

# Medical education as a tool to develop uncertainty tolerance

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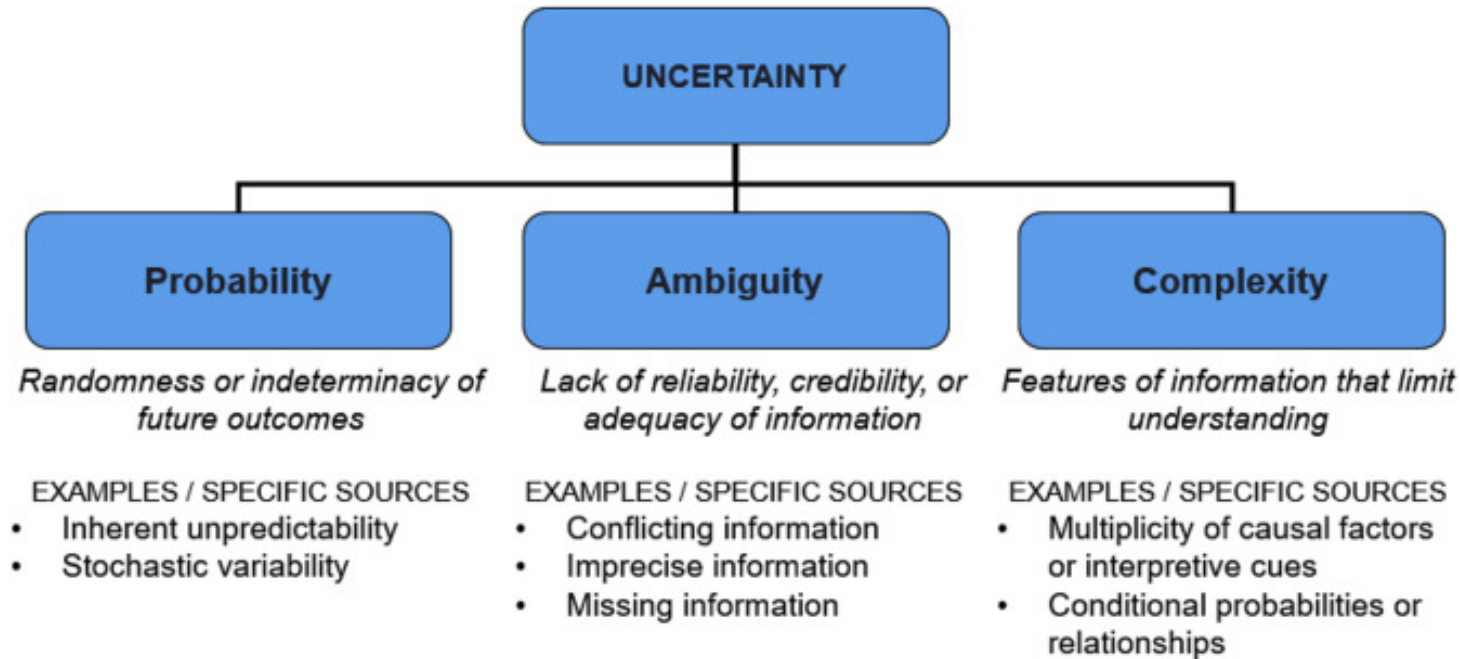
@DrJasonHancock

# Aims

- Definitions of uncertainty
- Uncertainty tolerance in the GMC and RCPsych curriculum
- Responses to uncertainty
- Strategies for enhancing uncertainty tolerance in training
- Your experience of supporting trainees to develop uncertainty tolerance

- Trainees:
  - What in your training has helped you to 'tolerate' uncertainty?
  - How have your supervisors supported you?
- Trainers:
  - How do you support your trainees to tolerate uncertainty?

# Definitions



- Hillen M, Gutheil C, Strout T, Smets E, Han P. Tolerance of uncertainty: Conceptual analysis, integrative model, and implications for healthcare. *Social Science & Medicine* 2017; 180: 62-75.

# Uncertainty tolerance in the curriculum

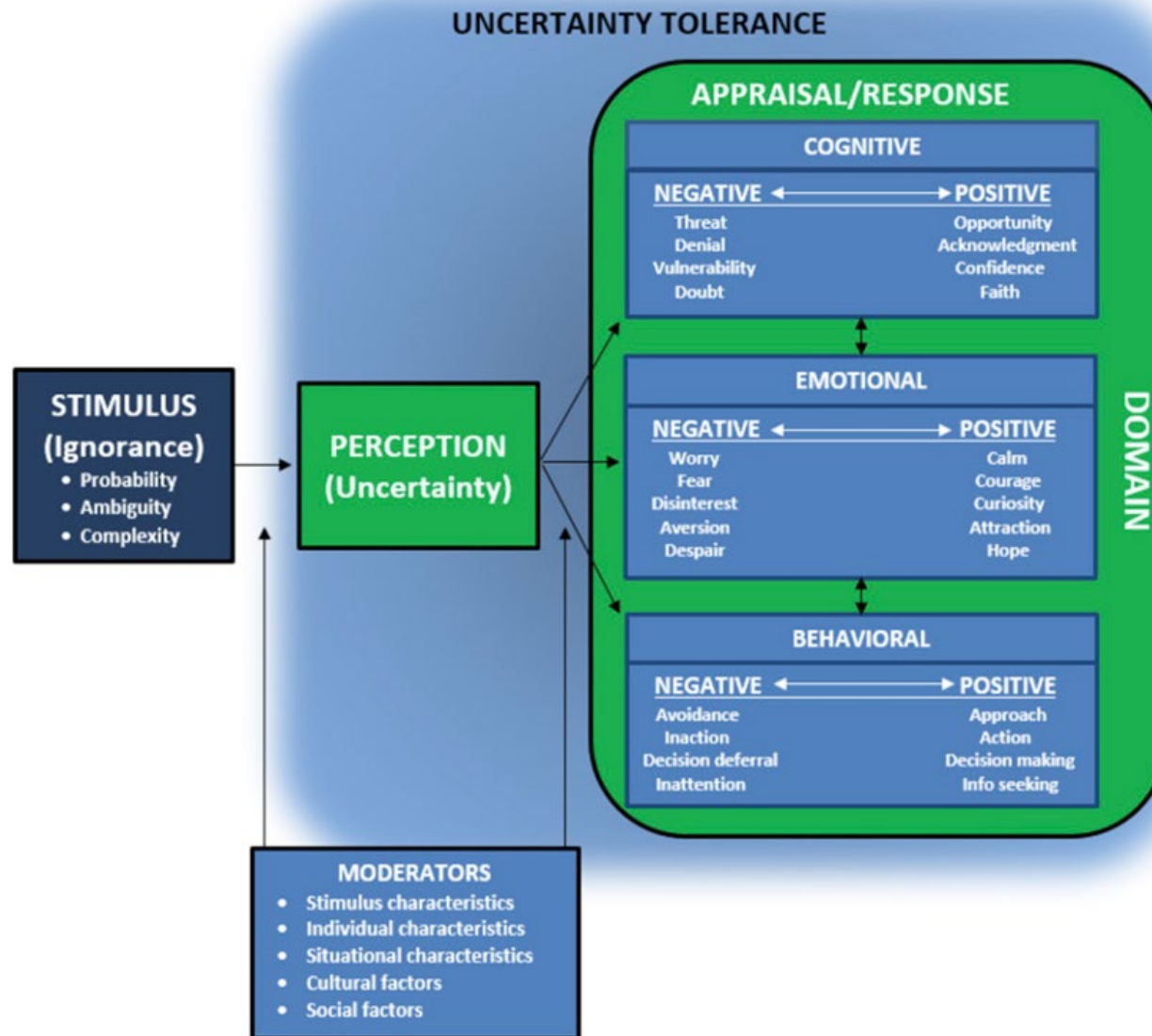


Medical students are tomorrow's doctors. In accordance with Good medical practice, newly qualified doctors must make the care of patients their first concern, applying their knowledge and skills in a competent, ethical and professional manner and taking responsibility for their own actions in complex and uncertain situations.

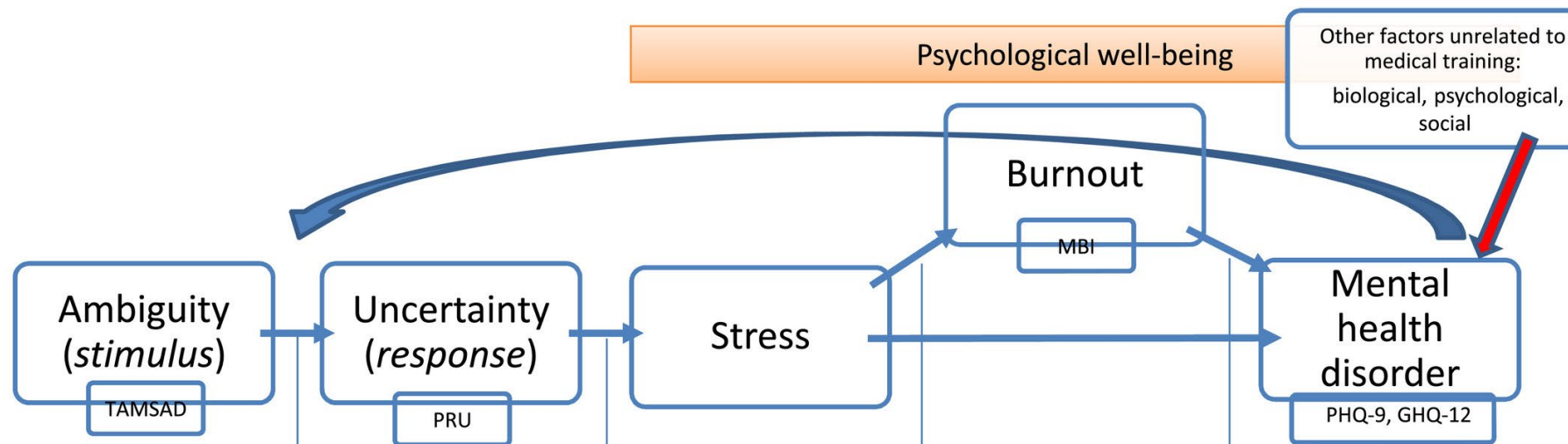
# Uncertainty tolerance in the curriculum

- Core Psychiatry Curriculum, Aug 2022
- High level outcome 2c) Complexity & Uncertainty
- Demonstrate an understanding of the various factors that contribute to complexity and uncertainty within psychiatric practice and the impact that they have on self, patients, carers of all ages, and colleagues.
  - Manage increasing levels of uncertainty safely under supervision prior to entering higher specialty training.





- Hillen M, Gutheil C, Strout T, Smets E, Han P. Tolerance of uncertainty: Conceptual analysis, integrative model, and implications for healthcare. *Social Science & Medicine* 2017; 180: 62-75.



- Hancock, J. and Mattick, K. (2020) Tolerance of ambiguity and psychological wellbeing in medical training: A systematic review, *Medical Education*, 54:125–137.



# Educational strategies to support UT in trainees

1. Specific educational strategies
2. The approach of the supervisor
3. Importance of supporting reflection
4. Broader student/ trainee support

# Specific educational strategies

- Problem Based Learning
- Simulation – including scenarios which have been carefully constructed to include uncertainty, either within the diagnosis or management
- Modification of assessment methods – moving away from single best answer questions, timings of assessments
- Humanities engagement

# The approach of the supervisor

- Demonstrating intellectual candor – explicitly sharing their thought processes, dilemmas and failures about uncertainty in medicine. This approach may invite students/ trainees to acknowledge their own uncertainty. It may also allow students to appreciate inherent uncertainty, build confidence that they can and will learn to manage these.
- Role modelling of supervisors responses to clinical uncertainty. This is something that we are currently in a qualitative piece of research with PBL tutors.

# Importance of supporting reflection

- It is likely to be the case that any medical education intervention in isolation will struggle to support improved UT without it resulting in enhanced reflection within the student/ trainee.
- For example simulation, immediate negative emotional response, but with support from the supervisor and through encouraging reflection this can in time result in more positive cognitive and behavioural responses to uncertainty.
- It might also be beneficial to consider the possibility of anonymised opportunities for reflection for difficult discussions.

# Broader student/ trainee support

- Importance of good quality administrative support for students/ DIT such as induction, orientation, and communicating support available.
- Research by Stephens et al suggests that by reducing administrative and placement uncertainties aids students capacity for managing clinical uncertainty.

# Future research

- Better understand relationship between UT and reduced psychological wellbeing and the potential mediators/ moderators to this relationship, with a focus on workplace cultures and environments.
- Specific interventions to support development of UT: PBL, humanities, simulation.
- Better understanding of the broader cultural and workplace factors that support enhanced UT.

Thoughts/ questions

# Resources/ references

- [https://www.youtube.com/watch?v=JGx92Ve1\\_o0&feature=youtu.be](https://www.youtube.com/watch?v=JGx92Ve1_o0&feature=youtu.be)
- <https://podcasts.apple.com/ca/podcast/tolerance-ambiguity-psychological-well-being-in-medical/id784455563?i=1000464247095>



# References

- Hancock, J., Roberts, M., Monrouxe, L. and Mattick, K. (2015) Medical student and junior doctors' tolerance of ambiguity: development of a new scale, *Advances in Health Sciences Education*, 20(1): 113-130.
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- Patel P, Pollard S, Rogers M, Hancock J. Improving Uncertainty Tolerance in Medical Students: a scoping review,
- Stephens GC, Sarkar M and Lazarus MD (2022) Medical Student Experiences of Uncertainty Tolerance Moderators: A Longitudinal Qualitative Study. *Front. Med.* 9:864141.