

Fieldwork Mental health – A practical toolkit

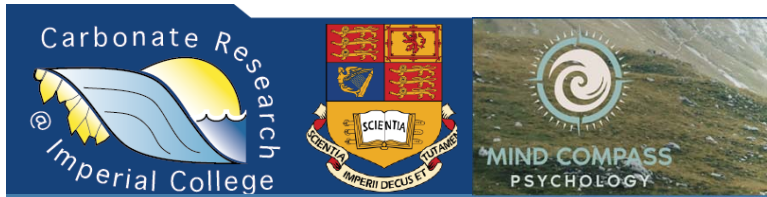
Dr. Cédric M. John

Dept. of Earth Science and Engineering, Imperial College London

Dr. Saira Khan

Mind Compass Psychology





Who we are – Cédric John

- PhD in Geology from Uni-Potsdam (Germany)
- Post-doc UC Santa Cruz (2004-2005)
- Staff Scientist for IODP (Texas A&M University), sailing on the research vessel Joides Resolution (2005-2008)
- Faculty position at Imperial College London, department of Earth Science and Engineering (2008-today)
- Mental Health champion for my department
- >15 years teaching and conducting research in the field and at sea





Who we are – Saira Khan

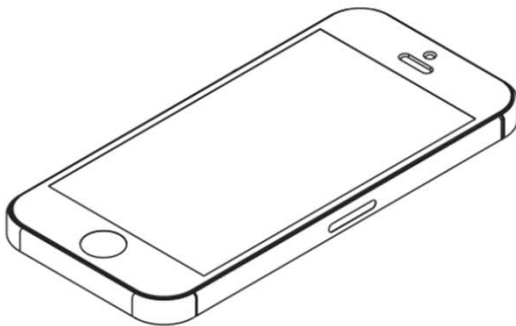
- BA Psychology UCLA (1998)
MSSW Columbia University (2000)
- Licensed Clinical Social Worker in California, Board of Behavioral Sciences
- Chartered Counselling Psychologist (DPsych), British Psychological Society
- Currently working for the National Health Services (NHS) in community mental health team and supervisor for a charity in London
- 15+ years of experience providing psychological therapy and working in mental health



www.mind-compass-psychology.com

Let's start with a little game

Go to **www.menti.com** and use the code **xx xx x**



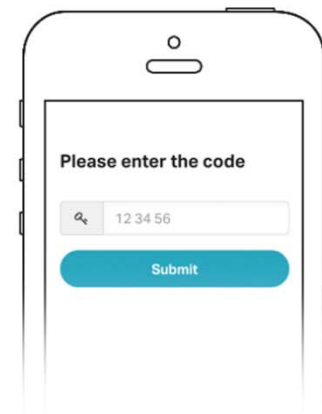
1

Grab your phone

www.menti.com

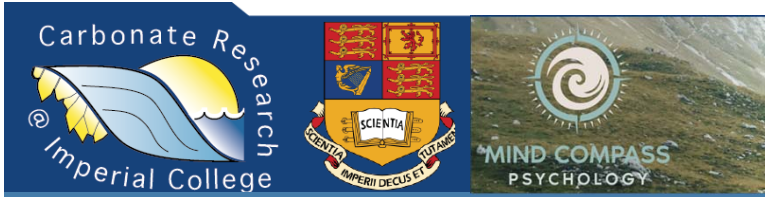
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Go to **www.menti.com**



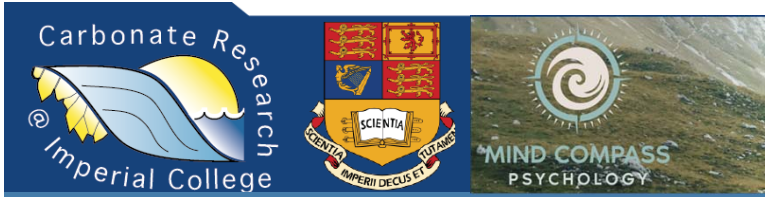
3

Enter the code **37 33 0** and vote!



Who's quote is that?

“Great God! this is an awful place and terrible enough for us to have laboured to it without the reward of priority.”

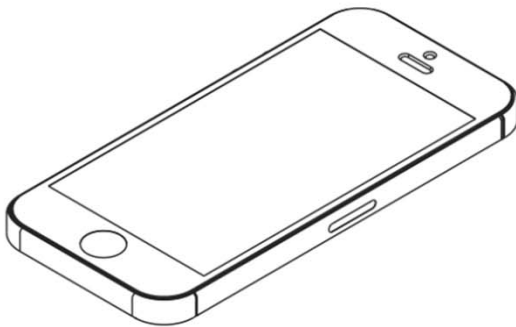


Who's quote is that?

*“We had seen God in His splendours,
heard the text that Nature renders. We
had reached the naked soul of man.”*

How to play the game

Go to **www.menti.com** and use the code **xx xx x**



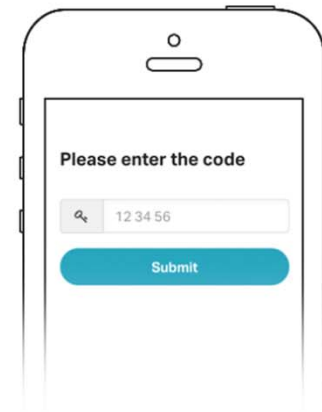
1

Grab your phone

www.menti.com

2

Go to **www.menti.com**



3

Enter the code **37 33 0** and vote!

Who's quote is that?

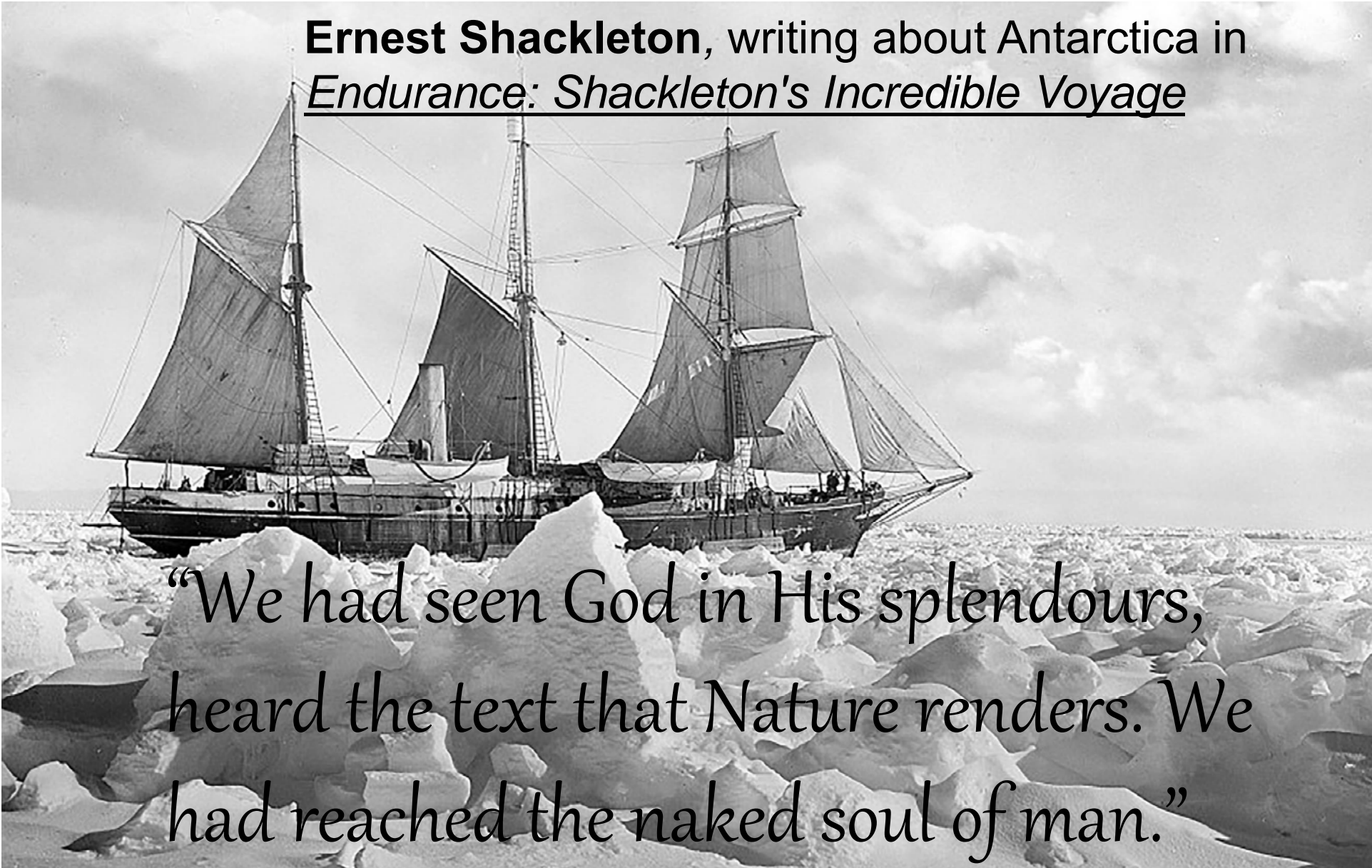
“Great God! this is an awful place and terrible enough for us to have laboured to it without the reward of priority.”



Robert Falcon Scott (British explorer) writing about Antarctica, quoted in *Scott's Last Expedition* (1913) vol.1, ch.18

Who's quote is that?

Ernest Shackleton, writing about Antarctica in
Endurance: Shackleton's Incredible Voyage



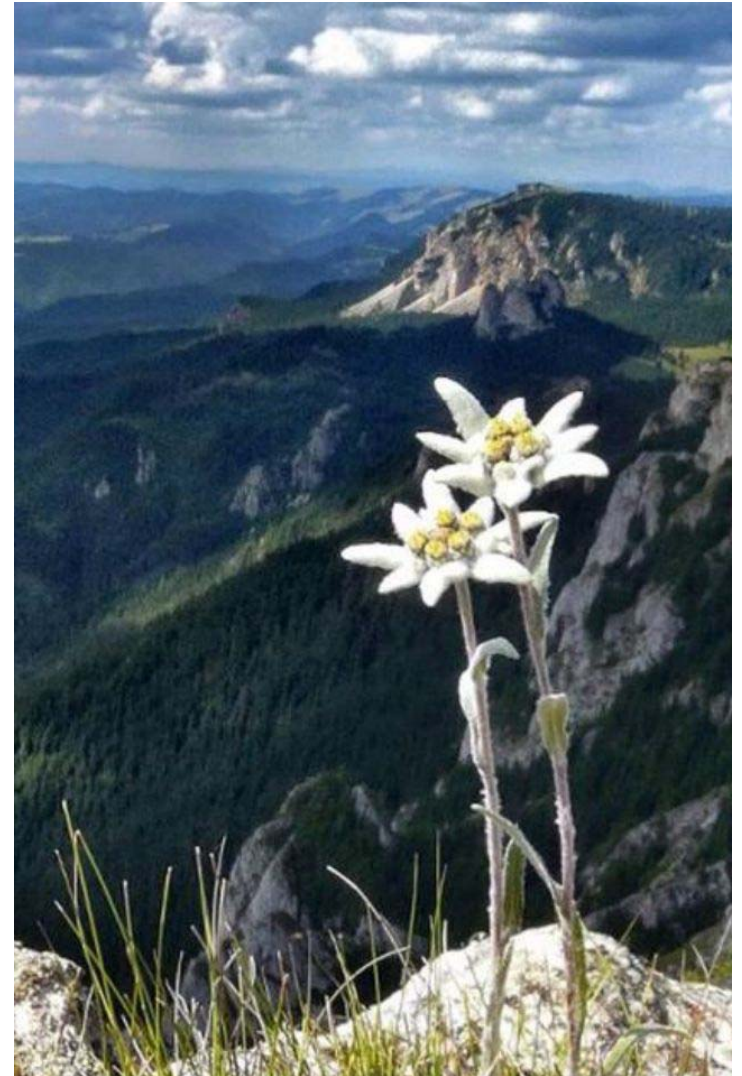
“We had seen God in His splendours,
heard the text that Nature renders. We
had reached the naked soul of man.”



Let's explore Mental Health in the Field



Setting the scene: Two Tales From Cedric's Distant Past



Tale 1, Summer 1994: A free Swiss “summer camp”



Soldier's life and MH: 50 km forced march through rough alpine terrain



The purpose of my army training?





Tale 2, Autumn 1994: start of a geology degree at the University of Neuchâtel



How about teaching in the field?



Let's start with one of my memories of visiting the 'Glarus Overthrust' whilst being an undergrad student

**The sort of weather we had in the
valley... yet up we went!**



Recollection of the Glarus Overthrust after a 2 hours hike...



Great learning experience for me on what not to do!

Other aspects of fieldwork during a typical geology degree



Worked long hours on the last night...



Lack of privacy: sometimes had to share one bed for two

The classical image of the geologist no longer matches reality

Canadian Geological Survey, 19th century



The ultimate purpose of a geology field training?



Modern geology rarely calls for work in grueling conditions...

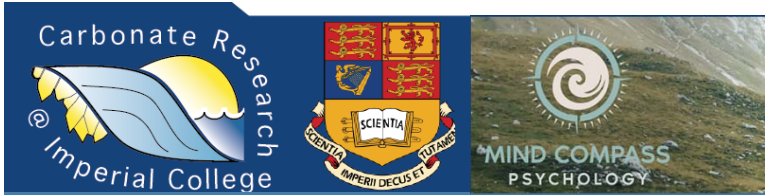


Even back in the 90's!

Are fieldwork and field teaching still important?

- Absolutely!
- The concept of scale in geology is crucial and hard to grasp
- Field geology displays a lot of complexity
- Needs to be safe and optimum for learning, including MH

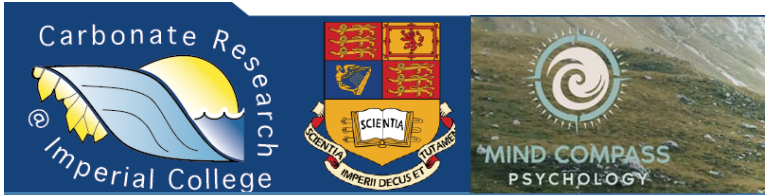




A humanistic view of human needs

Physiological needs

John and Khan, 2018 (Nature). Based on Maslow's hierarchy of needs

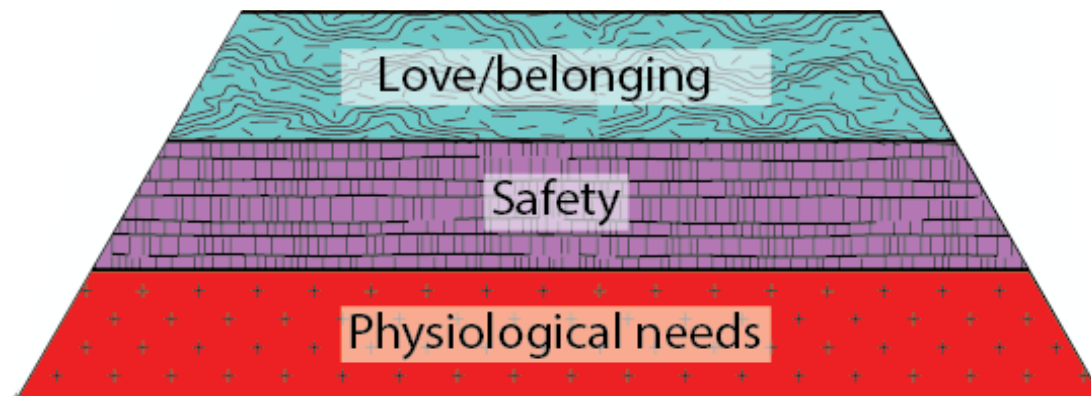


A humanistic view of human needs



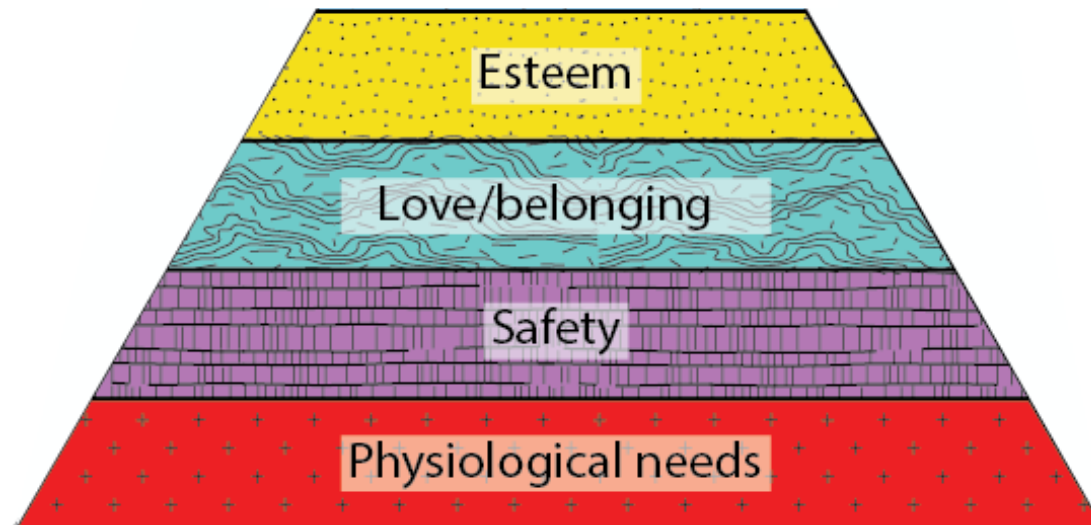
John and Khan, 2018 (Nature). Based on Maslow's hierarchy of needs

A humanistic view of human needs



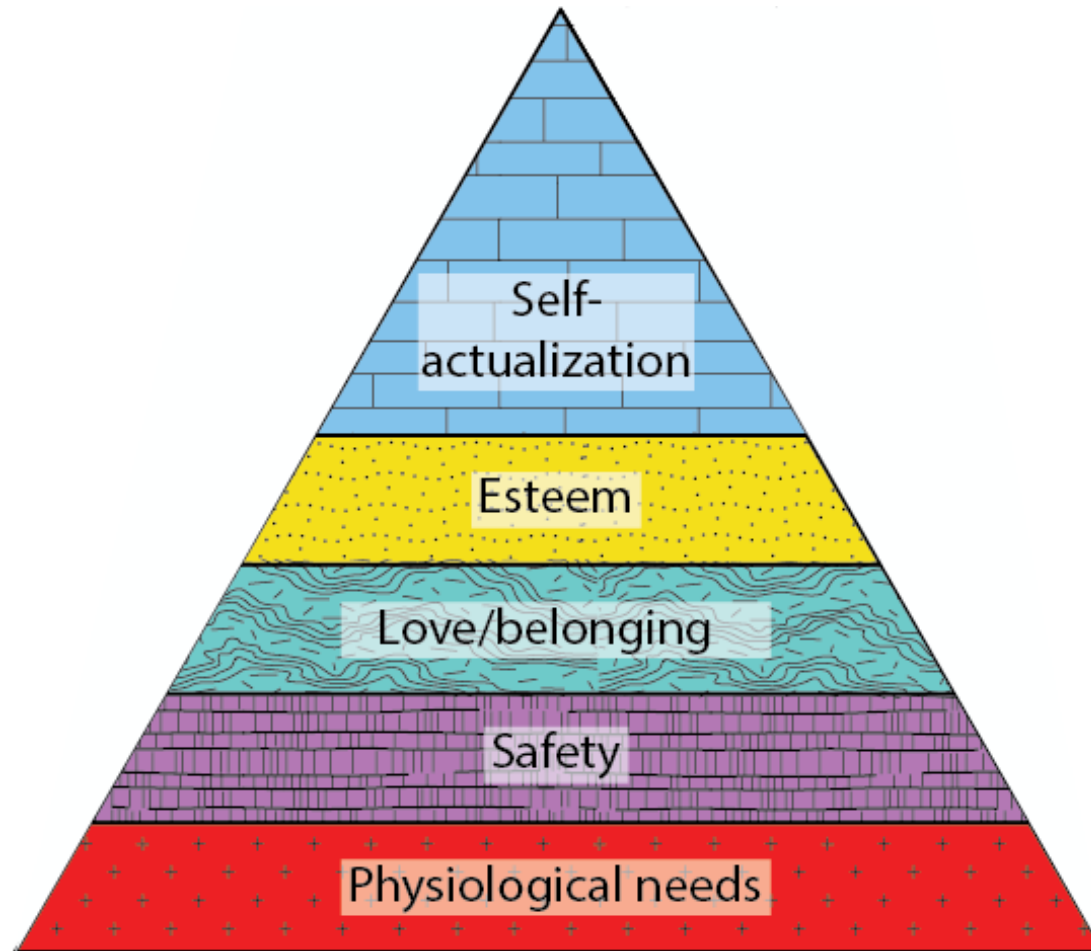
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A humanistic view of human needs



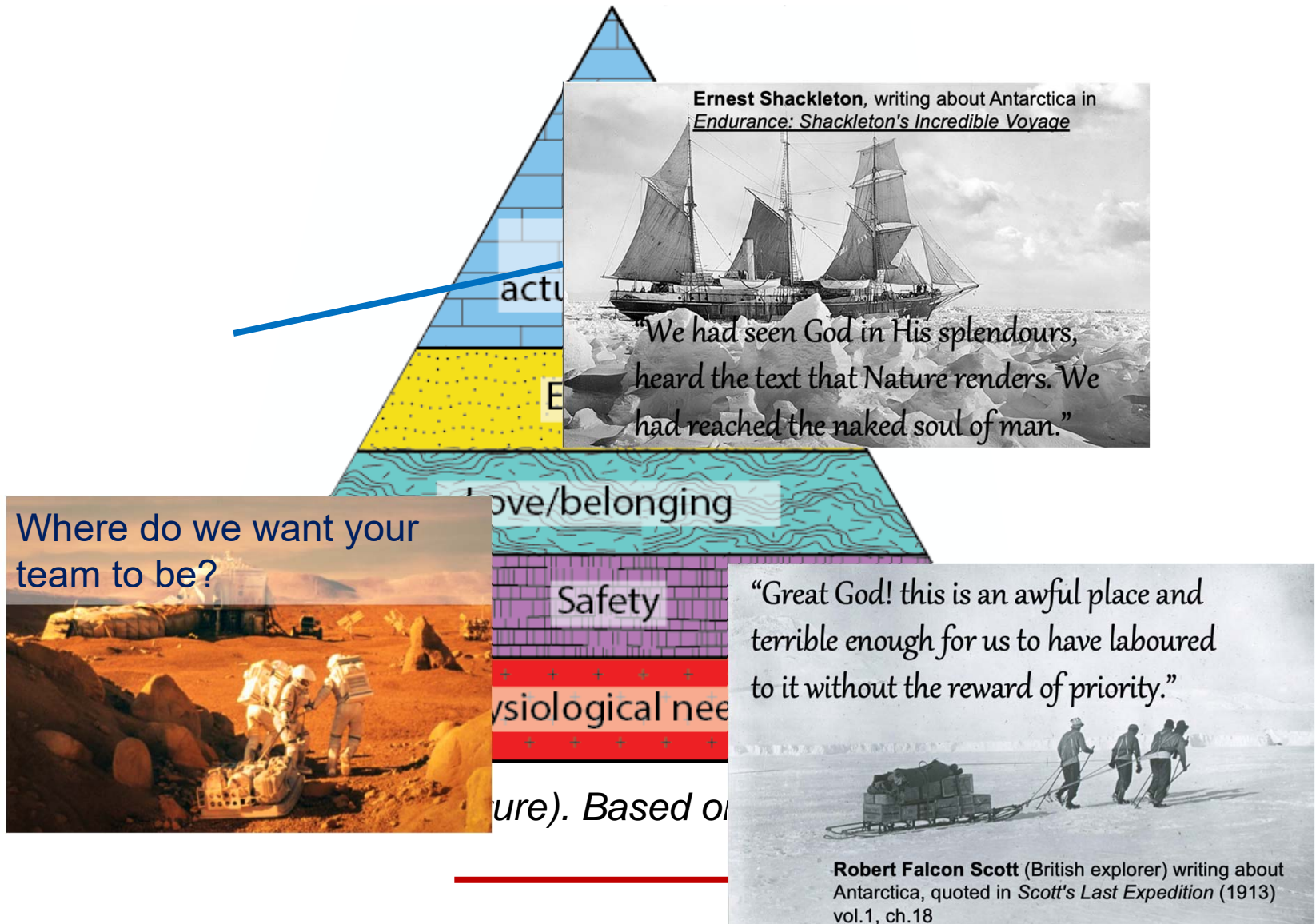
John and Khan, 2018 (Nature). Based on Maslow's hierarchy of needs

A humanistic view of human needs




John and Khan, 2018 (Nature). Based on Maslow's hierarchy of needs

The polar explorers on the pyramid of human needs



Breakout I

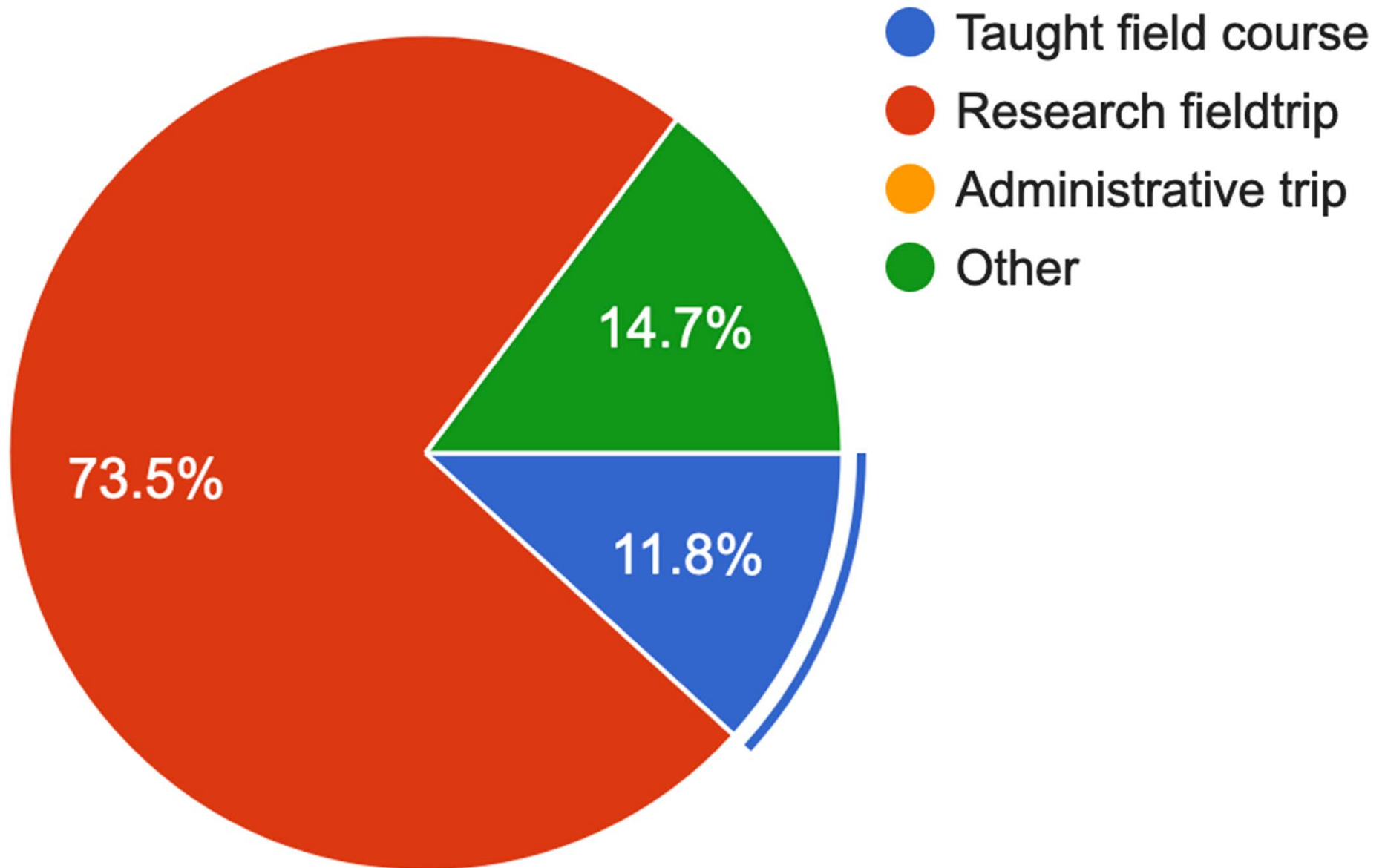


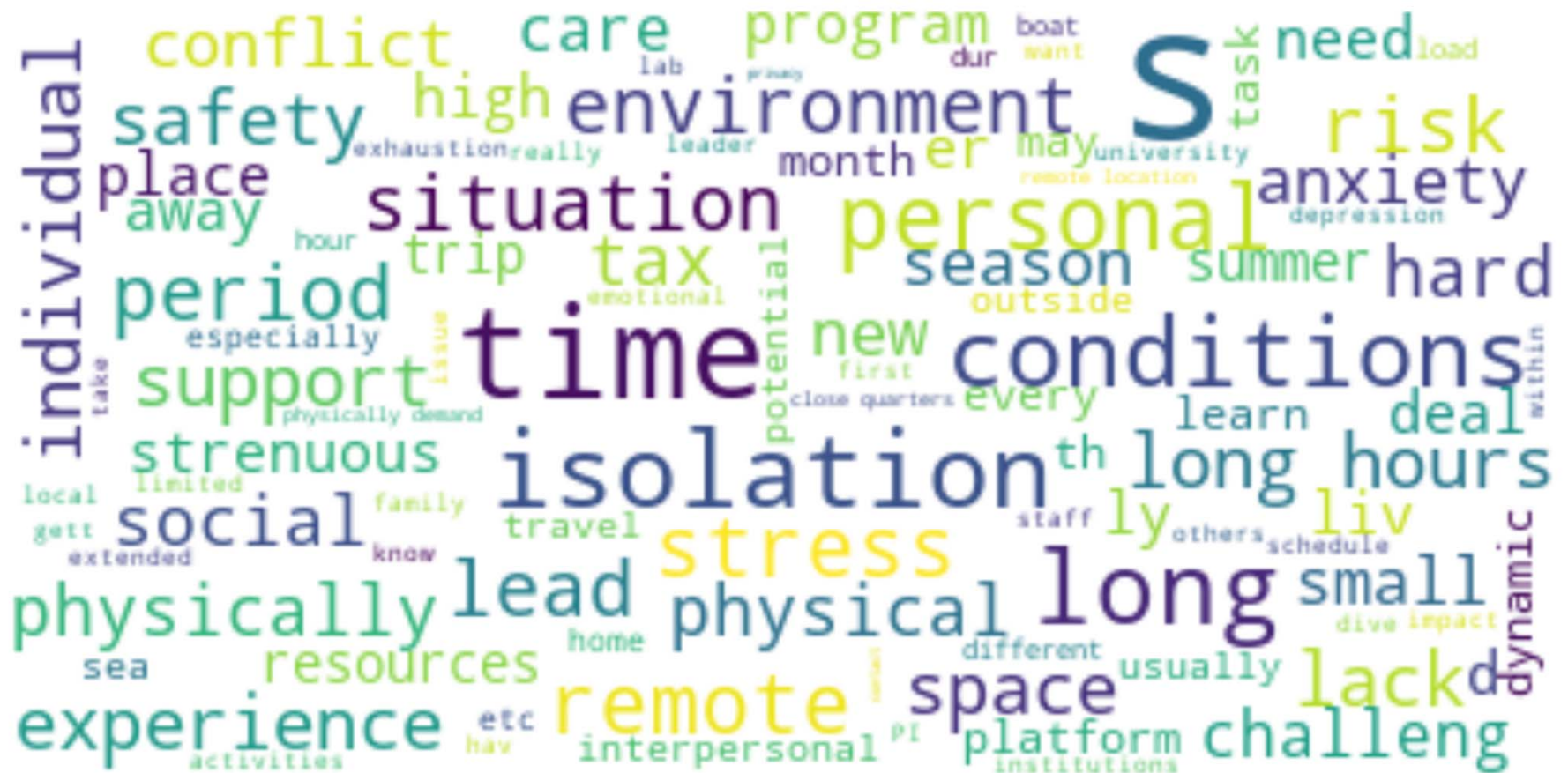
A wide-angle photograph of a beach at sunset. The sun is a bright, glowing orb on the horizon, casting a long, shimmering reflection across the calm water and the wet sand. The sky is a gradient of orange and yellow, fading into a darker blue at the top. The beach is composed of dark, wet sand with small, dark rocks scattered across it. The water is dark and textured with small waves.

Share your experience of dealing with mental health (yours or your participants) in your own field?

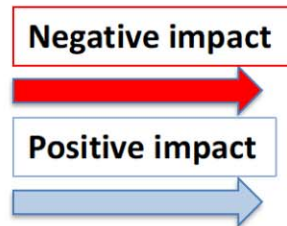
[illegible]

Main activity





Factors impacting mental health in the field



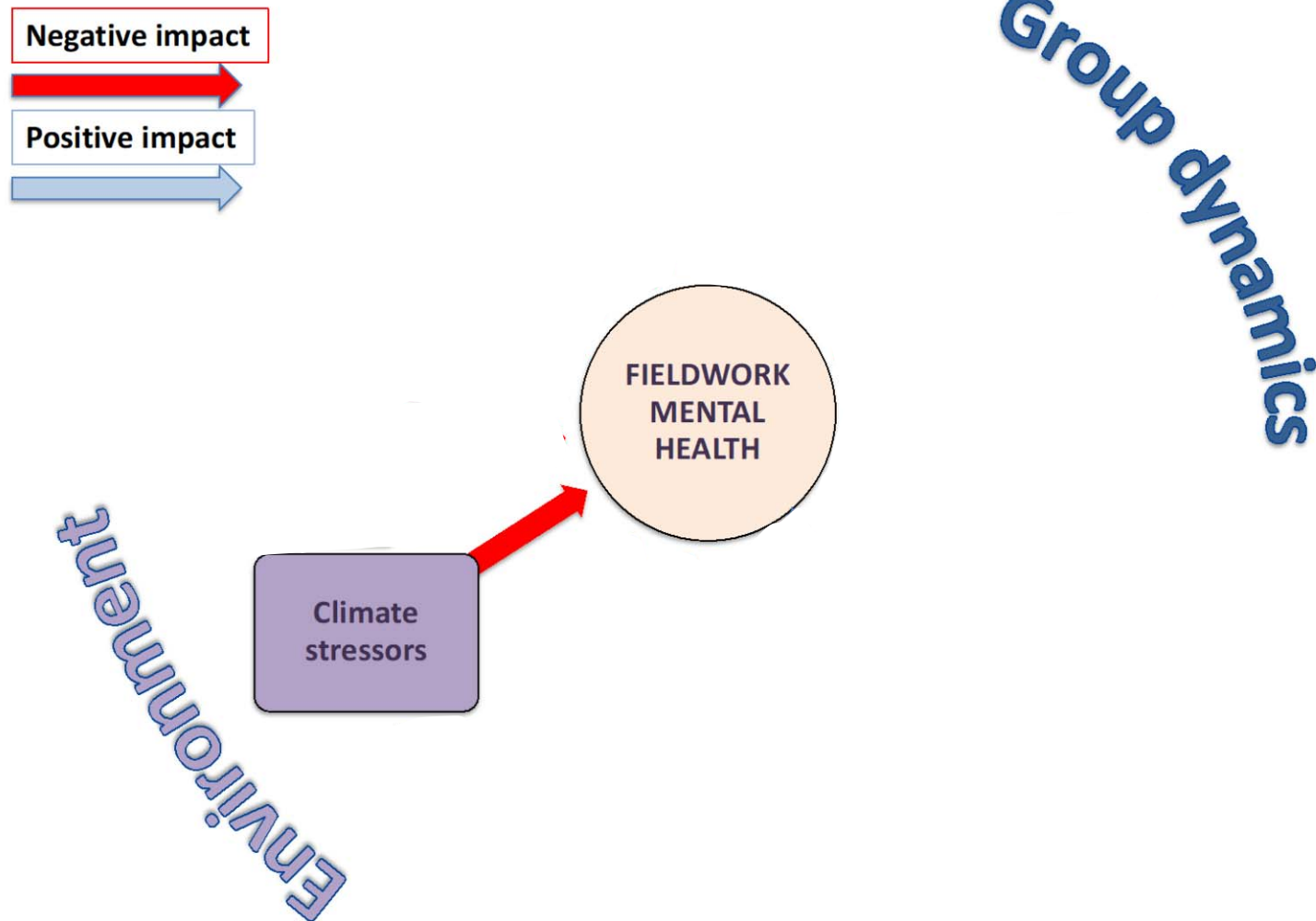
Group dynamics



Environment

John and Khan, 2018 (Nature)

Factors impacting mental health in the field



John and Khan, 2018 (Nature)

Field often is a harsh environment – need to adjust to it



The desert is a harsh environment – need to adjust to it



Too harsh for that guy!

Harsh Environment + Pressure to Perform = Challenge Ahead!

1. Fieldwork is expensive: tendency to want to “cram” more

2. Participants feel the pressure more than leaders

3. Pressure to perform can lead to stress and anxiety

4. For taught trips: assessment increases stress

5. For research trip: perceived or real need to perform and demonstrate competency (more = better)

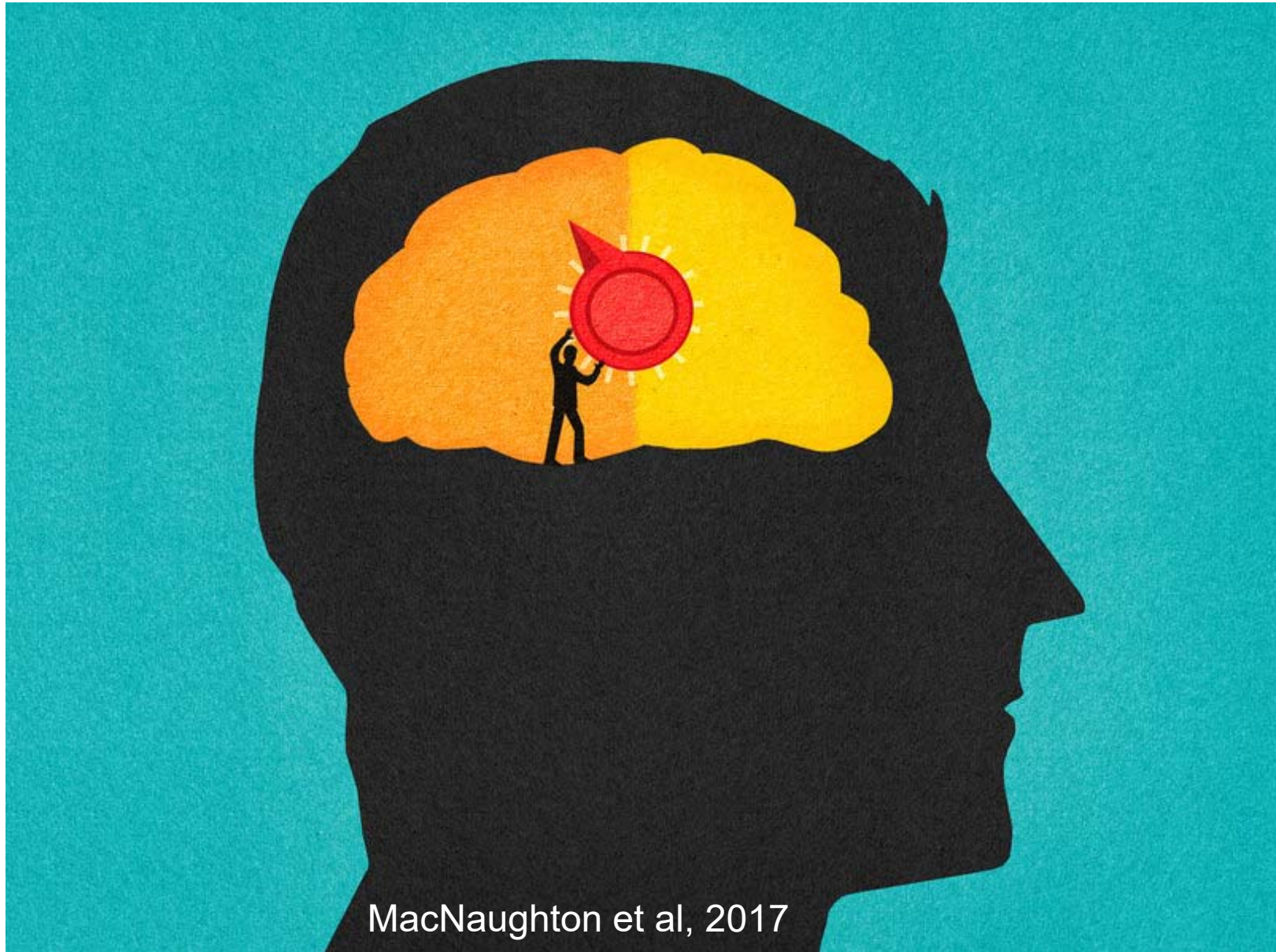




Tier of the Maslow Pyramid Impacted



Overheating can slow our thinking and muddle our thoughts



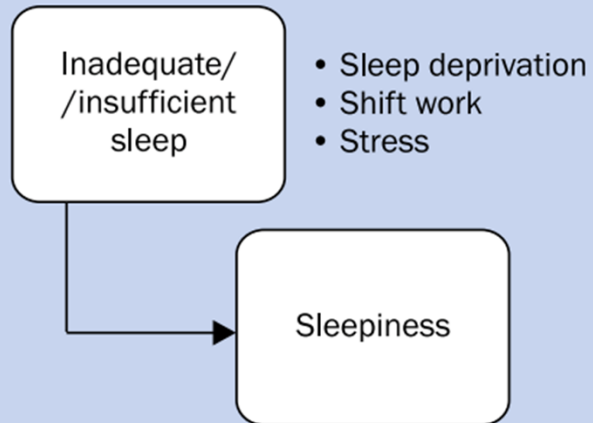
MacNaughton et al, 2017

Effect of exhaustion on physical and mental health

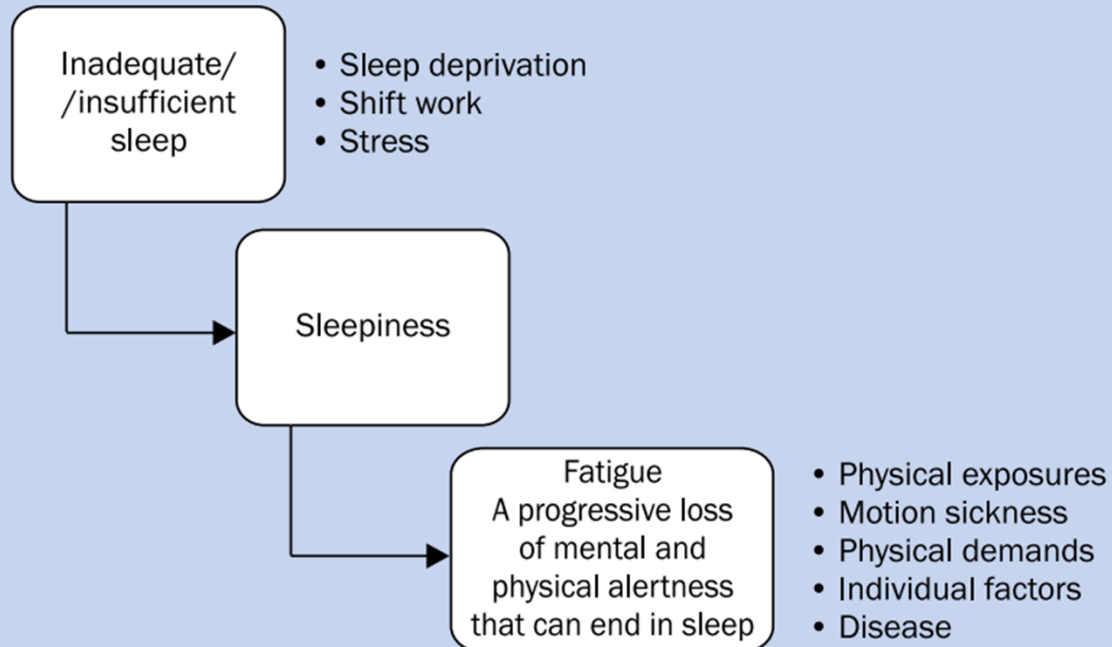
Inadequate/
/insufficient
sleep

- Sleep deprivation
- Shift work
- Stress

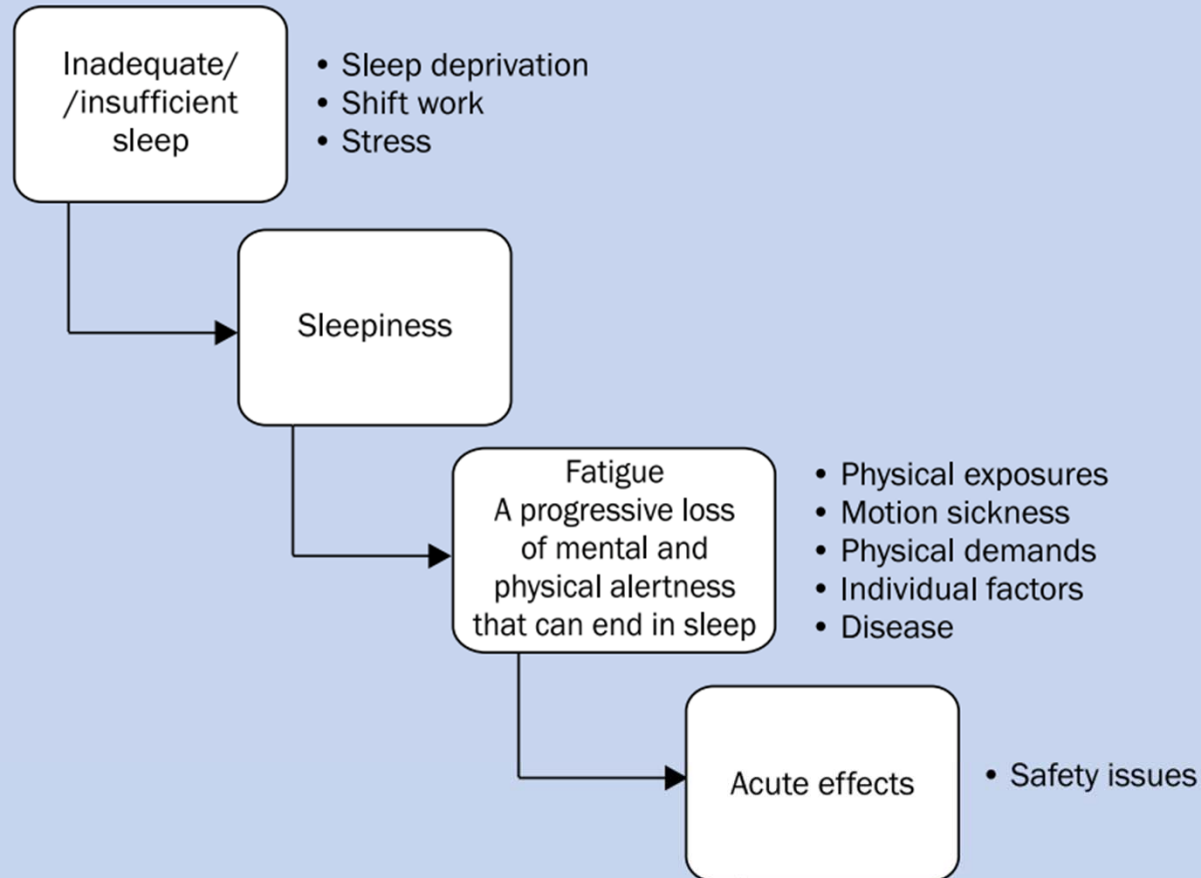
Effect of exhaustion on physical and mental health



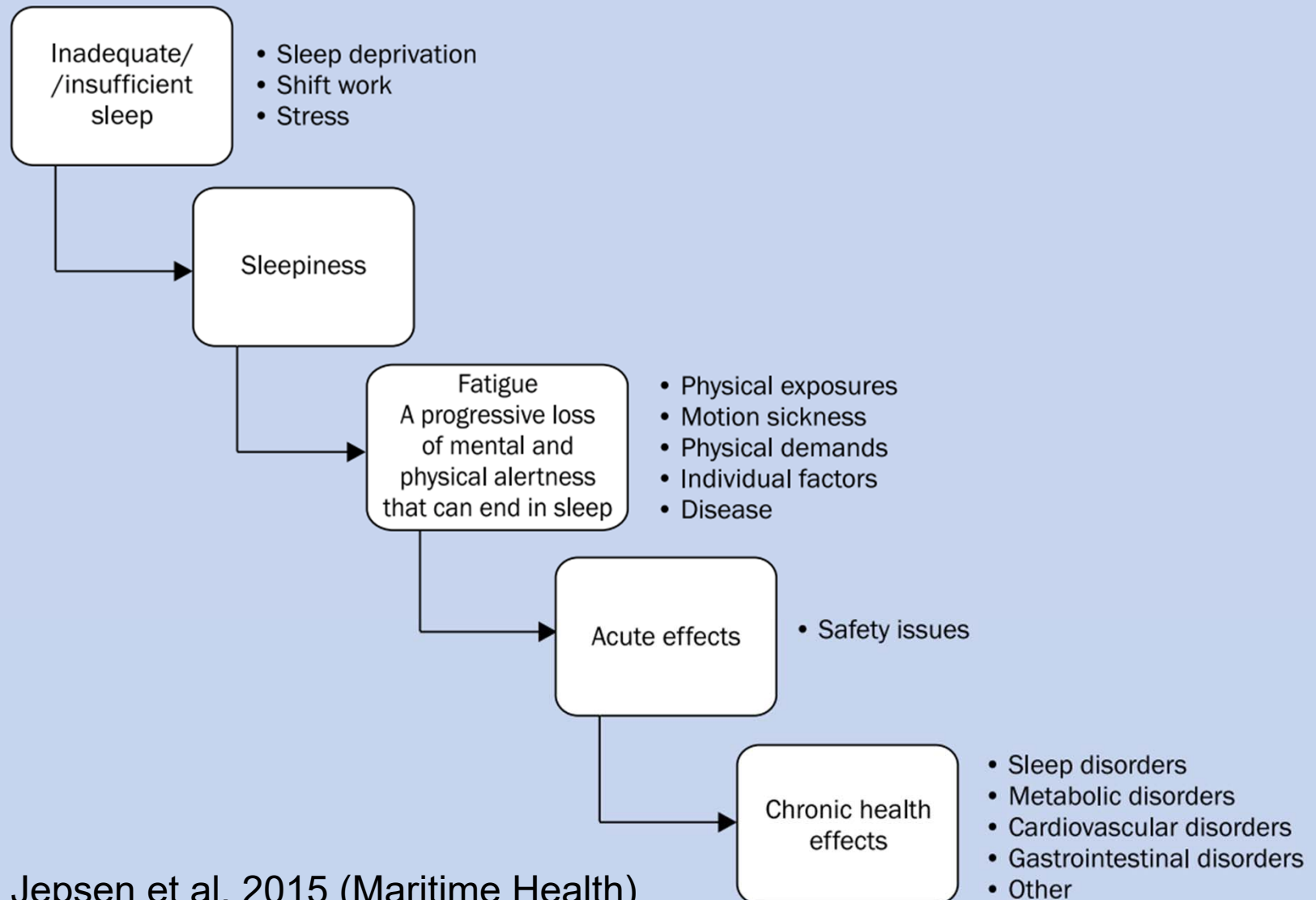
Effect of exhaustion on physical and mental health



Effect of exhaustion on physical and mental health

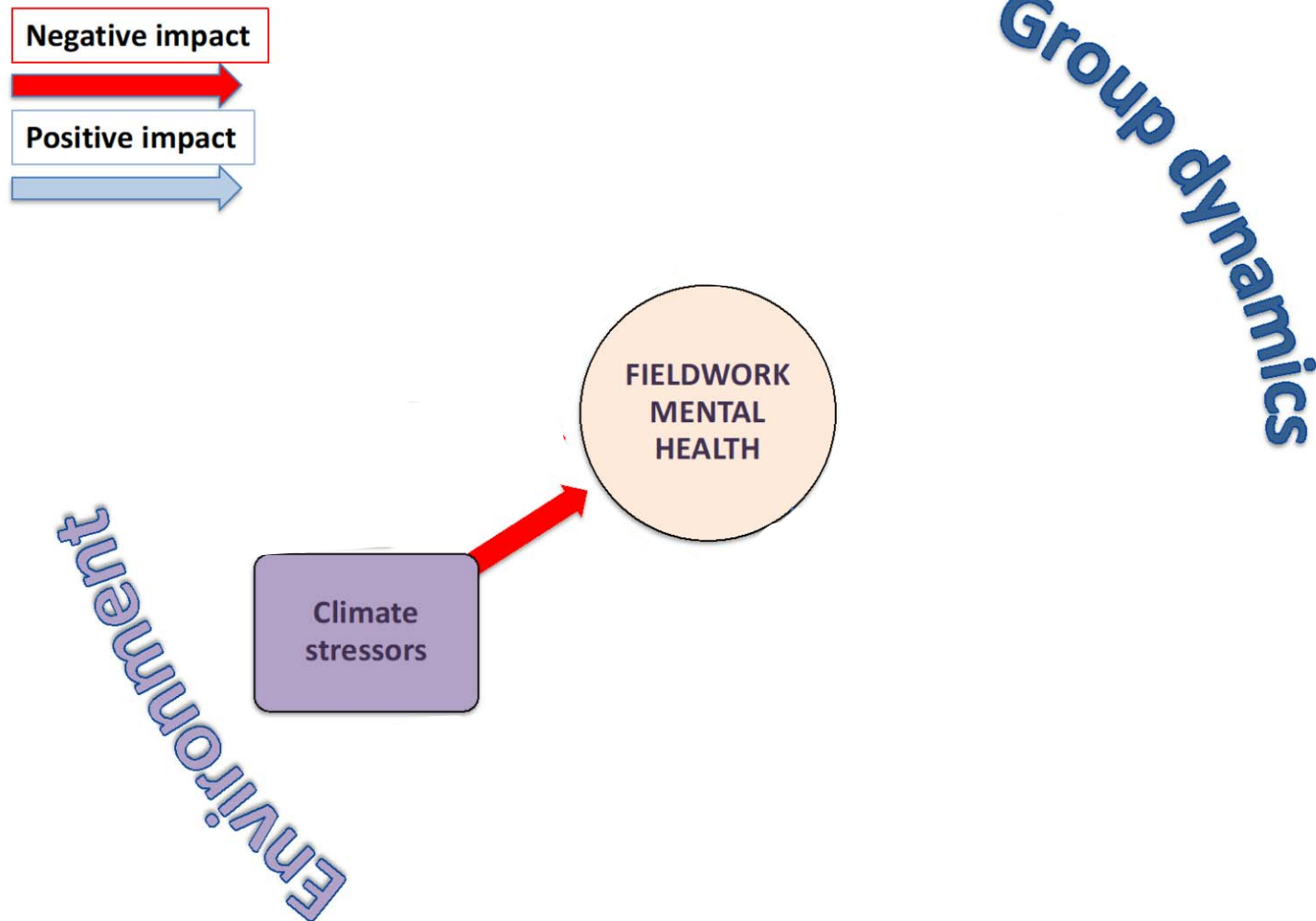


Effect of exhaustion on physical and mental health



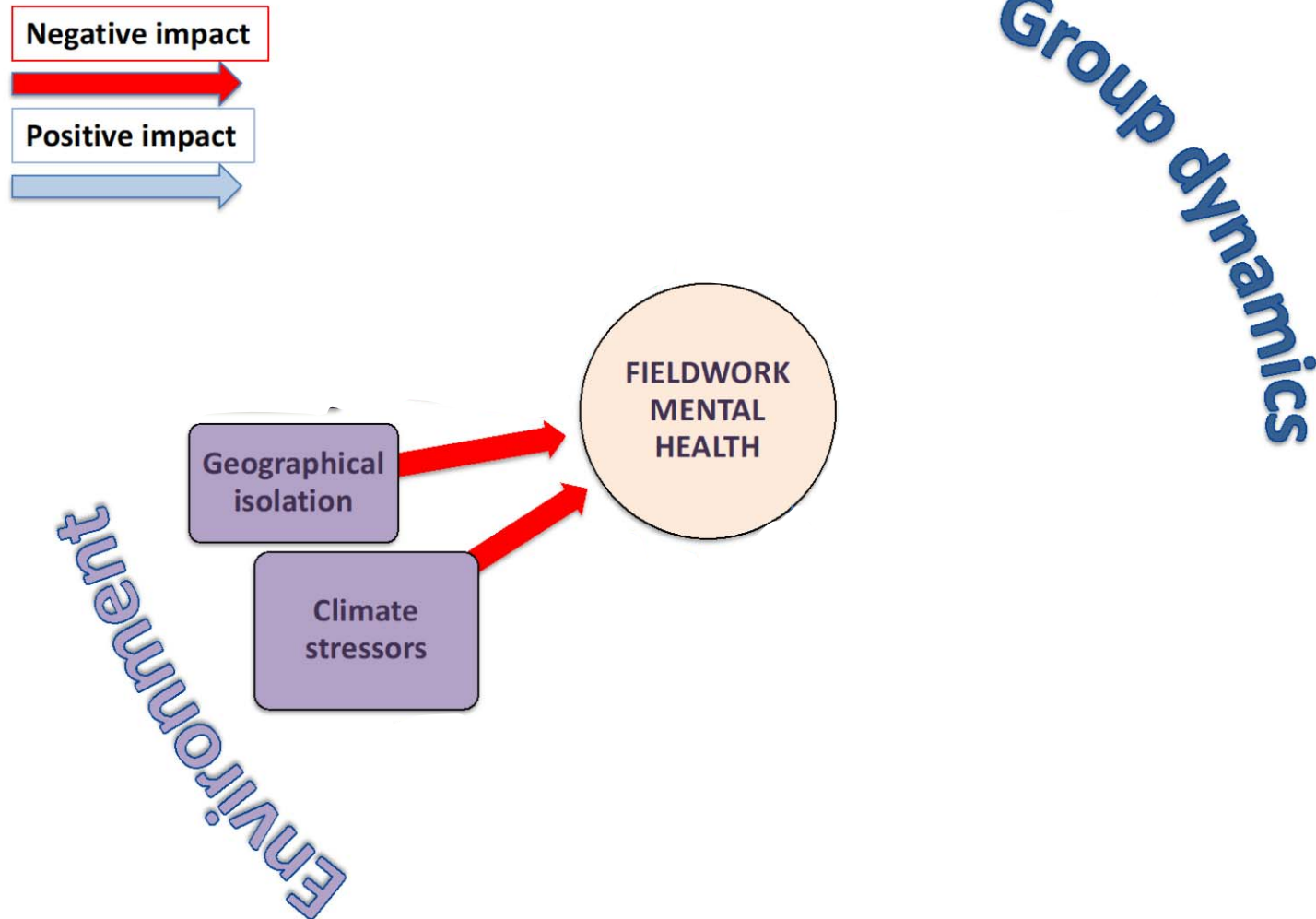
Jepsen et al, 2015 (Maritime Health)

Factors impacting mental health in the field



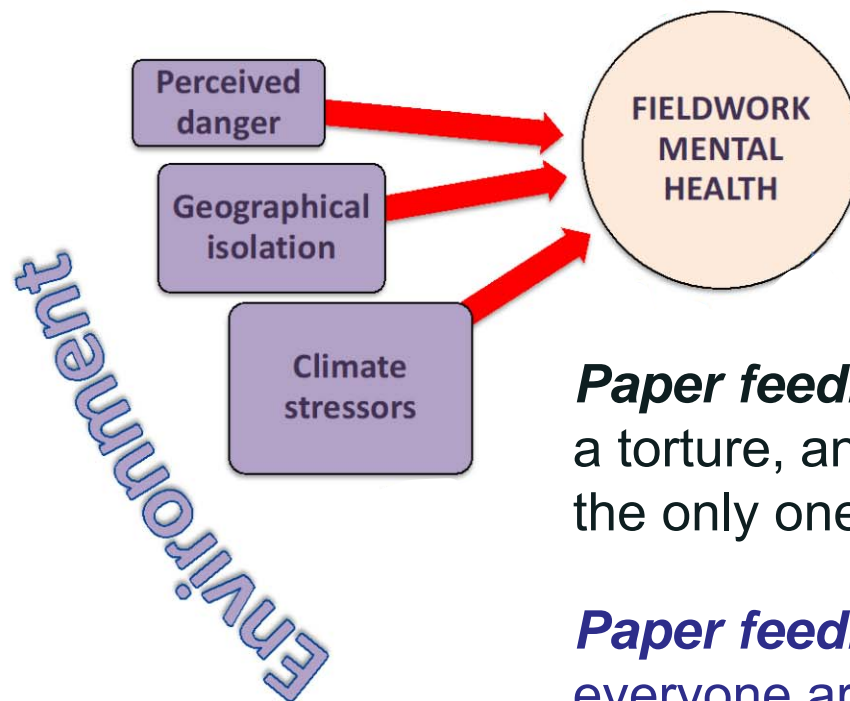
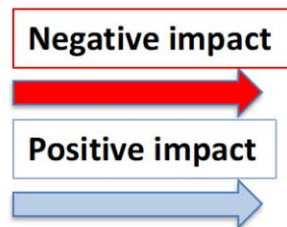
John and Khan, 2018 (Nature)

Factors impacting mental health in the field



John and Khan, 2018 (Nature)

Factors impacting mental health in the field



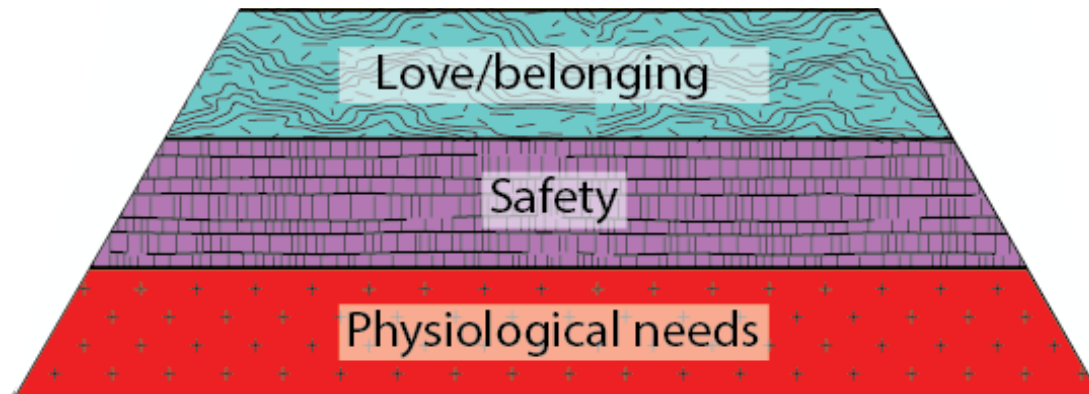
Paper feedback 1: "For me, fieldwork was a torture, and for decades I thought I was the only one who felt that way"

Paper feedback 2: "I felt like a fraud: everyone around me seemed to enjoy the experience, yet I was miserable"

John and Khan, 2018 (Nature)

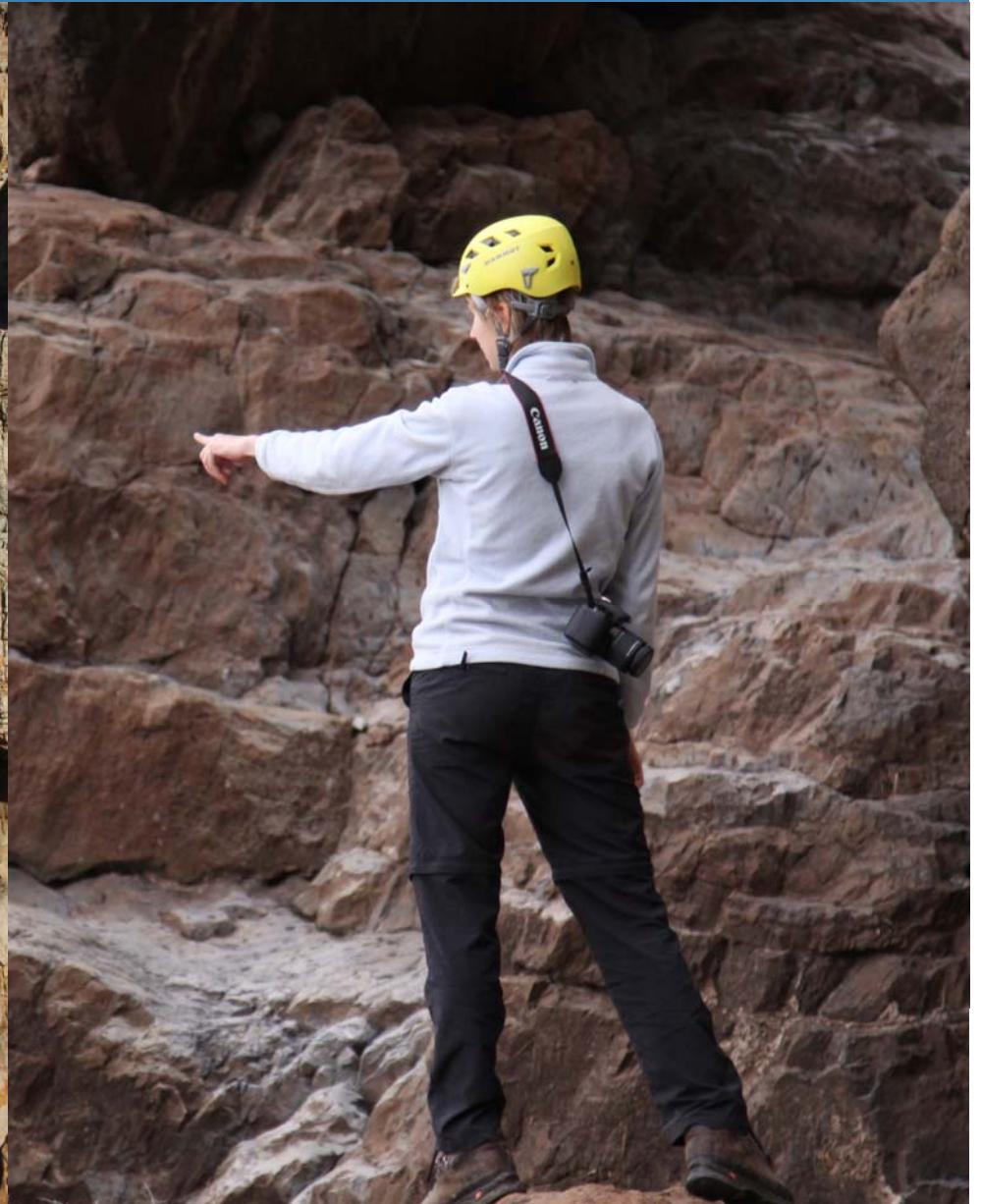


Tiers of the Maslow Pyramid Impacted





Most of the ground work done by small teams of PhD students



**A majestic, but very isolated landscape –
we are away from everyone**



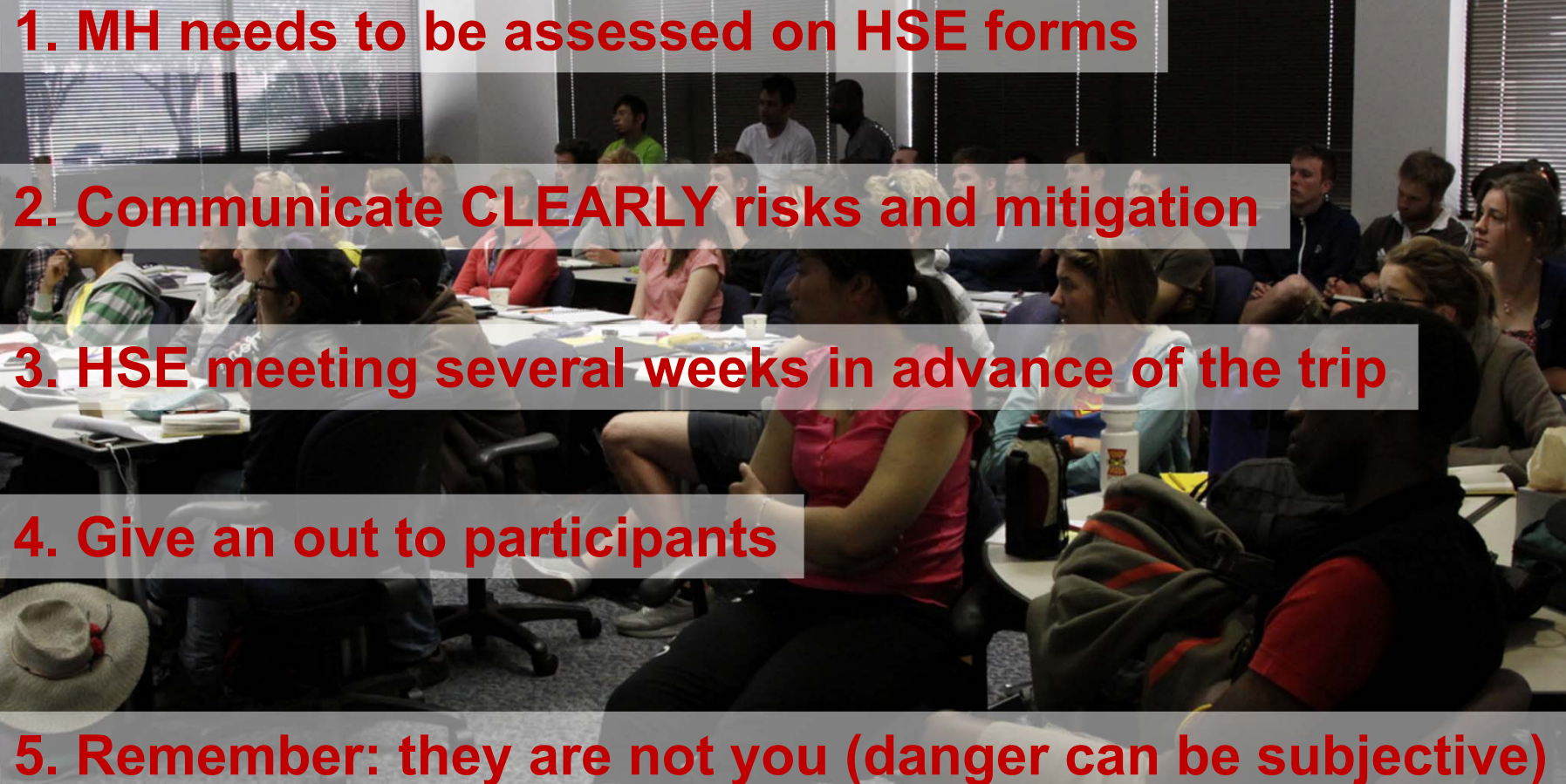
Small problems quickly become bigger problem – and you are aware of it



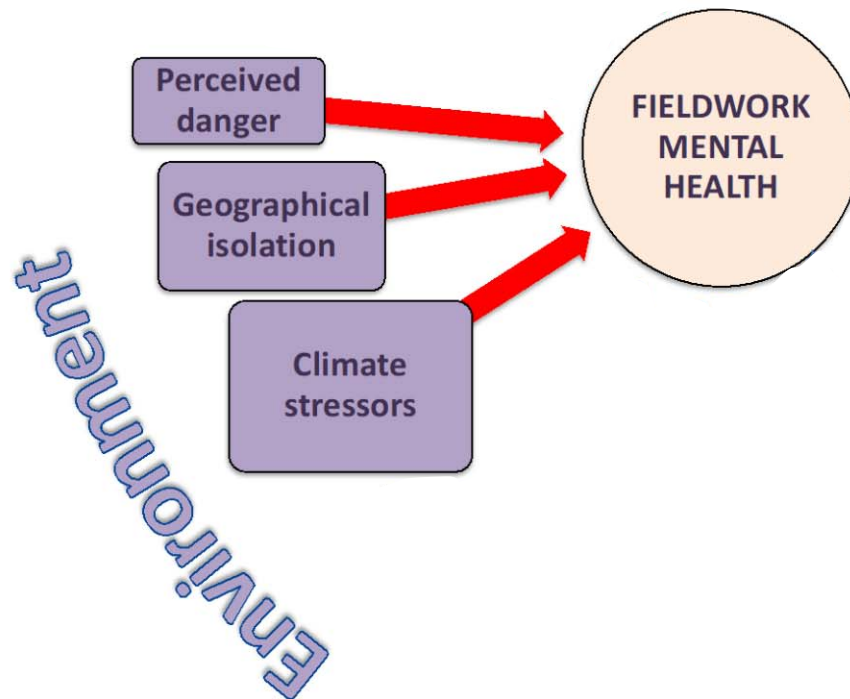
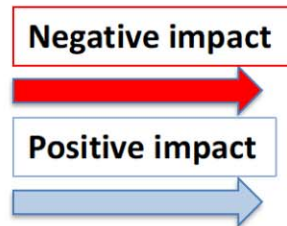
Feeling of isolation can impact mental well being

For very isolated field location, we had a satellite phone and the student was allowed to use it for personal calls

Perceived dangers

- 
1. MH needs to be assessed on HSE forms
 2. Communicate CLEARLY risks and mitigation
 3. HSE meeting several weeks in advance of the trip
 4. Give an out to participants
 5. Remember: they are not you (danger can be subjective)

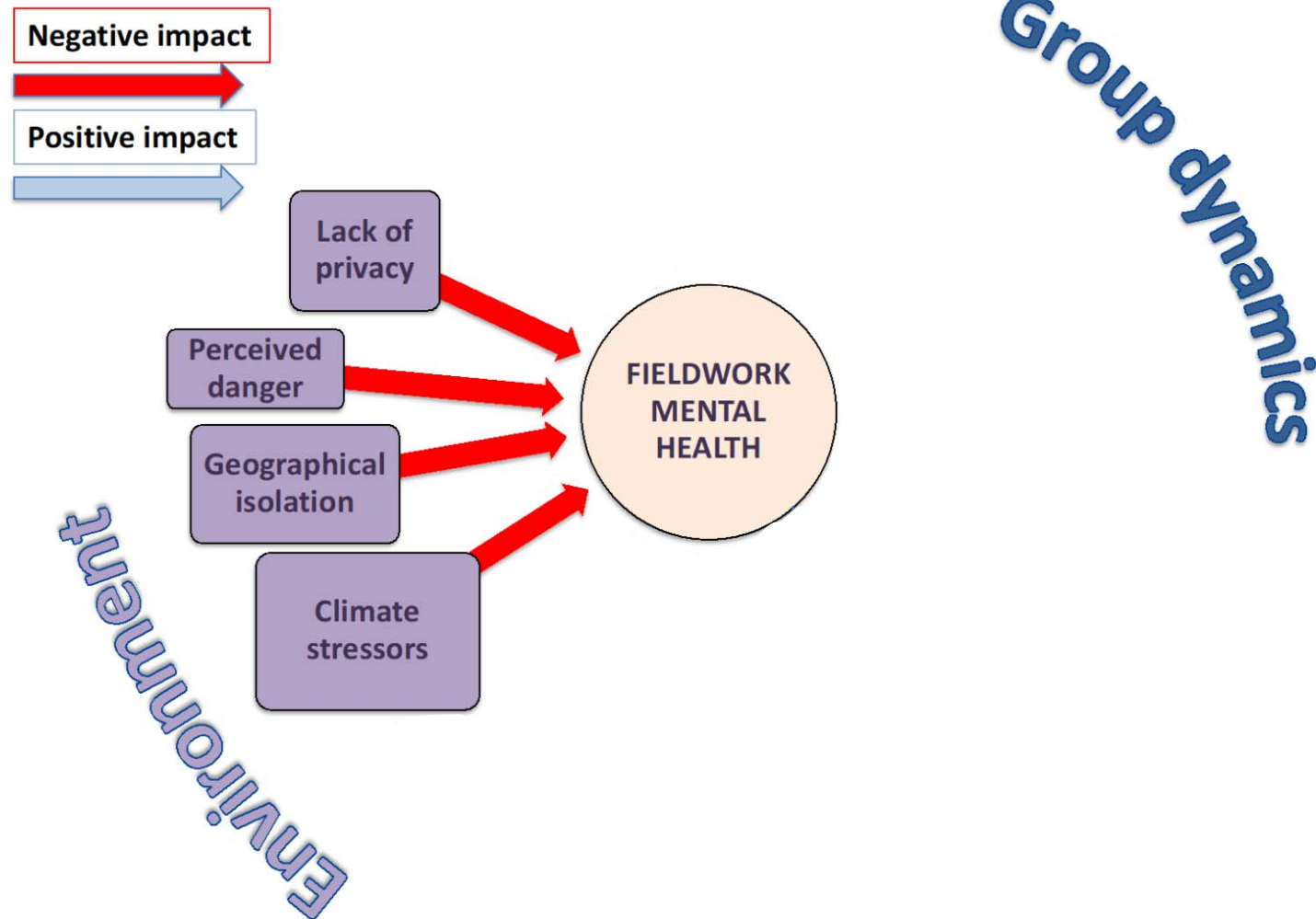
Factors impacting mental health in the field



Group dynamics

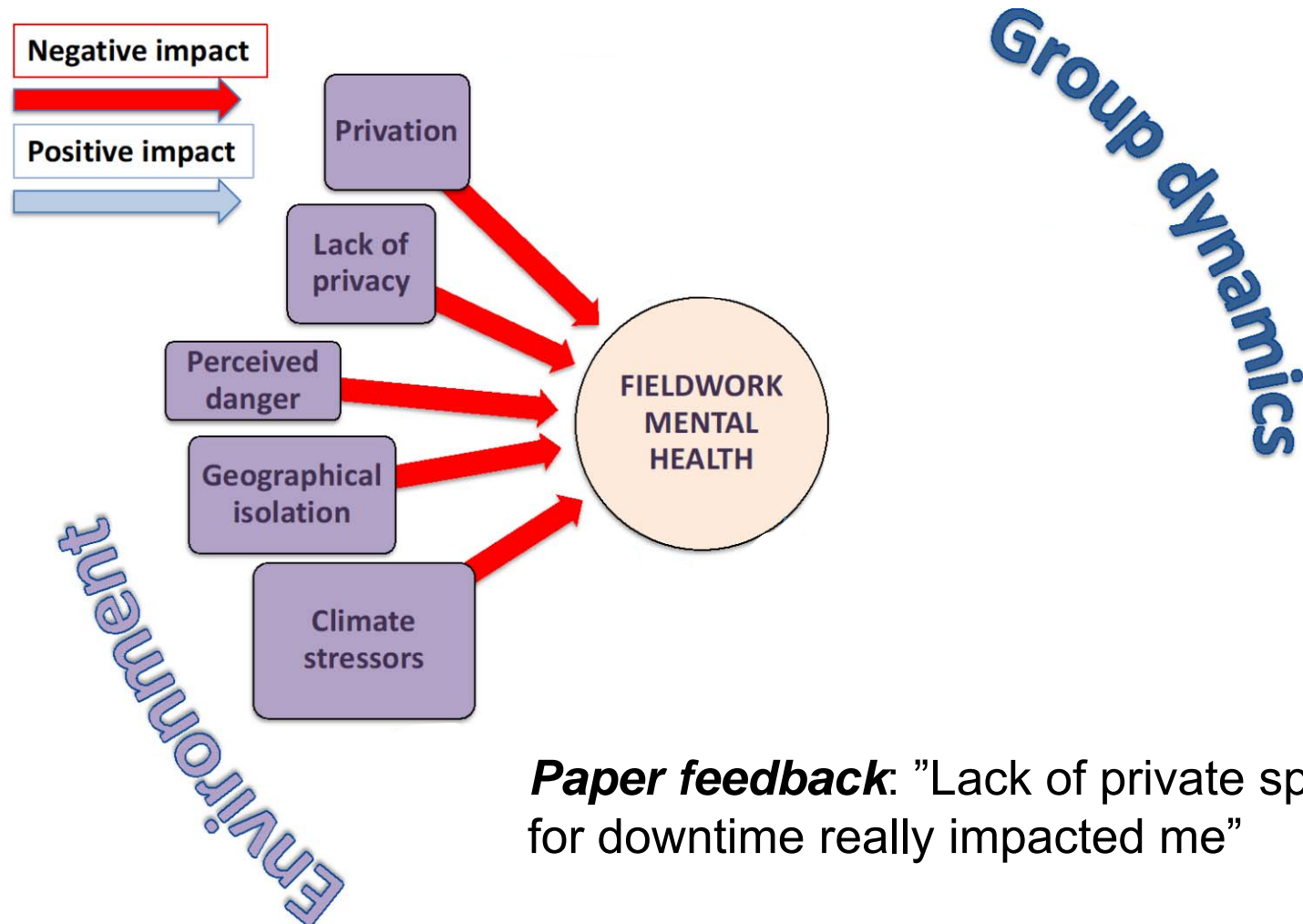
John and Khan, 2018 (Nature)

Factors impacting mental health in the field



John and Khan, 2018 (Nature)

Factors impacting mental health in the field

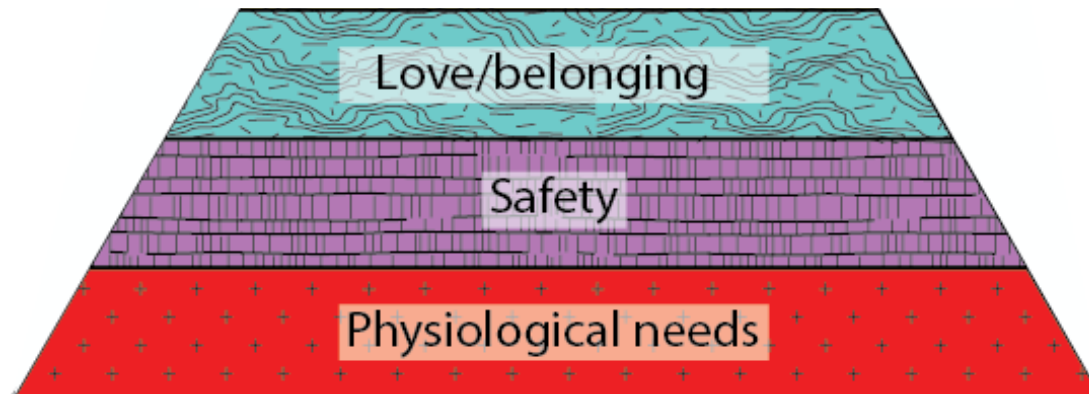


Paper feedback: "Lack of private space for downtime really impacted me"

John and Khan, 2018 (Nature)



Tiers of the Maslow Pyramid Impacted



Basic accommodation



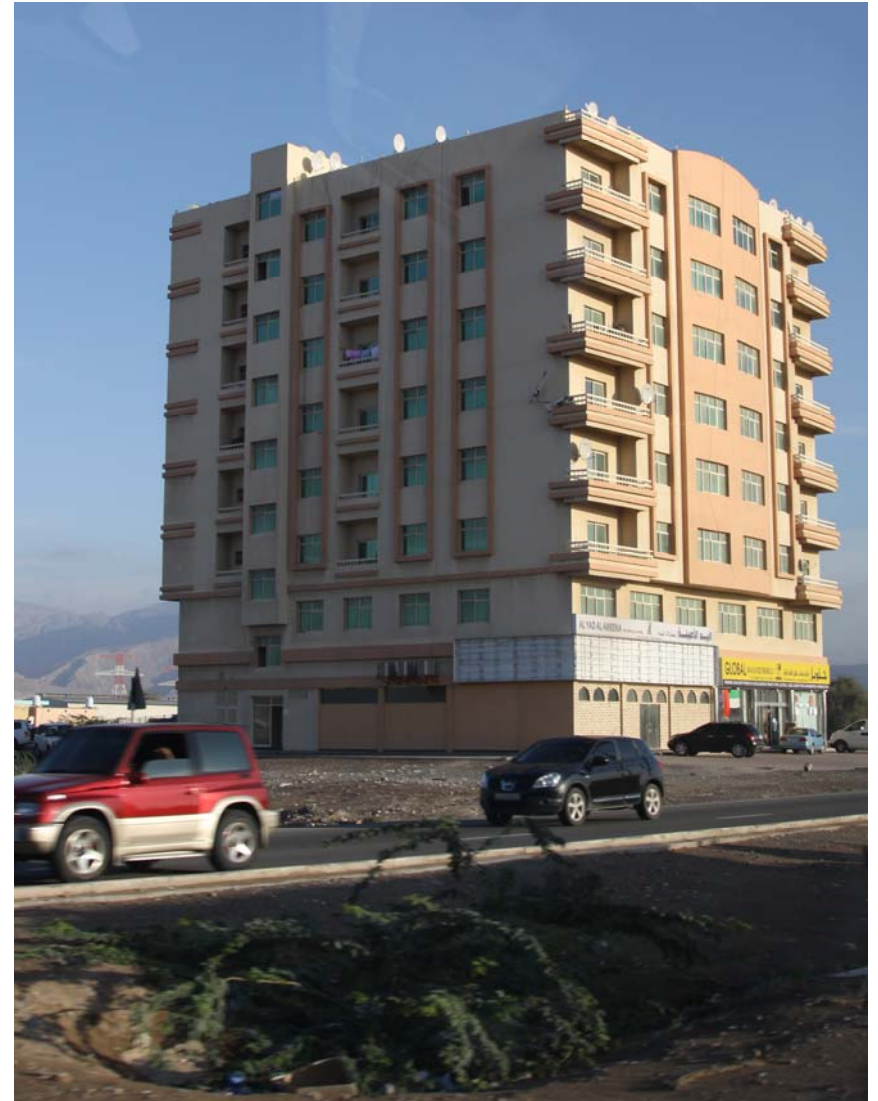
Lack of privacy and comfort often exacerbated on large taught field courses

1. Much larger team

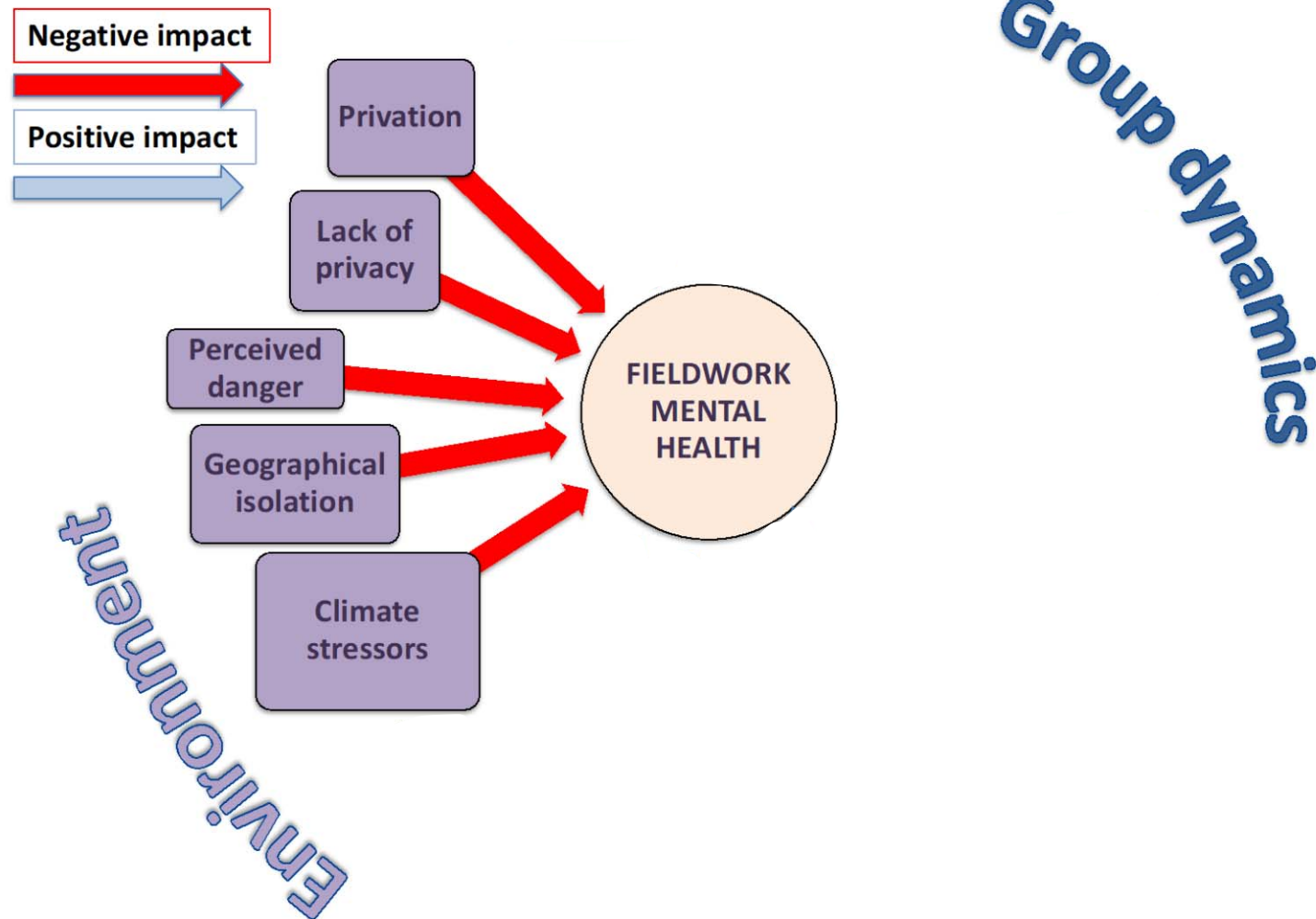
2. Complex logistic

3. Participants and team with various degrees of experience

If possible, choose lodging with good access to internet/phone and more rooms

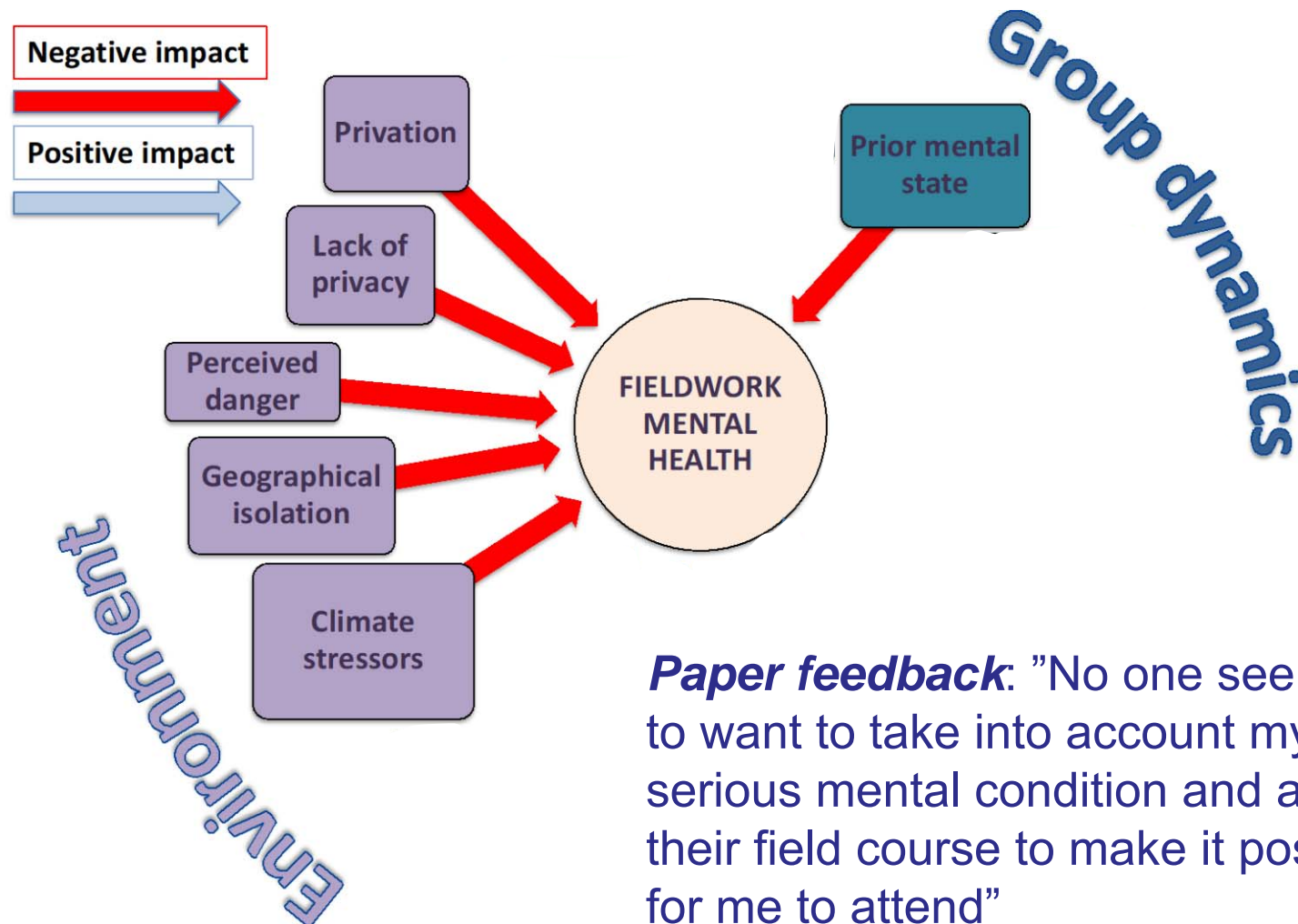


Factors impacting mental health in the field



John and Khan, 2018 (Nature)

Factors impacting mental health in the field



Paper feedback: "No one seemed to want to take into account my serious mental condition and adapt their field course to make it possible for me to attend"

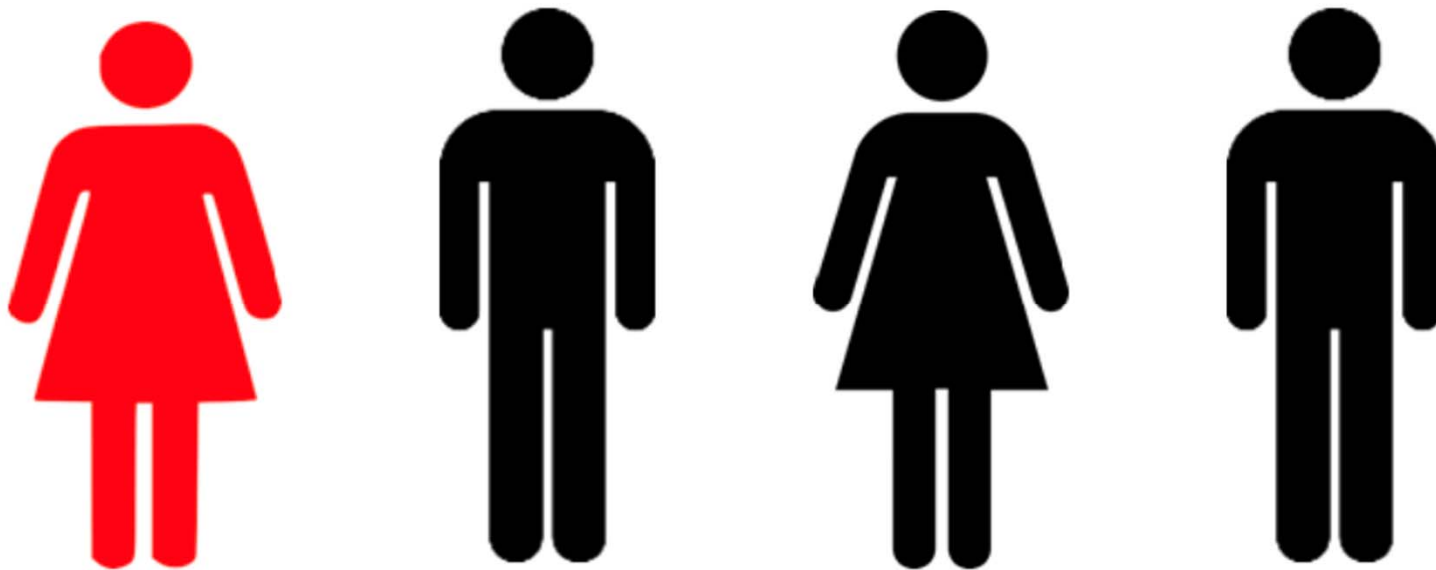
John and Khan, 2018 (Nature)

Physical Health vs Mental Health: Difference in Perception



Mental health: a prominent problem worldwide

1 in 4 people in the World will be affected by mental or neurological disorder at some point in their lives –World Health Organization



The continuum of mental health

SELF CARE & SOCIAL SUPPORT

PROFESSIONAL CARE

You Can Influence

Needs to be Managed with Participant

HEALTHY

Normal Functioning

Normal mood fluctuations.
Takes things in stride.
Consistent performance.
Normal sleep patterns.
Physically and socially active. Usual self-confidence
Comfortable with others.

REACTING

Common & Reversible Distress

Irritable/Impatient.
Nervousness, sadness, increased worrying.
Procrastination, forgetfulness. Trouble sleeping (more often in falling asleep) Lowered energy. Difficulty in relaxing. Intrusive thoughts.
Decreased social activity.

INJURED

Significant Functional Impairment

Anger, anxiety. Lingering sadness, tearfulness, hopelessness, worthlessness.
Preoccupation. Decreased performance in academics or at work. Significantly disturbed sleep (falling asleep and staying asleep).
Avoidance of social situations, withdrawal.

ILL

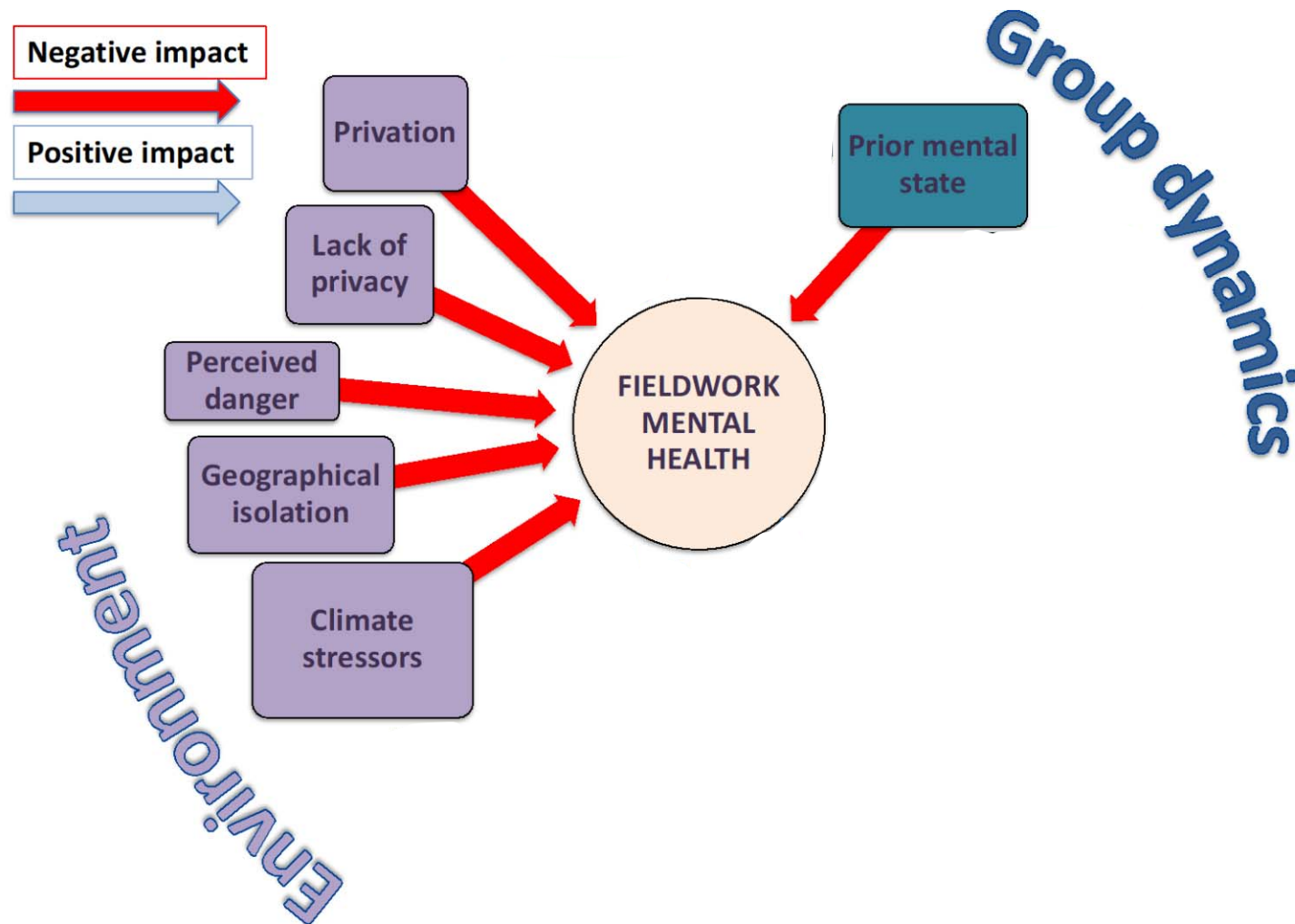
Clinical Disorder. Severe & Persistent Functional Impairment.

Significant difficulty with emotions, thinking High level of anxiety, Panic attacks. Depressed mood, feeling overwhelmed Constant fatigue. Disturbed contact with reality Significant disturbances in thinking Suicidal thoughts/intent/behaviour.

Solution to dealing with prior mental health state

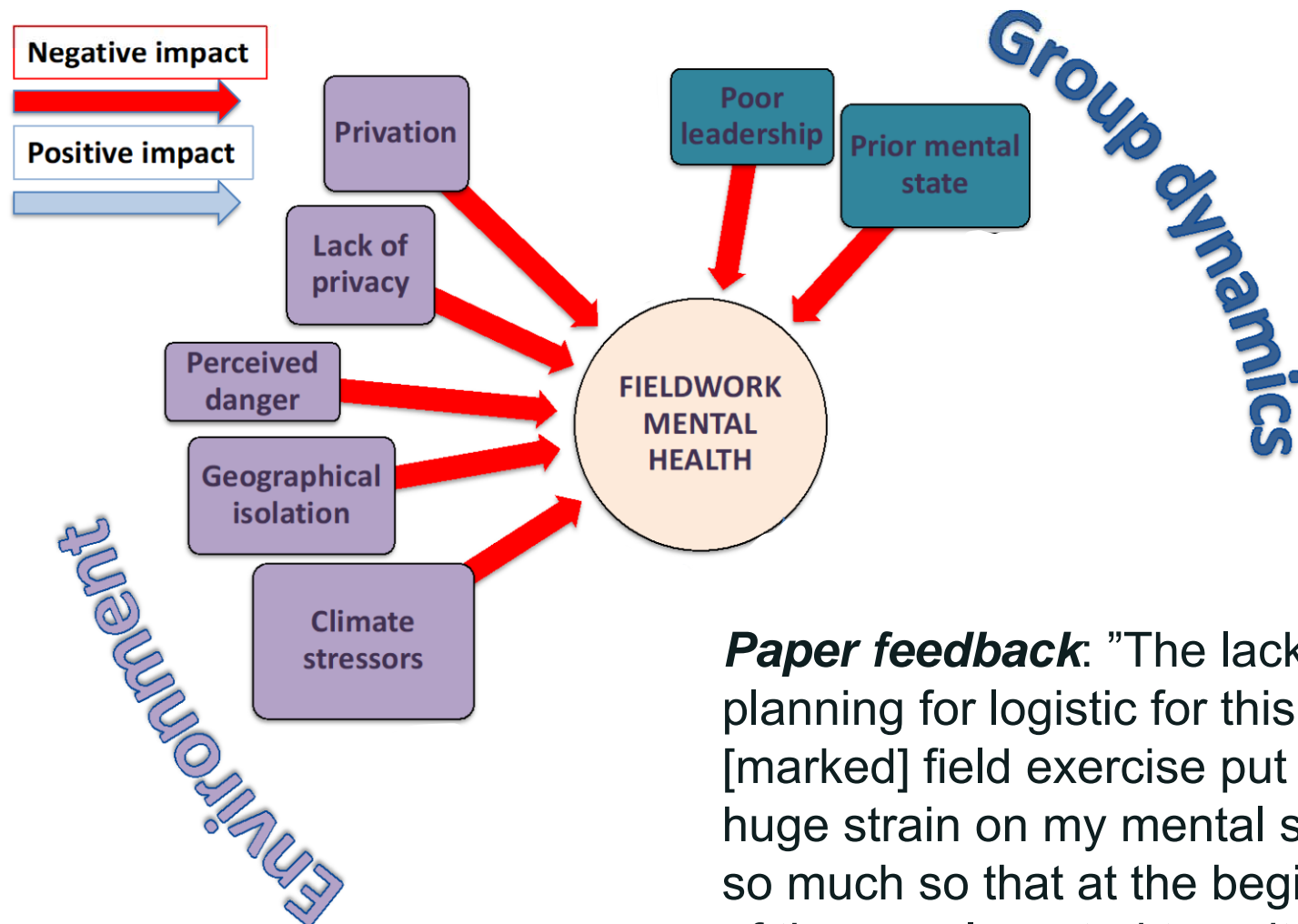
1. Collate prior experience of field participants
2. Ask about overcoming challenges and breakpoints
3. Designate a go to person for wellbeing (including MH)
4. Listen without judgement – Create an Individual Plan

Factors impacting mental health in the field



John and Khan, 2018 (Nature)

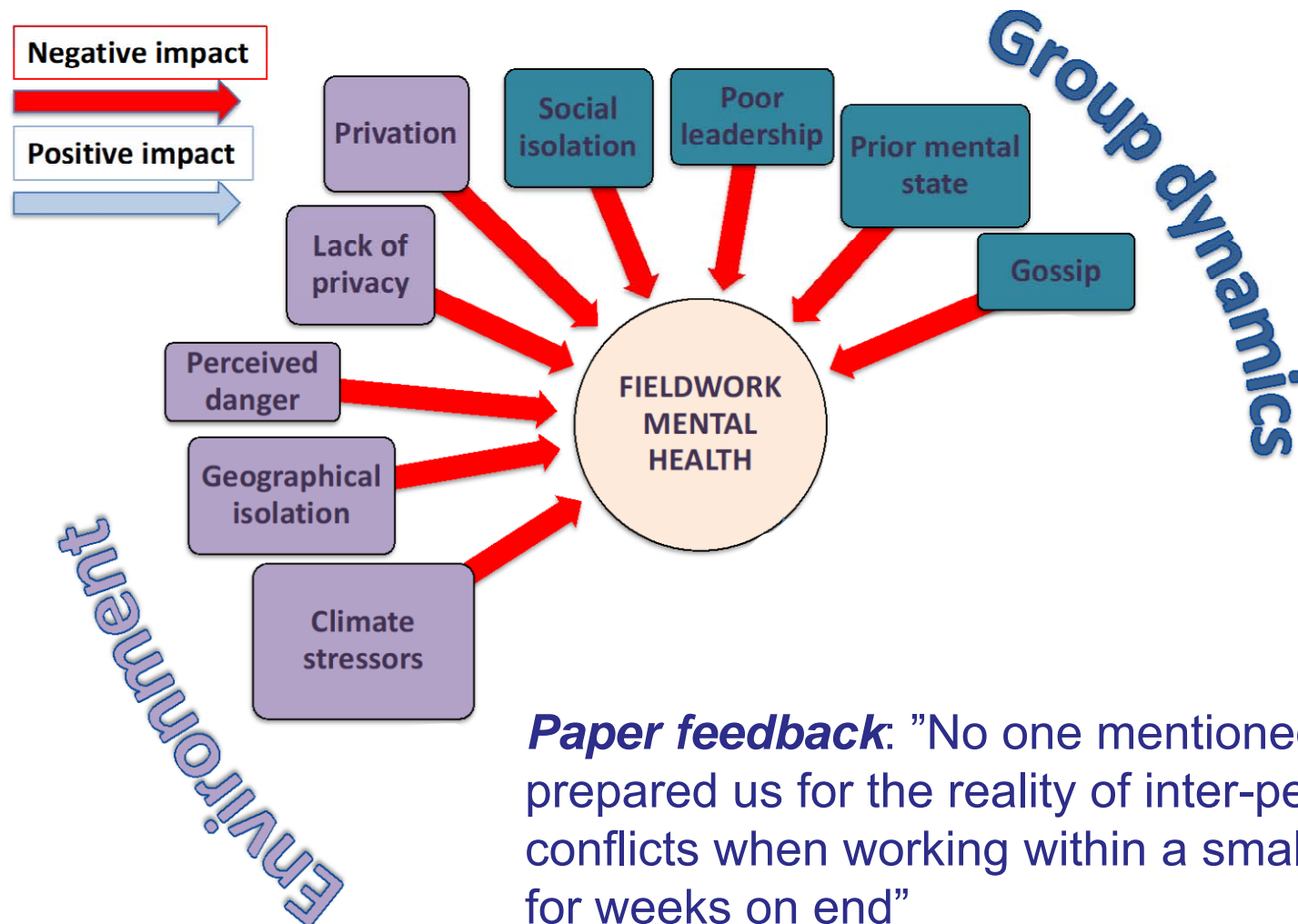
Factors impacting mental health in the field



John and Khan, 2018 (Nature)

Paper feedback: "The lack of planning for logistic for this [marked] field exercise put a huge strain on my mental state: so much so that at the beginning of the year I wanted to quit my degree"

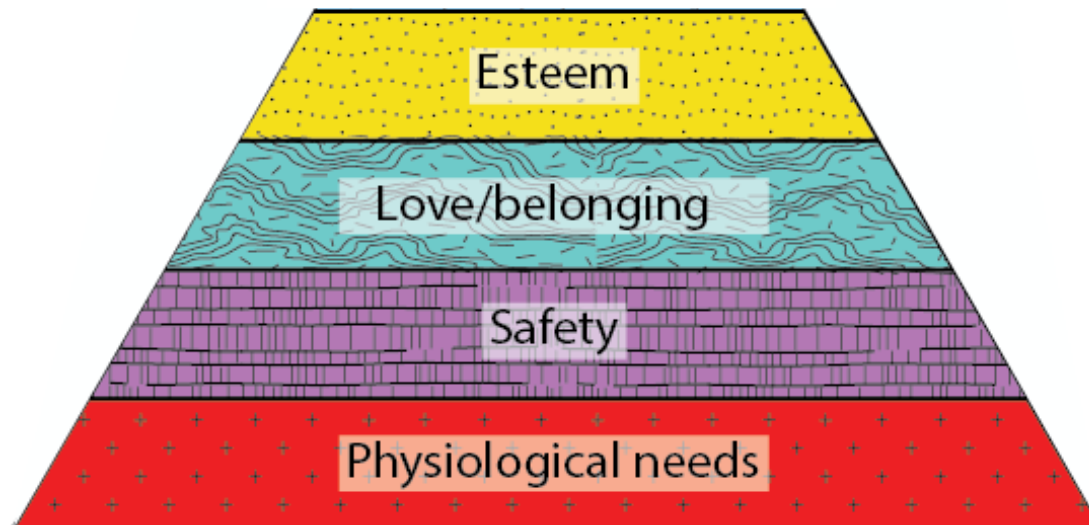
Factors impacting mental health in the field



Paper feedback: "No one mentioned or prepared us for the reality of inter-personal conflicts when working within a small team for weeks on end"

John and Khan, 2018 (Nature)

Tiers of the Maslow Pyramid Impacted



Lead by example – promote a culture of inclusivity and a no-tolerance for poor behaviour



Example in practice: Master Level course in the Sultanate of Oman

1. 6-7 days field course is a lot of work - weariness

2. Trip in the Middle East: foreign culture and food

3. Difficult terrain, off roads

4. Very different individual (>18 nationalities)

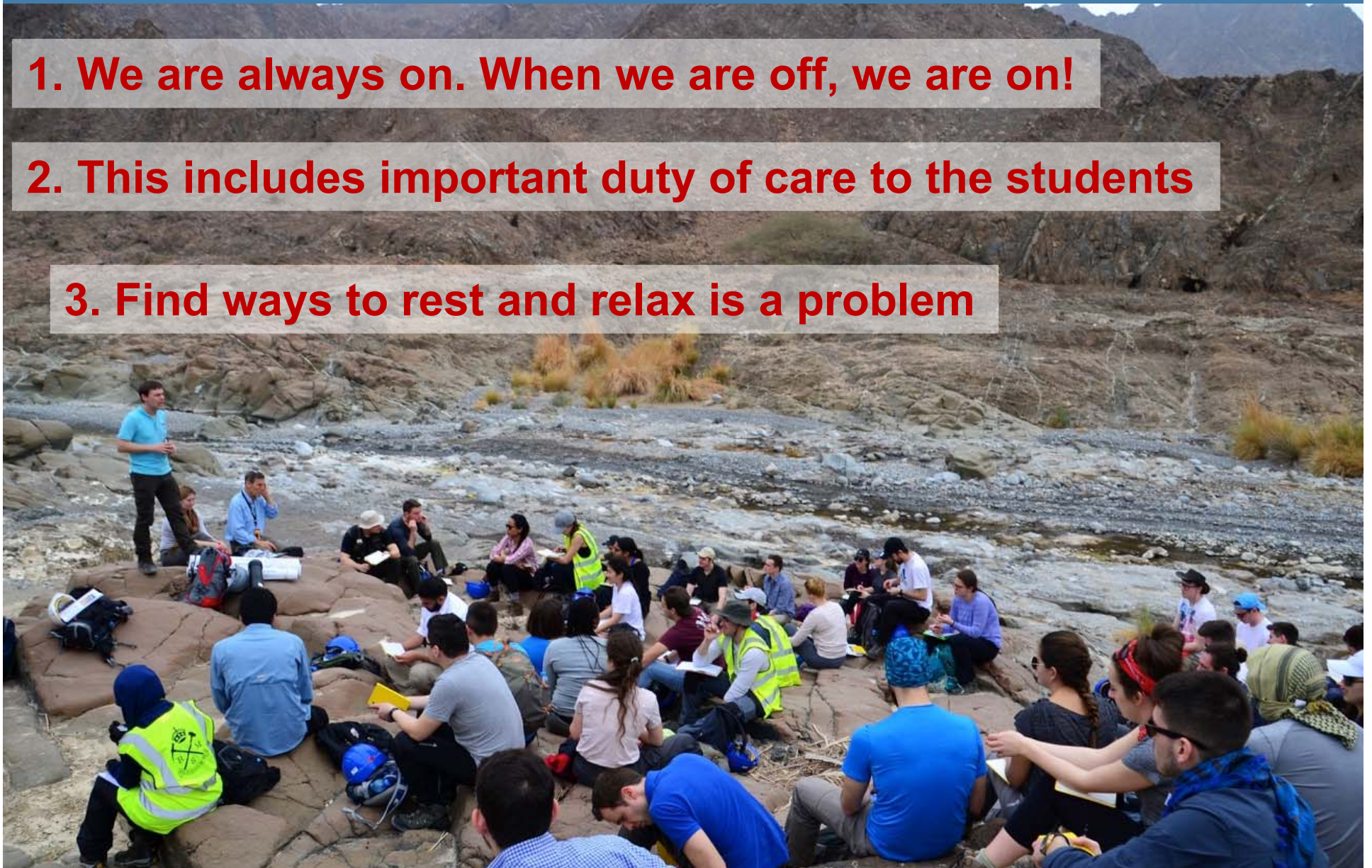


Put yourself in the picture: Potential impact on the leaders mental well being

1. We are always on. When we are off, we are on!

2. This includes important duty of care to the students

3. Find ways to rest and relax is a problem



Some of our solutions

1. Logistic is outsourced to a professional company

2. This includes transportation, food, lodging

3. HSE rules are very strict, all participants are aware of them and reminded during the trip

4. We have a lot of experience with the country (> 10 years research) and know their health system



Some of our solutions

5. We promote a culture of inclusion, lead by example

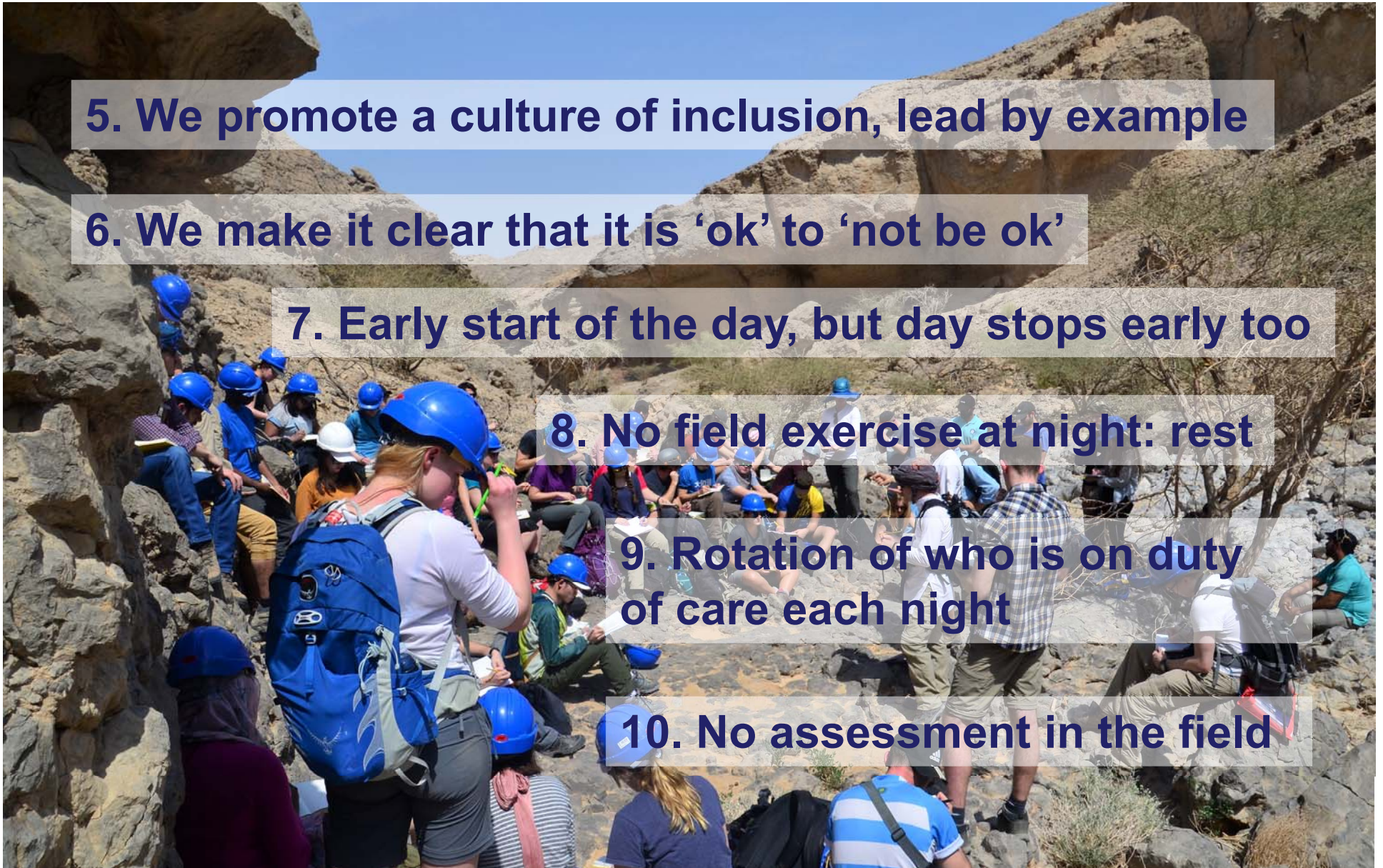
6. We make it clear that it is 'ok' to 'not be ok'

7. Early start of the day, but day stops early too

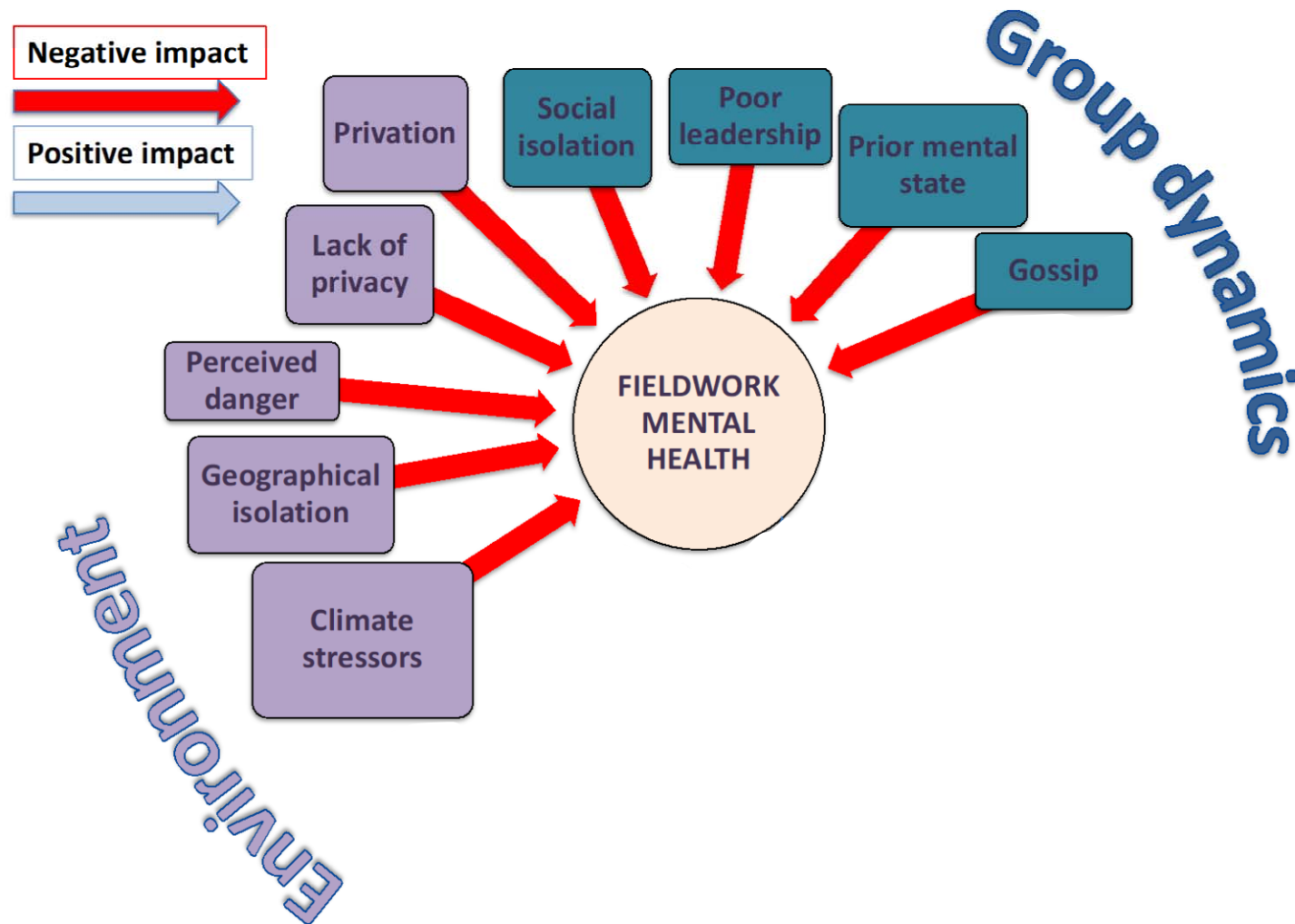
8. No field exercise at night: rest

9. Rotation of who is on duty of care each night

10. No assessment in the field

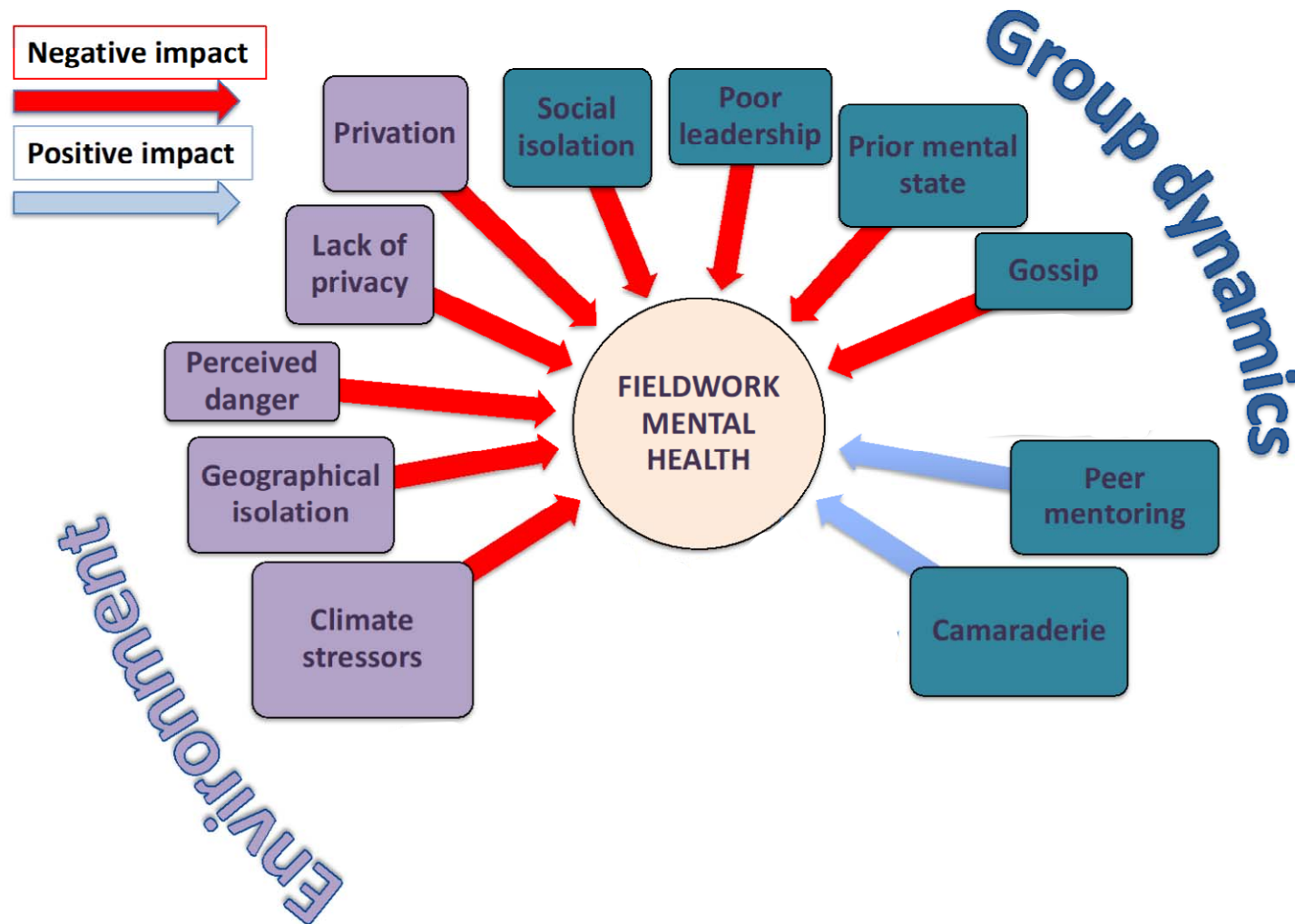


Factors impacting mental health in the field



John and Khan, 2018 (Nature)

Factors impacting mental health in the field



John and Khan, 2018 (Nature)

Teamwork is essential – especially for small research teams

A great team spirit is a big help

We changed team mates every week to avoid interpersonal problems

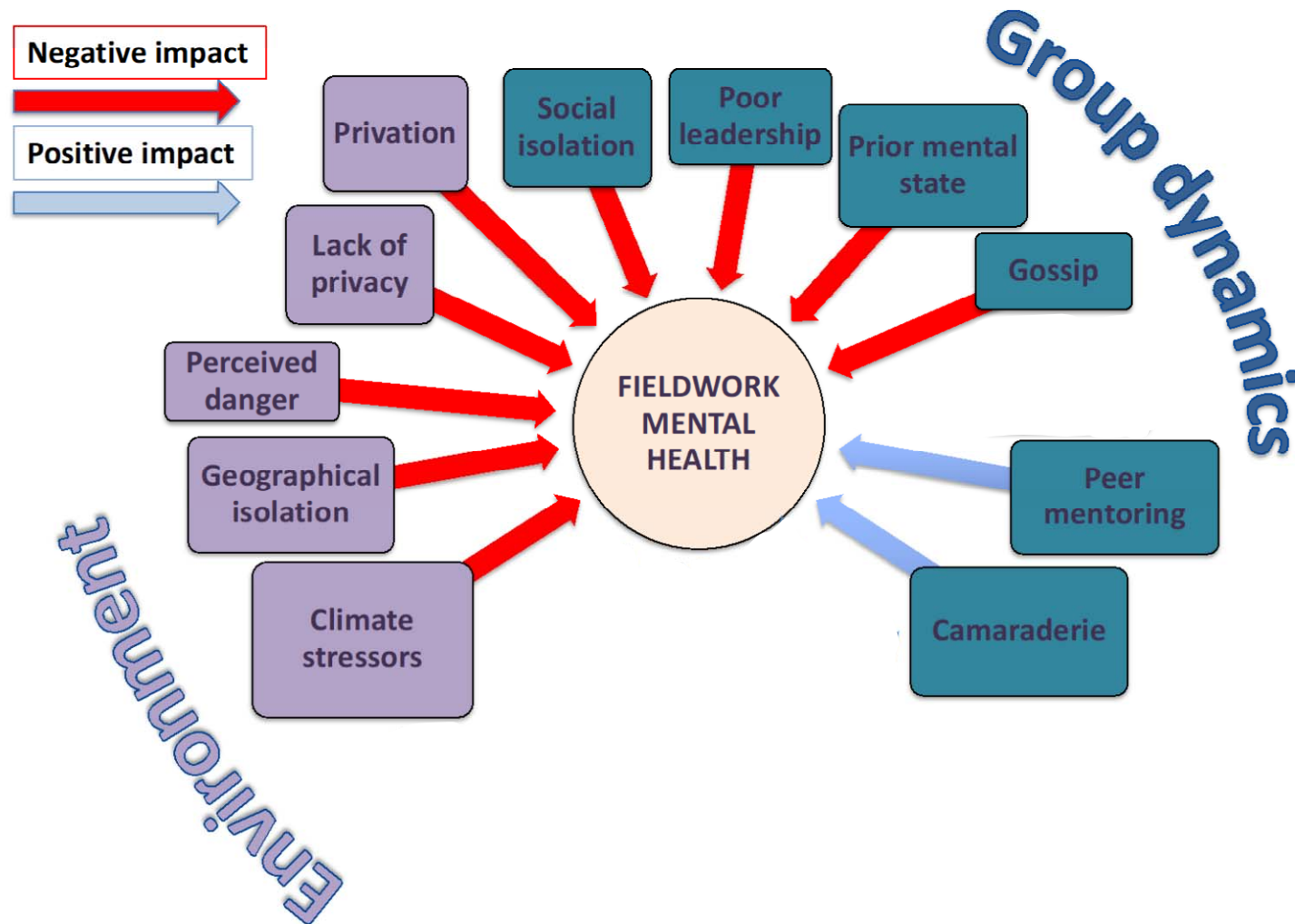
Students could choose their team mates



Fun and social activities have a serious function too!

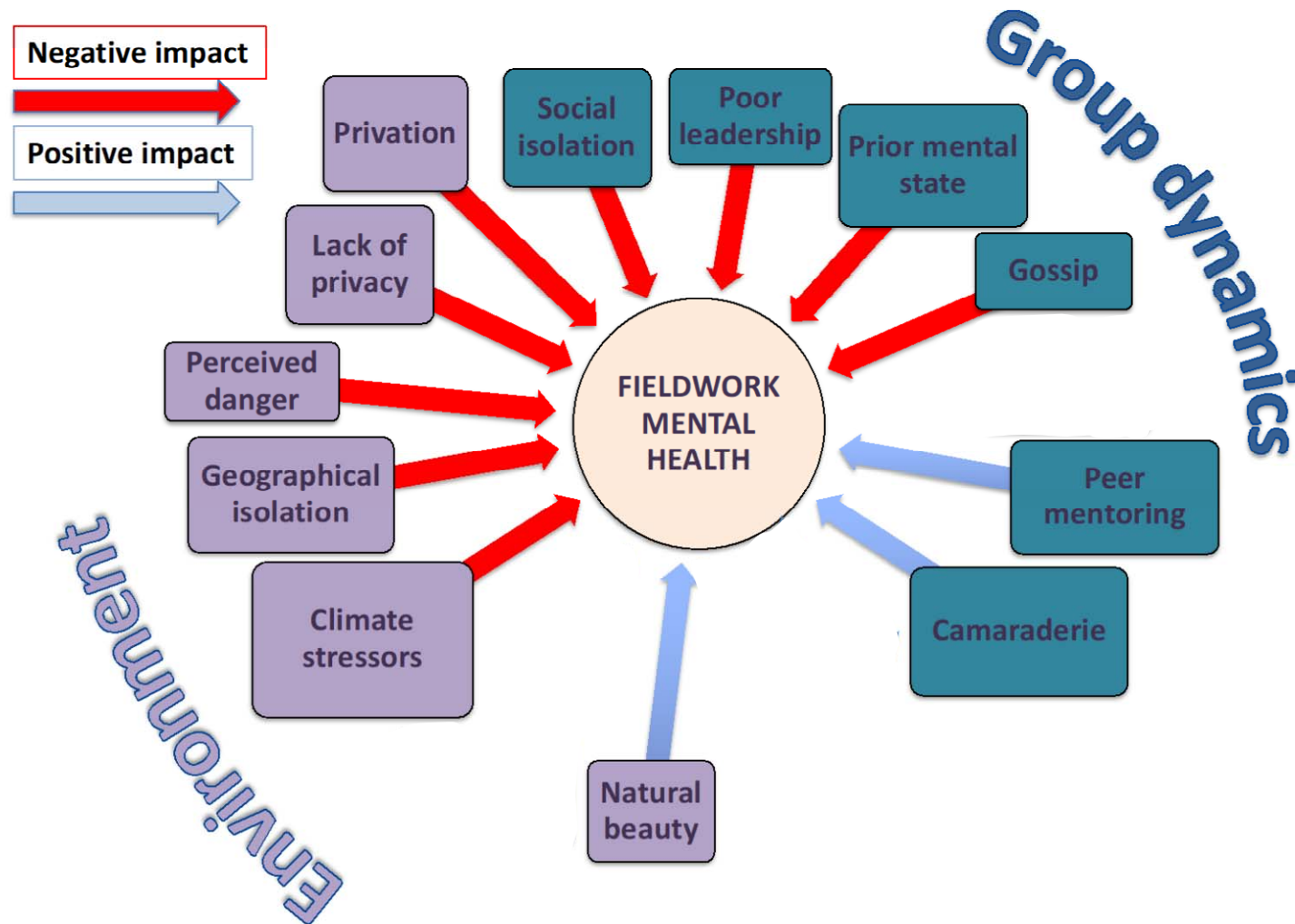


Factors impacting mental health in the field



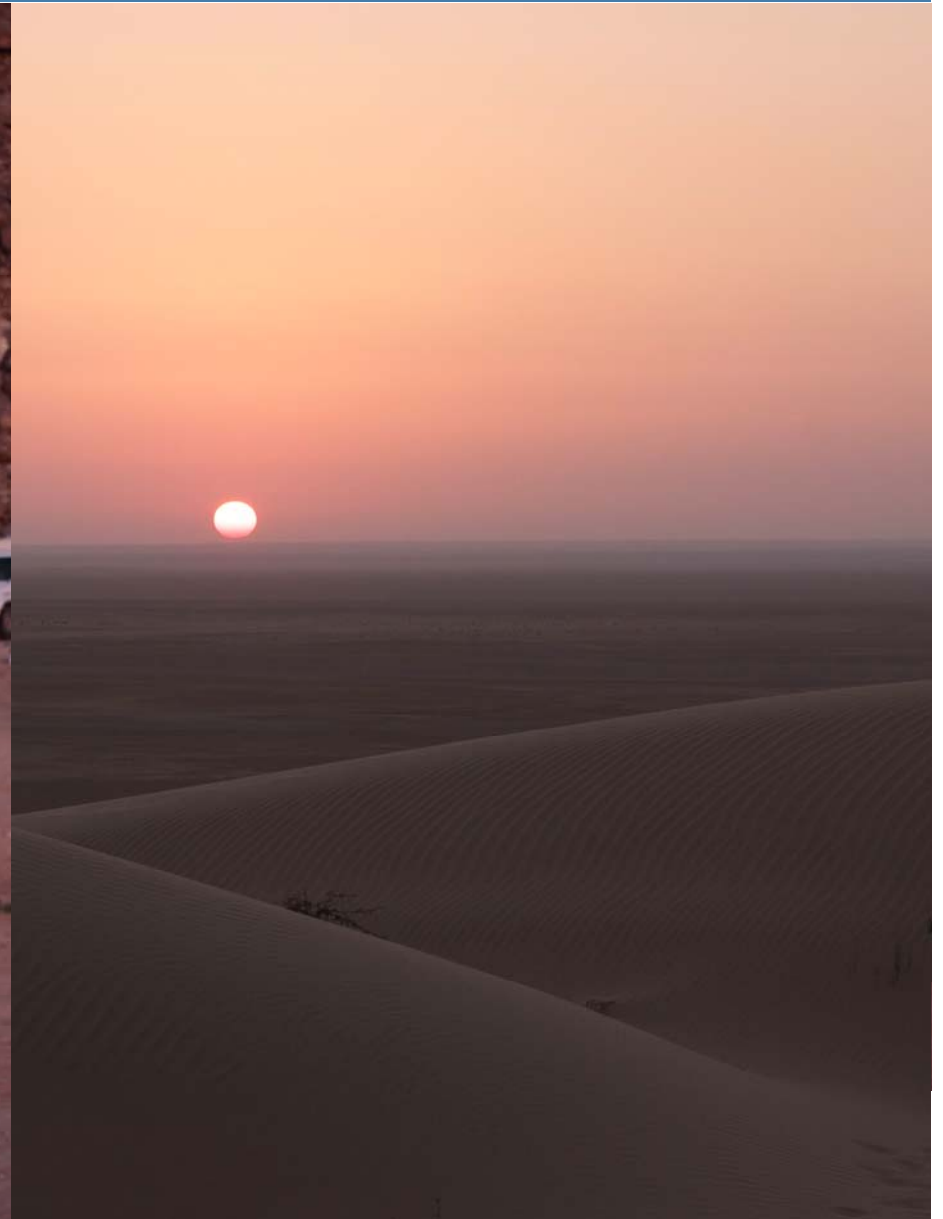
John and Khan, 2018 (Nature)

Factors impacting mental health in the field

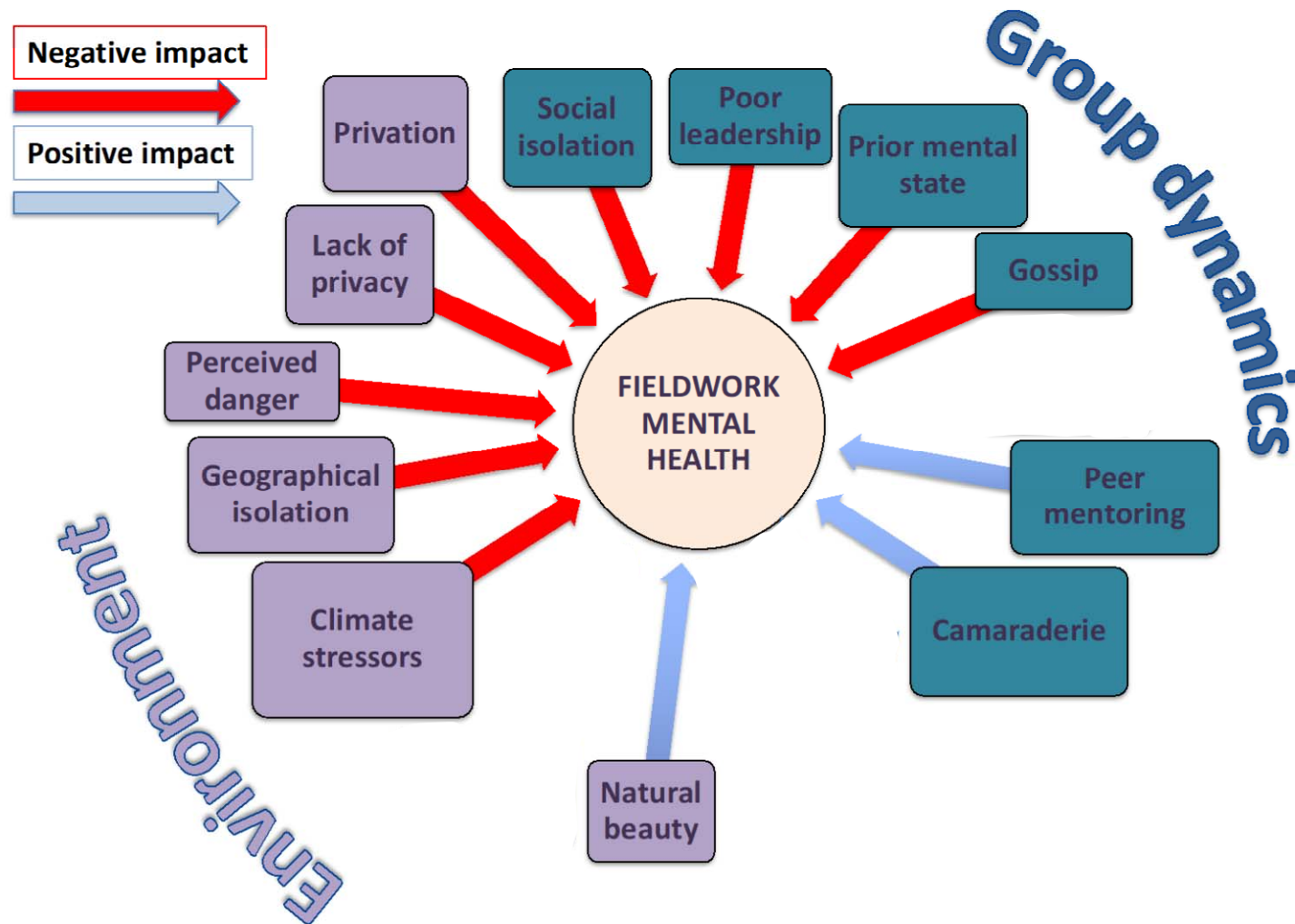


John and Khan, 2018 (Nature)

Experiencing life at a different pace



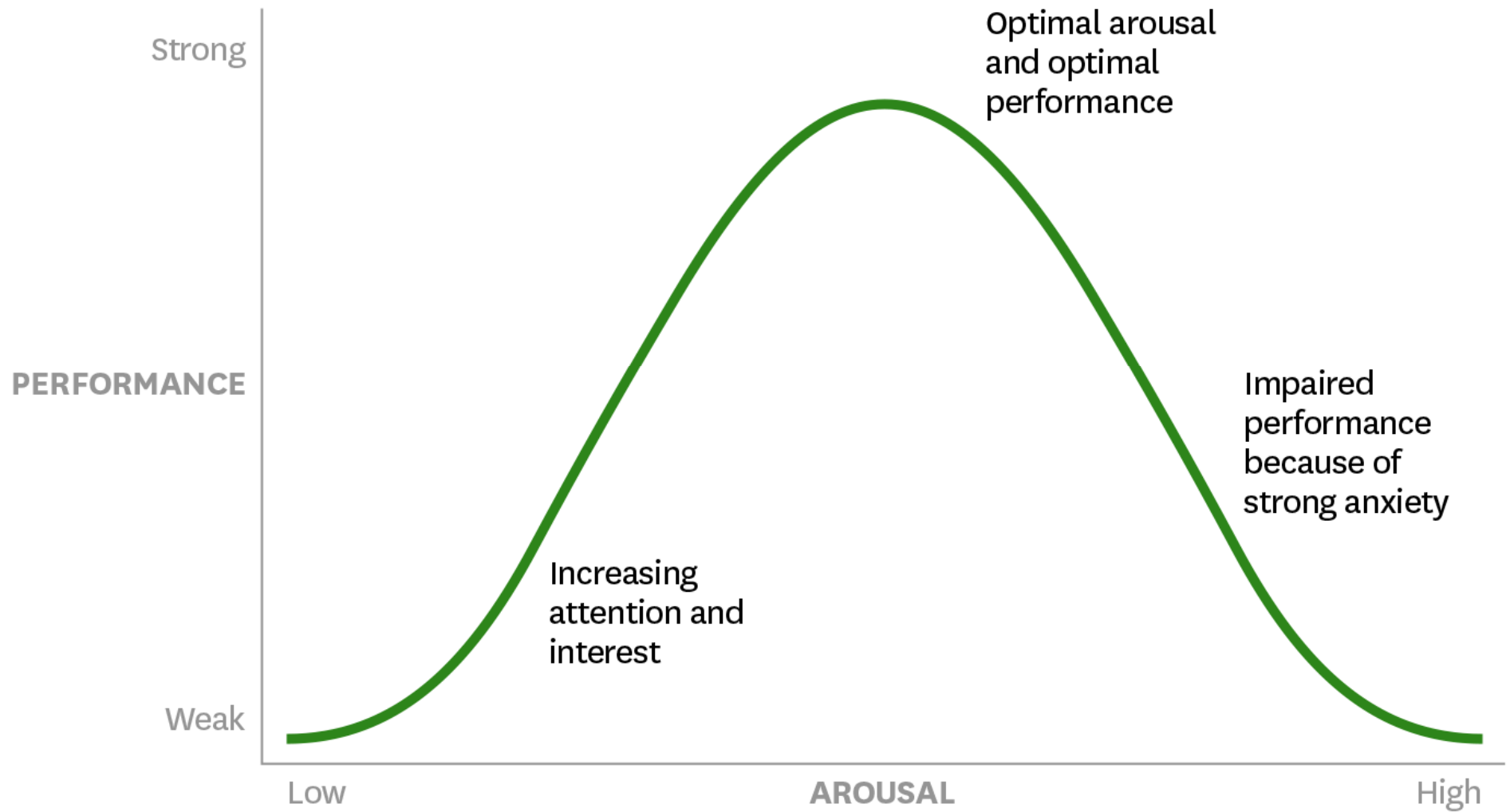
Factors impacting mental health in the field



John and Khan, 2018 (Nature)

The Yerkes-Dodson Law

How anxiety affects performance.

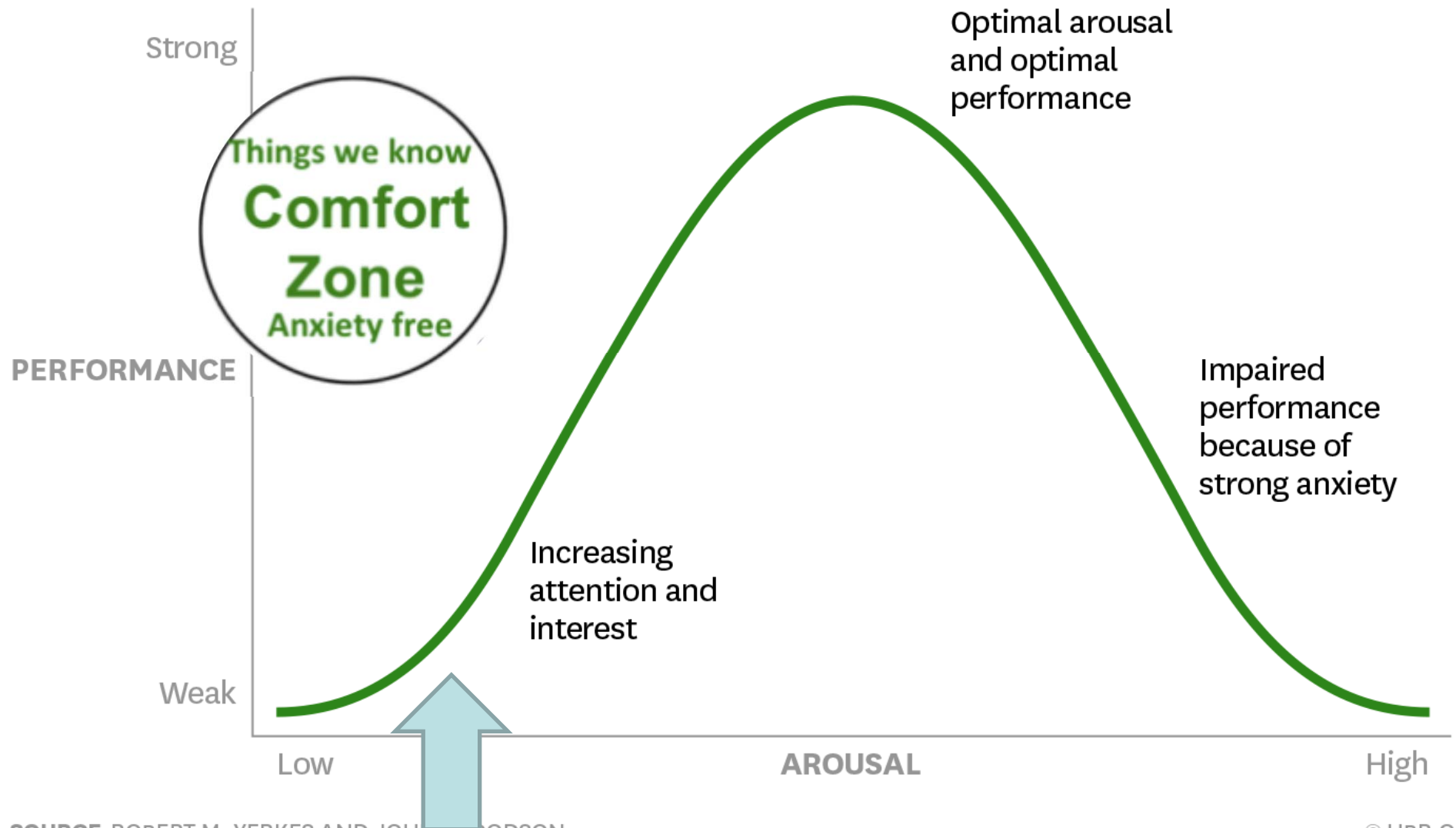


SOURCE ROBERT M. YERKES AND JOHN D. DODSON

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The Yerkes-Dodson Law

How anxiety affects performance.

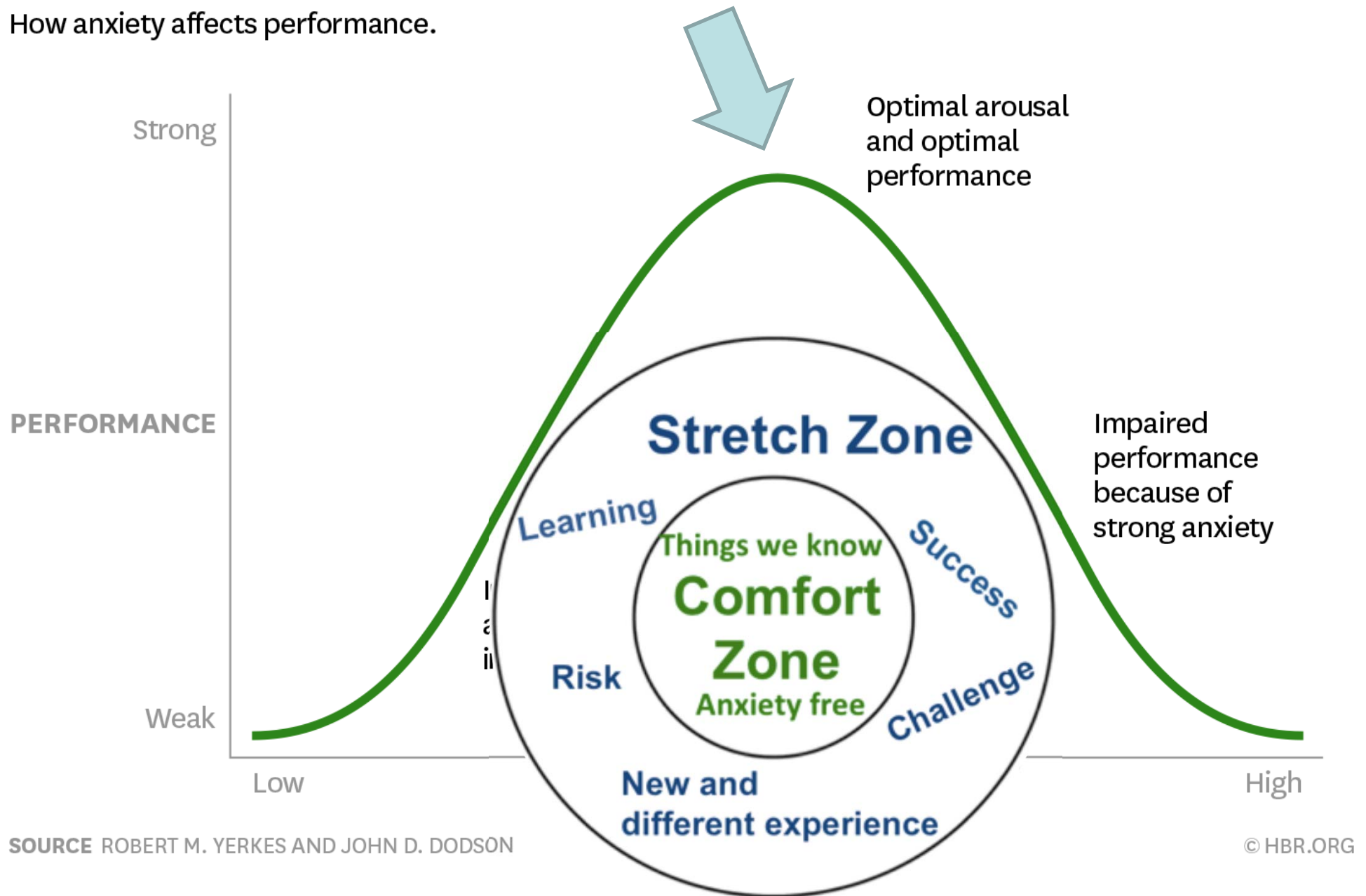


SOURCE ROBERT M. YERKES AND JOHN D. DODSON

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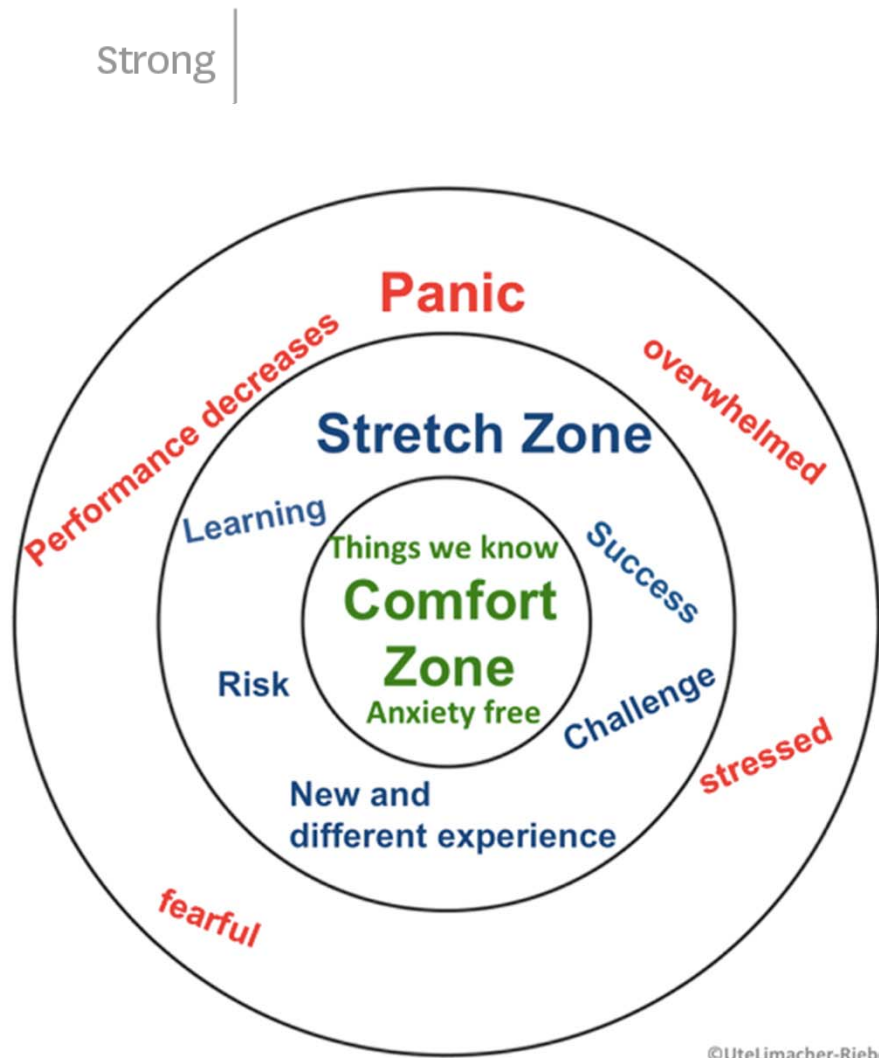
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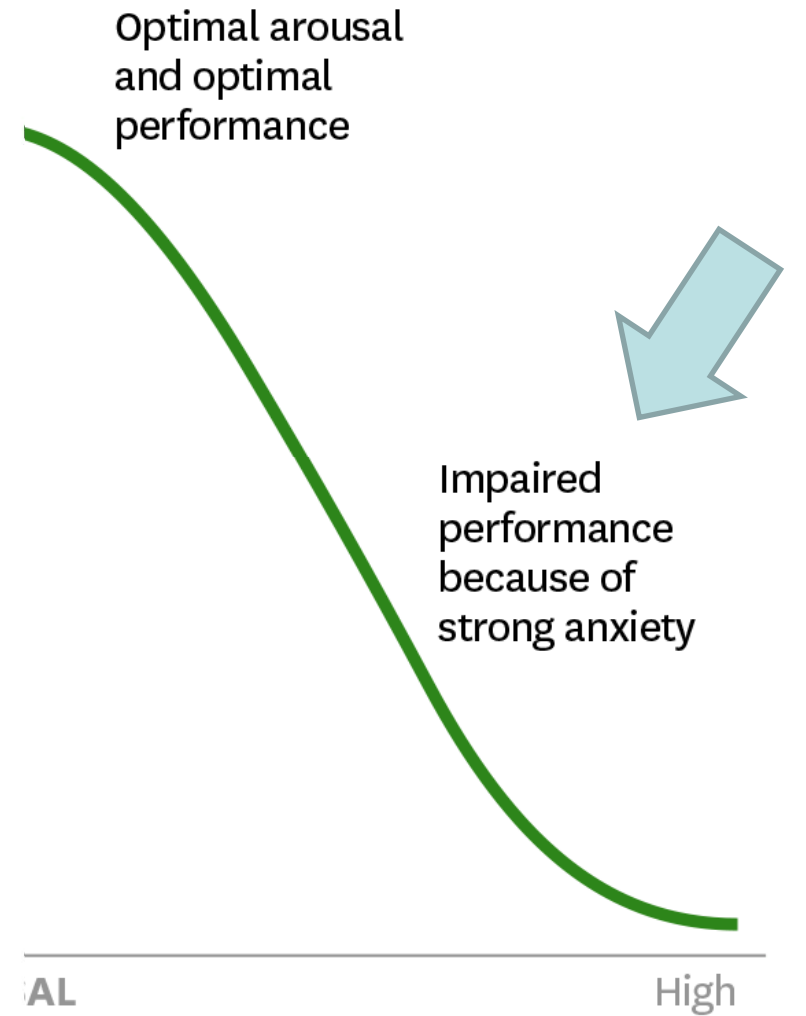


The Yerkes-Dodson Law

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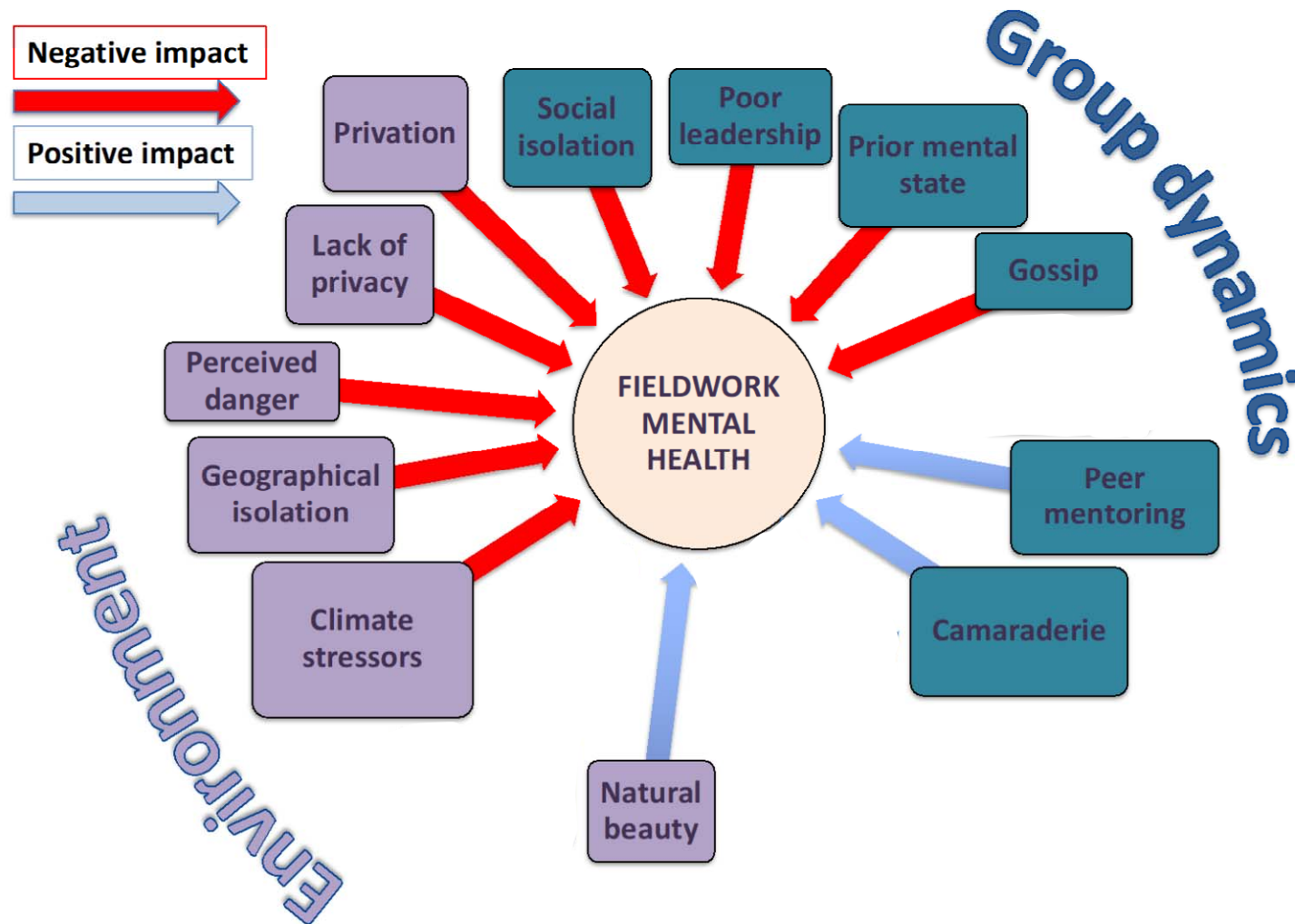


©UteLimacher-Riebold 2016



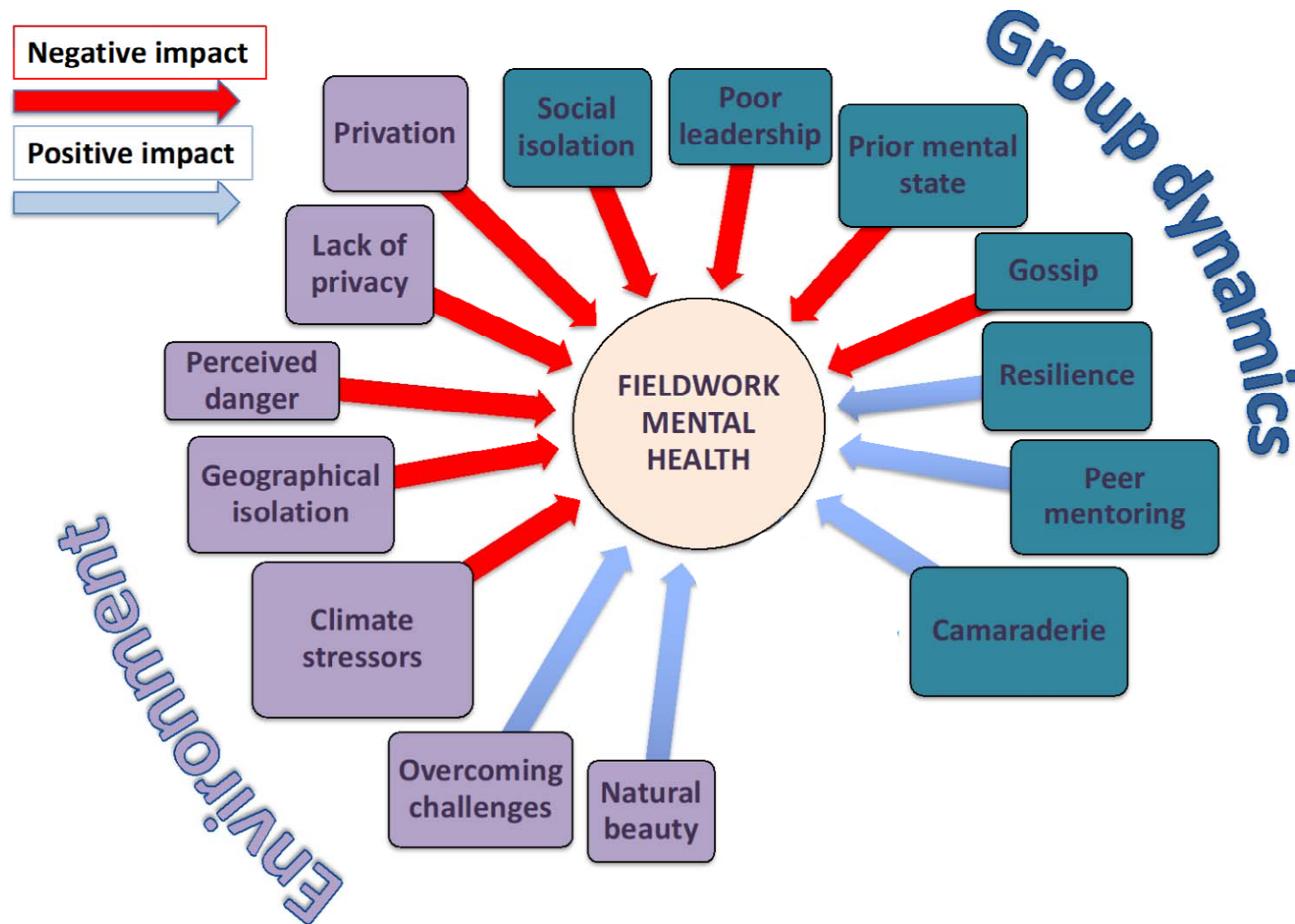
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Factors impacting mental health in the field



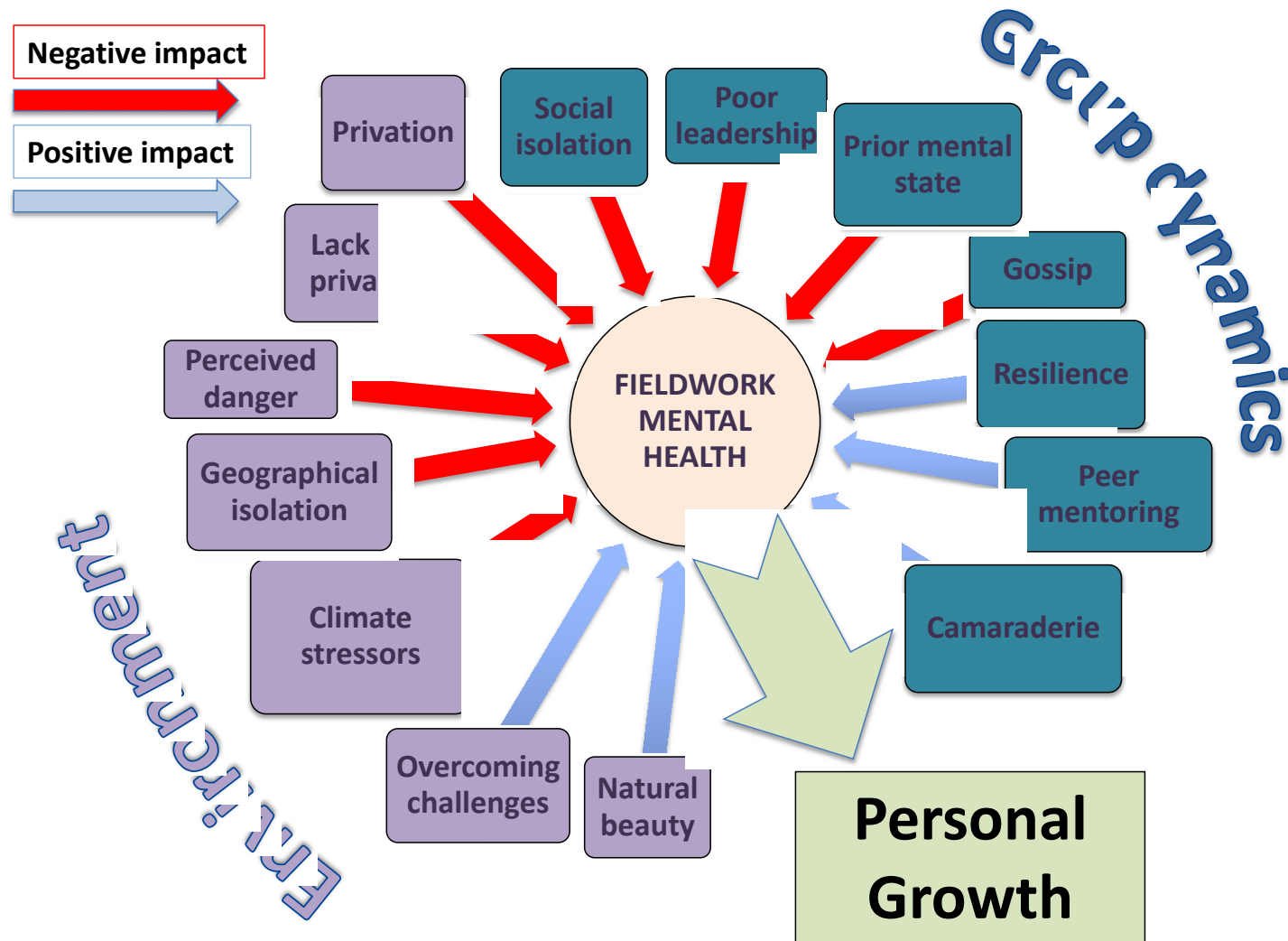
John and Khan, 2018 (Nature)

Factors impacting mental health in the field



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Factors impacting mental health in the field

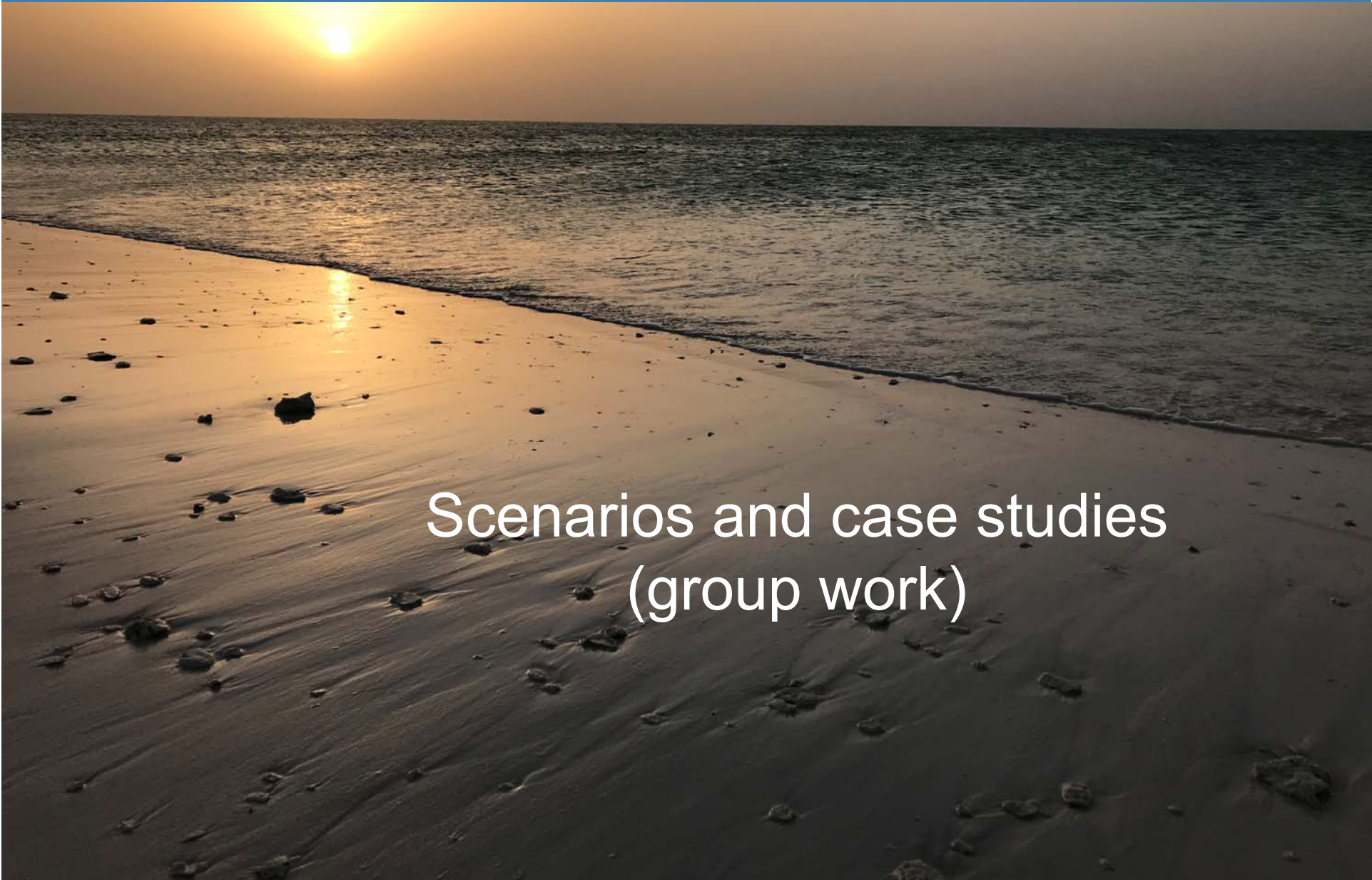


John and Khan, 2018 (Nature)

Tiers of the Maslow Pyramid Impacted



Breakout II



Scenarios and case studies
(group work)

A photograph taken from inside a dark cave, looking out through a large, irregular opening. The sky outside is a clear, pale blue. The cave's interior is mostly in deep shadow, with the rocky walls and ceiling visible in silhouette. At the bottom of the frame, near the cave's exit, three small human figures are standing on a rocky ledge, their forms silhouetted against the bright light from outside. The text "THANK YOU" is superimposed in the center of the image in a large, white, sans-serif font.

THANK YOU