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| **Theme SIX: Consequences of Using Performance and Appearance Enhancement Substances (PAES)****Session Plan** |  |
| **Tutors:** |  | **Date:** |  |
| **Location:** |  | **Cohort:** |  |
| **Topic:** | *Using PAES and their consequences on mental and physical health* | **Where session comes in the module:** | *1/1*  |
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| **Key questions:** |  |  |
| * *How does PAES use affect one’s mental and physical well-being?*
* *How does optimistic bias (i.e., those side-effects “will not happen to me”) affect young people’s decision about using PAES?*
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| **Who are the learners? Group composition and description:** |
| *This session has been developed for adolescents and young adults (16-25 years old, both males and females) involved in exercise and/or amateur or recreational sports. No specific knowledge or skill requirements are needed to follow through the sessions, other than the learner's own motivation to learn!*  |
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| **What is the learning outcome?** |
| At the end of the session, participants are expected to: |
|  | * *Be able to describe some general characteristics of PAES use side-effects*
* *Be able to describe in general terms the effect of optimistic bias*
* *Be cognisant with mental and physical consequences of PAE use; as well as discontinue of use*
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| **Expected contribution to self-efficacy through PAES literacy:** |  |
| *This session aims to help learners reflect on their judgments about the outcomes and consequences of using controlled/uncontrolled PAES. The Theme contributes to interactive health literacy by building self-efficacy to make informed and evidence-based decisions on PAES by providing evidence on potential side effects regardless of the type and legal status and by deconstructing the optimistic belief that those side-effects ‘will not happen to me’.* |
| **TIME** | **LEARNING ACTIVITIES** | **TEACHING MATERIAL PROVIDED** | **NOTES** |
| **Starter (connect / hook)** |  |  |
| 1. mins
 | * *Reflect on the application- discuss on the side effects of PAES substances*
* *Have the participants discuss the supplements that they are using*
 |  | *Facilitators may have to do some independent research to adjust the material in their own context* |
| **Series of learning activities (demonstrate & activate)** |  |  |
|  | **Activity 1:** *PEAS use consequences, side effects of supplements* |  |  |
| 10 mins | * *See video*
* *Present research findings on the use and side effects of legal supplements*
* *Discuss if these effects would affect the participants*
 | *Example video* [*Health consequences of doping I*](https://www.youtube.com/watch?v=O1l1H8u5lM4) | *See material on the Optional Reading list for information on legal supplements’ side effects.* |
|  | **Activity 2:** *Reducing optimism bias* |  |  |
| 15 mins | * *List five reasons of why the negative side effects of PAES will not affect you (or and individual that is taking supplements)*
* *See example video(s) and discuss about how optimism bias can influence to disregard the side effects of PAES*
 | *Example videos*[*Optimism Bias*](https://www.youtube.com/watch?v=o2GncOR7LZI) [*The Magnets Experiment*](https://www.youtube.com/watch?annotation_id=annotation_4244632701&feature=iv&src_vid=o2GncOR7LZI&v=uDjutAUhnDg) | *See material on the Optional Reading list for Optimism Bias* |
|  | **Activity 3:** *Justifying irrational choices* |  |  |
| 10 mins | * *List five reasons exercisers use PAES although they are aware of the negative side effects.*
* *Present video from the case study from Cyprus (The Competitiveness: Christos’ stody)*
* *Discuss how you can be a rational, impartial and unbiased critical thinker when it comes to the benefits of nutritional supplements and PAES use?*
 |  | *See material on the Optional Reading list for Cognitive Dissonance* |
| **Plenary (consolidate & evaluate)** |  |  |
| 5 mins | *In this round-up activity facilitators/ moderators should close the session by reflecting on the activities that took place and by conveying the following take-home messages:* * *PAES substances may have severe side effects on health*
* *All exercisers are vulnerable to these side effects*
* *You should make rational choices when it comes to your health*
 |  *None required* | *Ensure that you have communicated clearly the activities that took place, and that the take home messages are clear and meaningfully communicated to all learners. Allow time for questions so that all learners leave the session without unresolved queries.* |
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| **Purpose and nature of INDEPENDENT STUDY:*****Core reflection:*** |
| *To 1) embed the newly acquired knowledge and 2) facilitate improvement in self-efficacy through increased health-literacy (developing skills to understand both physical and mental effects of PAES).**For setting independent study:** *Ask participants to find examples for optimistic bias outside sport and exercise; and*
* *Be prepared to discuss the best ways to counterbalance this bias in young people in general; and with regards to PAES (if workshop is arranged in more than one session).*

*Participants should reflect on how trustworthy advertisements about a product and on how to find accurate information.* |
| **Optional further reading:** |  |  |
| * [*National Geographic Documentary Anabolic Steroid Effects*](https://www.youtube.com/watch?v=DDlZJdTbHHA)
* *Ostojic, S. M., & Ahmetovic, Z. (2008). Gastrointestinal distress after creatine supplementation in athletes: are side effects dose dependent?. Research in Sports Medicine, 16(1), 15-22. Available at (*[*link*](https://www.researchgate.net/profile/Sergej_Ostojic/publication/5479908_Gastrointestinal_Distress_After_Creatine_Supplementation_in_Athletes_Are_Side_Effects_Dose_Dependent/links/544ab88a0cf24b5d6c3cdadc.pdf)*)*
* *Ristow, M., Zarse, K., Oberbach, A., Klöting, N., Birringer, M., Kiehntopf, M., ... & Blüher, M. (2009). Antioxidants prevent health-promoting effects of physical exercise in humans. Proceedings of the National Academy of Sciences, 106(21), 8665-8670. Available at (*[*link*](http://www.pnas.org/content/106/21/8665.full?linkType=FULL&resid=106/21/8665&journalCode=pnas)*)*
* [*https://www.youtube.com/watch?v=50QBwi11ncE*](https://www.youtube.com/watch?v=50QBwi11ncE)*;* [*https://www.youtube.com/watch?v=xw4xcQE1K4c*](https://www.youtube.com/watch?v=xw4xcQE1K4c)
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| **Problem Based Learning activity:** |  |  |
| * *Case Studies and Problem Scenarios: Episodes 1, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16*
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| **Assessment of learning outcomes:** |  |  |
|  | * *Increased awareness of the issue can be reflected upon during the ’plenary’ discussion.*
* *Assessing self-efficacy specific to this session, use the following 3 questions either before and after; or after the session. Individual scores are calculated by averaging Q15, Q16 and Q17.*

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| *I feel confident in making an informed and evidence-based decision about PAES use…* | Strongly disagree (-2) | Disagree(-1)  | Neither agree or disagree(0)  | Agree (+1) | Strongly agree (+2) |
| *Q15* | *...because I know that even nutritional supplements can sometimes contain harmful ingredients.* | 🞎 | 🞎 | 🞎 | 🞎 | 🞎 |
| *Q16* | *...because I know that even nutritional supplements can sometimes be harmful to the body if excess amount is taken or if taken in wrong combinations.* | 🞎 | 🞎 | 🞎 | 🞎 | 🞎 |
| *Q17* | *… because I am aware how PEAS affects my physical and psychological wellbeing.* | 🞎 | 🞎 | 🞎 | 🞎 | 🞎 |

* *Use these questions for self-reflection after the workshop session.*
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| **Resources required:**  |  |  |
| *Screen or Data Projection, Internet connection* |
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| **Session evaluation to be completed by the tutor** (reflect on what went well and what could be improved or changed): |
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**Safe You: Know your body. Know your substance.**