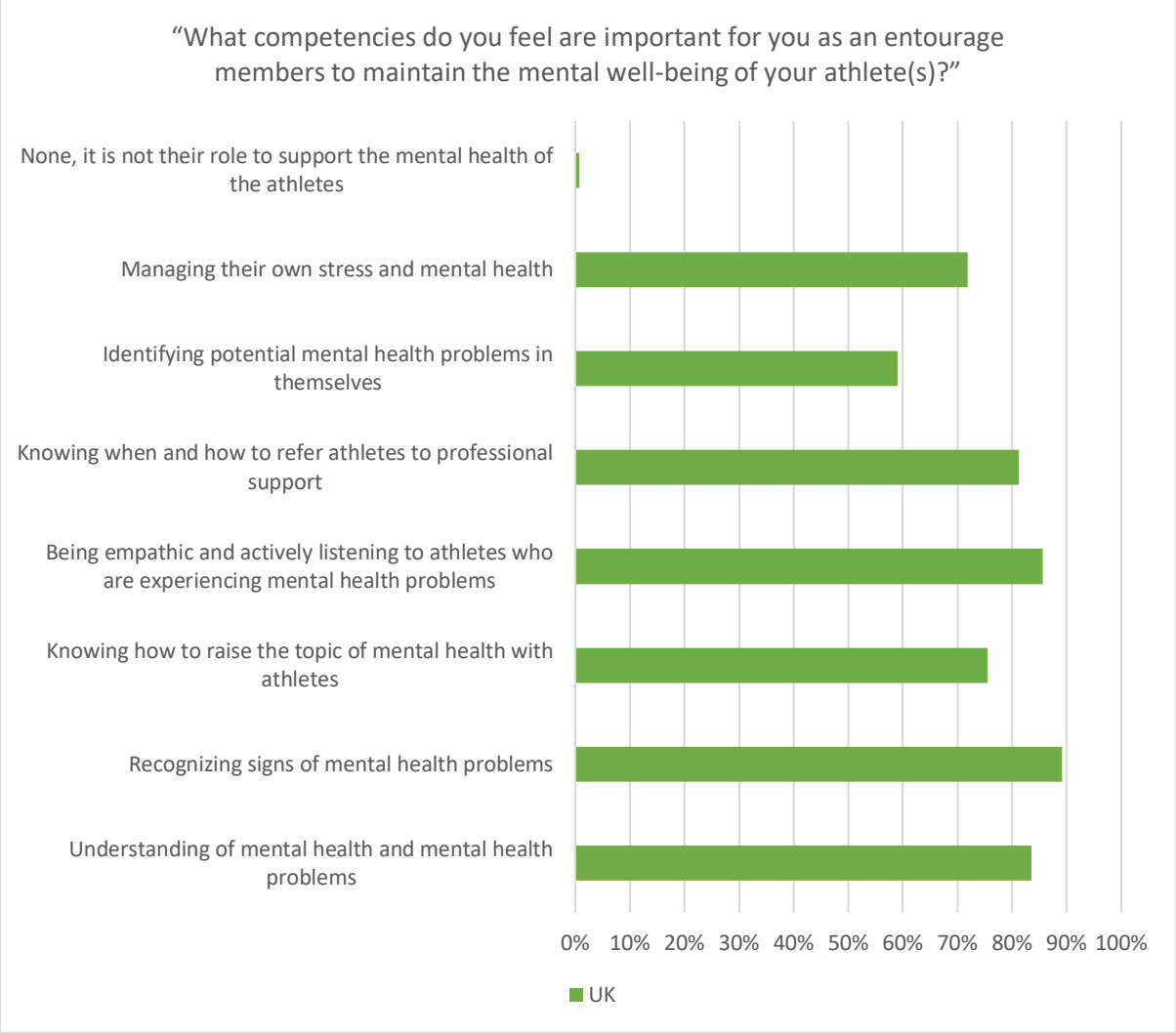


Figure 18 – Entourage members perceptions of required Entourage competencies for Mental health promotion for Athletes

## Link between study constructs

a. Correlation between study constructs
b. Key predictors of MH for athletes

**KEY FINDINGS**

**MENTAL HEALTH & WELL-BEING – ATHLETE SAMPLE**

- Moderate relationships between athletes' general well-being and anxiety scores (*r = .50*) and between general well-being and depression scores (*r = .55*) were observed. Correlation graphs are shown in the figures below.
- As anxiety levels increased, average general wellbeing scores of athletes decreased (figure 19)
- Similarly, as athlete depression scores increased, general wellbeing scores decreased showing a negative relationship (figure 20)
- The main predictor for **general well-being** in the athlete sample was low anxiety (<9 on PHQ)

**MENTAL HEALTH & WELL-BEING – ENTOURAGE SAMPLE**

- As a general trend, entourage mental health challenges were correlated with wellbeing. Depression scores decreased as wellbeing scores increased and similarly, anxiety scores decreased as wellbeing scores increased, although the trend was not as clear as with the athlete population.

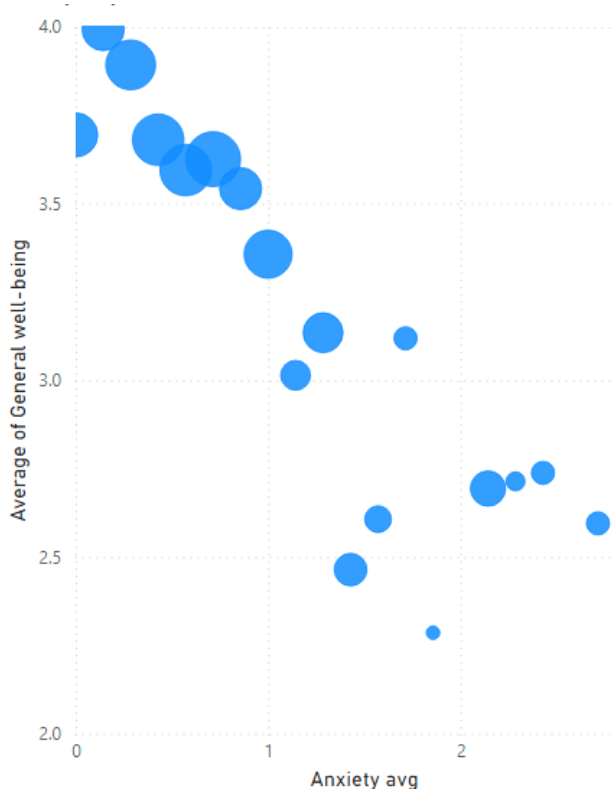


Figure 19: Relationship between anxiety and well-being for athletes

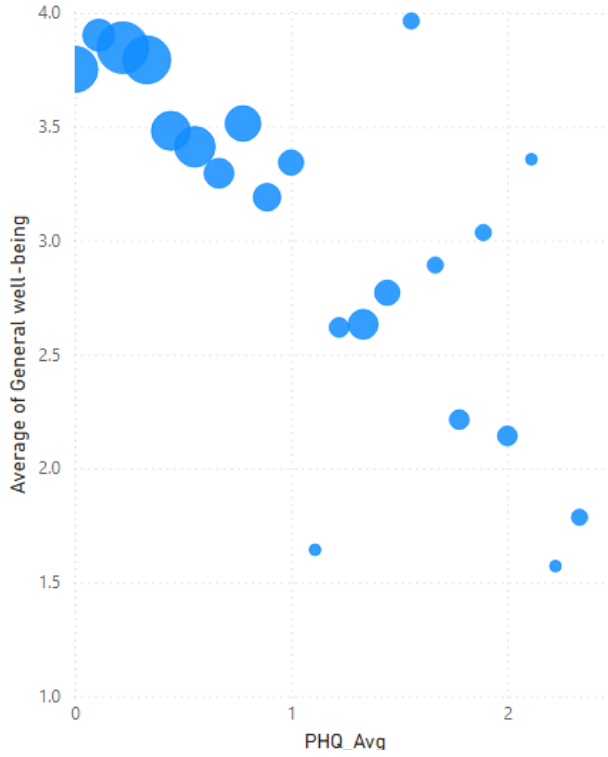


Figure 20: Relationship between depression and well-being for athletes

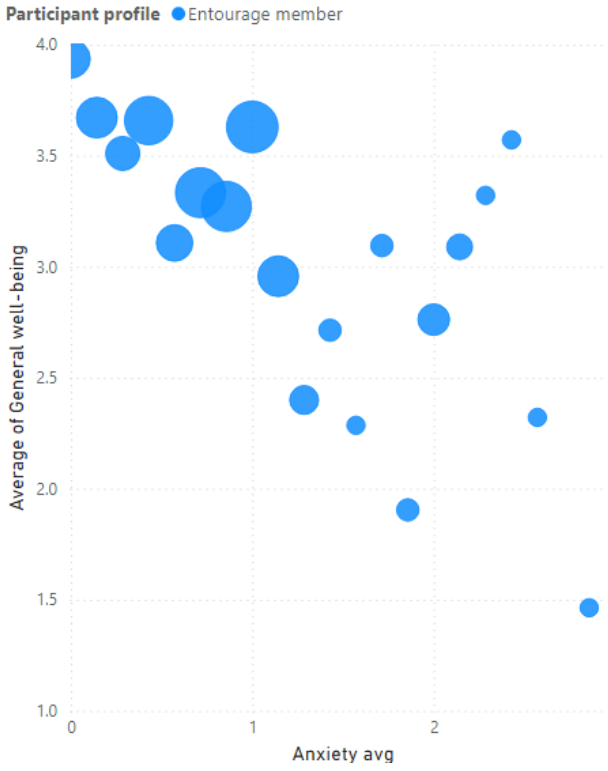


Figure 21: Relationship between anxiety and well-being for entourage members

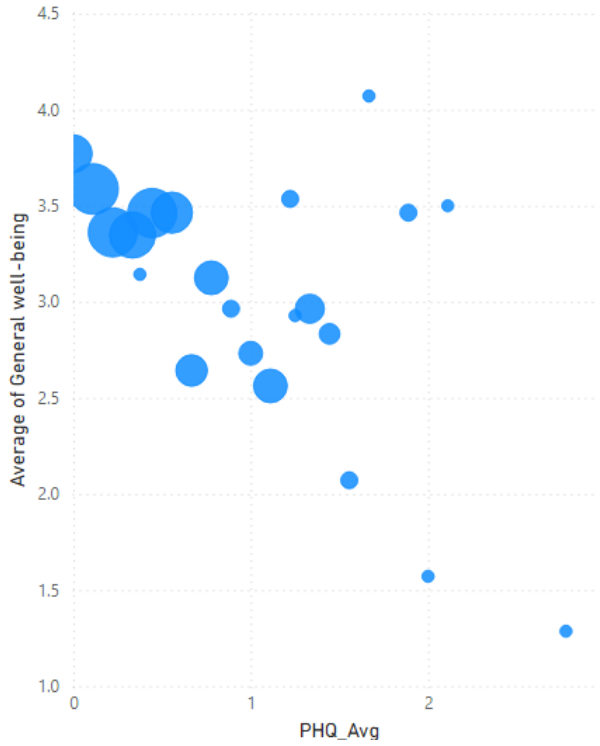


Figure 22: Relationship between depression and well-being for entourage members

## Qualitative data results

Athletes were asked (1) what skills entourage need to support their mental well-being and (2) what skills athletes need to promote their own mental health.

Entourage members were asked what skills they need to (1) maintain the mental well-being of their athletes, and (2) maintain their own mental well-being.

**KEY FINDINGS**

**Athlete sample:**

Athletes stress the importance of their entourage conducting regular mental health checks, promoting awareness of support resources, and easing performance pressure. Understanding triggers, fostering strong relationships, and showing empathy are highlighted. Providing resources like helplines, training sessions, and frequent check-ins is crucial. Empowering the entourage to address mental health with knowledge, compassion, and sensitivity is key. The consensus calls for a holistic approach prioritizing mental rest, robust support networks, and proactive interventions to safeguard athletes' well-being alongside their physical performance. Overall, the consensus among athletes was for a holistic support system that helps them feel supported and understood.

With regards to promoting their own mental health, athletes' responses stress the importance of self-awareness, seeking support, and coping strategies to maintain their mental well-being. They highlight the need for access to resources like sports psychologists and counselling, alongside self-management practices such as rest and managing life-sport balance. Building confidence, resilience, and a supportive environment are crucial. Regular mental strengthening exercises and social engagement are also emphasized. Although one athlete suggested societal concern for mental health promoted a weak mindset, this was not the consensus. Ultimately, a combination of self-awareness, professional support, and a supportive environment is essential for athletes' mental well-being.

**Entourage sample:**

Entourage members outline essential competencies to effectively support athletes' mental well-being. Key themes include building trust through understanding and consistent support, acknowledging athletes beyond their sporting roles, and practicing active listening without judgment. They emphasize the significance of accessing professional support, maintaining strong relationships with mental health experts, and creating a supportive environment conducive to open conversations. Understanding the sport and having clear referral pathways are deemed essential, alongside self-compassion, managing expectations, and providing safe spaces for athletes to share. Ultimately, entourage members aim to cultivate an environment where athletes feel valued, understood, and empowered to prioritize their mental health alongside their athletic pursuits.

Regarding competencies to support their own mental health, entourage members stress the importance of managing boundaries and work-life balance, incorporating practices like yoga and regular exercise, and having a support network of colleagues. Open communication and feeling safe to share personal struggles with others are emphasized. Access to counselling, timely support, and maintaining clear boundaries are highlighted. Additionally, they advocate for awareness of individual triggers and the importance of self-care activities such as relaxation, reflection, and engaging in hobbies. Having time for oneself, a supportive network of friends and family, and

access to resources for mental health management are prioritized. Overall, entourage members underscore the significance of self-awareness, self-care practices, and access to support systems for maintaining their own mental well-being while supporting athletes effectively.

# Next steps

## Practical implications

Based on these research findings, we have a greater appreciation of the levels of mental health literacy in athletes and the entourage as well as their perceptions, levels and experiences of well being, mental health concerns, and competencies related to promoting mental health in both self and significant others.

While the absolute picture is one of generally good mental health, it is evident that mental health challenges exist in the lives of sportspeople to greater or lesser extents, and that mental health matters. The qualitative findings support many of our objective results in terms of potential practical considerations for mental health support programmes for entourage members.

**From the athlete perspectives**, it may be beneficial for the entourage consider the value of:

- The athlete well-being logs checked regularly by coaches for ongoing monitoring/relevant team support
- Managing normative expectations and adaptive reactions to success and failure
- Ensuring appropriate athlete rest and recovery is built into performance planning
- Empathy with athlete's existing mental and emotional load ensuring that any entourage (coach/parent) stress is not further projected onto the athlete (i.e., coach and entourage stress management skills)
- Implementing a holistic philosophy and understanding that a whole athlete approach means time to understand wider life issues, needs or commitments
- There is an importance placed on listening skills, availability and time, relationship-building and acceptance that mental health challenges exist
- Creating a psychologically safe space where an athlete who is vulnerable feels safe and supported being vulnerable
- Asking the athlete for ways of optimal support to understand the full picture, as opposed to assuming what an individual needs

**From athlete perspectives,** practical considerations for taking care of their own **mental health** could include**:**

- Completion of mental health and well being logs for self-regulation and monitoring
- Developing their ability to separate identities and positive resources in other life domains away from sport and the dominant sport identity
- Ensuring rest and recovery time with confidence to communicate the need when it is needed
- Normalising professional help-seeking and engagement with sport psychologist or expert support in this space as a natural decision given the demands of sport
- Understanding one's own triggers and how they affect well-being to better respond and plan
- Being comfortable showing vulnerability to others in order access optimal support
- Maintaining a healthy social life or social balance with performance commitments
- Creating and ensuring a strong support network with a constructive and caring environment

**Entourage members** offered perceptions and insights that speak to competencies and strategies that might be more readily available and deployed to athletes. These could include:

- Good communication skills and connectedness including time availability and regular well-being check ins
- Knowledge about referral networks for accessing professional support for the athlete
- Effective listening and sharing skills – comfort in speaking about ones own mental health, leading by example and normalising disclosure and personal vulnerability by role modelling
- Creating a safe trusting and supportive environment within the Team for the athlete
- Enhanced education about mental health with an emphasis on signs and symptoms
- Showcasing 'person first values' in front of the athletes and others
- Understanding the psychological and emotional demands and elements of a specific sport
- Creating a supportive peer group outside of sport and maintaining close lines of communication with other entourage members
- Drawing advice and mentoring from those who have lived experience of mental health challenges as an entourage member or current / former athlete

These aspects may prove useful to consider optimising entourage support for athlete health and their own self-care and quality of experience.

## References

European Commission. (2023). *Dual Careers for Mental Health*. Retrieved 13/03/2024 from https://erasmus-plus.ec.europa.eu/projects/search/details/622178-EPP-1-2020-1-BE-SPO-SCP

International Olympic Committee. (2023, 12/07/2023). *Measuring and Increasing Athletes' Mental Health Literacy (MHL): Cross-Cultural Validation of MHL Questionnaire and Evaluation of MHL Intervention Implementation*. Retrieved 13/03/2024 from https://olympics.com/ioc/news/2023-2025-advanced-olympic-research-grants-awarded

Keyes, C. L. M. (2002). The Mental Health Continuum: From Languishing to Flourishing in Life. *Journal of Health and Social Behavior*, *43*(2), 16.

Kroenke, K., Spitzer Rl Fau - Williams, J. B., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, *16*(9), 8. https://doi.org/https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092