Fieldwork Mental health – A practical toolkit

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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

www.carbonateresearch.com
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
2. Go to www.menti.com
3. Enter the code 37 33 0 and vote!
“Great God! this is an awful place and terrible enough for us to have laboured to it without the reward of priority.”
“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

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“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

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

Worked long hours on the last night...
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

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

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

John and Khan, 2018 (Nature). Based on Maslow’s hierarchy of needs
The polar explorers on the pyramid of human needs

Where do we want your team to be?

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.”

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

Share your experience of dealing with mental health (yours or your participants) in your own field?
What you do
Main concerns

- Individual
- Conflict
- Safety
- High care
- Environment
- Support
- Stress
- Isolation
- Time
- Period
- Trip
- Tax
- Emotional
- Program
- Personal
- Season
- Support
- Place
- Tax
- New
- Conditions
- Sea
- Leads
- Physical
- Remote
- Resources
- Home
- Experience
- Interpersonal
- Platform
- Institutions
- Lack
- Dynamic
- Impact
- Usually
- Small
- Long
- Staff
- Ly others
- Schedule
- Liv
- Home
- Staff
- Ly others
- Schedule
- Liv
Factors impacting mental health in the field

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!
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

Physiological needs
Overheating can slow our thinking and muddle our thoughts

MacNaughton et al, 2017
Effect of exhaustion on physical and mental health

- Sleep deprivation
- Shift work
- Stress

Inadequate/insufficient sleep
Effect of exhaustion on physical and mental health

- Sleep deprivation
- Shift work
- Stress

Inadequate/insufficient sleep ➔ Sleepiness
Effect of exhaustion on physical and mental health

Inadequate/insufficient sleep
- Sleep deprivation
- Shift work
- Stress

Sleepiness

Fatigue
A progressive loss of mental and physical alertness that can end in sleep
- Physical exposures
- Motion sickness
- Physical demands
- Individual factors
- Disease
Effect of exhaustion on physical and mental health

Inadequate/insufficient sleep
- Sleep deprivation
- Shift work
- Stress

Sleepiness

Fatigue
- A progressive loss of mental and physical alertness that can end in sleep

Acute effects
- Safety issues

- Physical exposures
- Motion sickness
- Physical demands
- Individual factors
- Disease
Effect of exhaustion on physical and mental health

- Inadequate/insufficient sleep
  - Sleep deprivation
  - Shift work
  - Stress

- Sleepiness

- Fatigue
  - A progressive loss of mental and physical alertness that can end in sleep
  - Physical exposures
  - Motion sickness
  - Physical demands
  - Individual factors
  - Disease

- Acute effects
  - Safety issues

- Chronic health effects
  - Sleep disorders
  - Metabolic disorders
  - Cardiovascular disorders
  - Gastrointestinal disorders
  - Other

Jepsen et al, 2015 (Maritime Health)
Factors impacting mental health in the field

Climate stressors

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

Love/belonging

Safety

Physiological needs
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

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
No showers

Little comfort or privacy

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

GEEZ, CHEER UP. HAVE YOU TRIED NOT BEING IN A COMA?

IF WE TREATED OTHER AILMENTS LIKE MENTAL ILLNESS
1 in 4 people in the World will be affected by mental or neurological disorder at some point in their lives – World Health Organization
<table>
<thead>
<tr>
<th>HEALTHY</th>
<th>REACTING</th>
<th>INJURED</th>
<th>ILL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Functioning</td>
<td>Common &amp; Reversible Distress</td>
<td>Significant Functional Impairment</td>
<td>Clinical Disorder</td>
</tr>
<tr>
<td>Consistent performance.</td>
<td>Procrastination, forgetfulness. Trouble</td>
<td>Preoccupation. Decreased performance in</td>
<td>Significant difficulty with</td>
</tr>
<tr>
<td>Normal sleep patterns.</td>
<td>sleeping (more often in falling asleep)</td>
<td>academics or at work.</td>
<td>emotions, thinking</td>
</tr>
<tr>
<td>Physically and socially</td>
<td>Lowered energy. Difficulty in relaxing.</td>
<td>Significantly disturbed sleep (falling asleep</td>
<td>High level of anxiety,</td>
</tr>
<tr>
<td>Comfortable with others.</td>
<td>Decreased social activity.</td>
<td>Avoidance of social situations, withdrawal.</td>
<td>Depressed mood, feeling</td>
</tr>
</tbody>
</table>
<pre><code>                                                             |                                               |                    | overwhelmed.       |
                                                             |                                               |                    | Constant fatigue.  |
                                                             |                                               |                    | Disturbed contact  |
                                                             |                                               |                    | with reality.      |
                                                             |                                               |                    | Significant        |
                                                             |                                               |                    | disturbances in thinking |
                                                             |                                               |                    | Suicidal thoughts/ |
                                                             |                                               |                    | intent/behaviour.  |
</code></pre>
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

- Privation
- Lack of privacy
- Perceived danger
- Geographical isolation
- Climate stressors

Prior mental state

John and Khan, 2018 (Nature)
Factors impacting mental health in the field

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”

John and Khan, 2018 (Nature)
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)
Lead by example – promote a culture of inclusivity and a no-tolerance for poor behaviour
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)
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
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.

Optimal arousal and optimal performance

Increasing attention and interest

Impaired performance because of strong anxiety

Source: Robert M. Yerkes and John D. Dodson
The Yerkes-Dodson Law

How anxiety affects performance.

- Optimal arousal and optimal performance
- Impaired performance because of strong anxiety
- Increasing attention and interest
- Comfort Zone: Anxiety free

Source: Robert M. Yerkes and John D. Dodson

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The Yerkes-Dodson Law
How anxiety affects performance.

Optimal arousal and optimal performance

Impaired performance because of strong anxiety

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Factors impacting mental health in the field

John and Khan, 2018 (Nature)

- Natural beauty
- Camaraderie
- Peer mentoring
- Gossip
- Prior mental state
- Poor leadership
- Social isolation
- Privation
- Lack of privacy
- Perceived danger
- Geographical isolation
- Climate stressors
- Environment
Factors impacting mental health in the field

John and Khan, 2018 (Nature)
Factors impacting mental health in the field

John and Khan, 2018 (Nature)
Tiers of the Maslow Pyramid

Impacted

- Physiological needs
- Safety
- Love/belonging
- Esteem
- Self-actualization
Scenarios and case studies
(group work)
THANK YOU