Exploring the causes of mental health problems experienced by medical undergraduates in the United Kingdom: a realist review

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Medical students have higher rates of mental health conditions compared to the general population\(^1\)

In a recent worldwide meta-analysis\(^2\):
- Depressive symptoms: 27.2%
- Suicidal ideation 11.1%
- Other MH conditions also prevalent

Important consequences on wellbeing, future careers, and workforce

Current research has largely focused on describing the scale of the issue, but not explaining reasoning why
• MH has been recognised as a key area by GMC\(^3\)
• Medical education in the UK has idiosyncratic factors that need to be considered – e.g. dual entry pathways, FPAS, etc.

• Realist analysis allows an approach that considers the underlying mechanisms behind the outcomes previously reported

• Our study therefore used a realist approach, with the following research questions:

  What are the outcomes reported as a result of mental health problems that develop during medical undergraduate studies?

  What are the mechanisms acting at various levels to cause such mental health problems to arise?

  In what contexts do these mechanisms occur to produce the outcomes reported in the current literature?
What is a Realist review?

Aims to delineate ‘what works, how, for whom and in what circumstances’

‘social reality cannot be measured directly, but can be understood through careful and systematic investigation of underlying causal mechanisms, the contexts in which events occur, and the outcomes produced’

CONTEXT + MECHANISM → OUTCOME
5 Simple (!) Steps to Realist Review

1. Identify the review question
2. Search the available literature
3. Study selection / ‘Quality Appraisal’
4. Extracting and organising data
5. Synthesise the data
1. Identify the review question

• Scoping of literature + existing theories

• IPT developed based on:
  • GMC mental health document\(^3\)
  • Dunn et al.’s ‘Coping Reserve’
  • Dual axis model of mental health

• Stakeholder opinions also sought on what factors are important to them
2. Search the available literature

- Comprehensive search developed in collaboration with an information specialist to find possible studies from three databases of interest (Medline, EMBASE, and PsycInfo)
3. Study selection

Total articles identified from database search: 2137

- MEDLINE: 599
- EMBASE: 1175
- PsycINFO: 363

Duplicates removed: 524

Titles and Abstracts screened: 1613

Articles removed: 1424

Full-text articles assessed for eligibility: 189

Articles removed: 78

- Reasons:
  - 14: full article not available
  - 7: non-undergraduate medical student population
  - 2: medical student information not reported separately to other data
  - 21: non-UK population
  - 21: deemed not relevant to research questions
  - 13: review of studies – discussion not focused on UK

Final number of articles included: 111
4. Extracting and organising data
5. Synthesise the Data

Solution: limit scope of initial review, aim to explore each intermediate outcome in future work...
Exemplar: students fear repercussions and sanctions (M) due to the current GMC regulatory process (C) (?misunderstanding), which results in poor engagement with support networks within the medical school (O)

<table>
<thead>
<tr>
<th>Context</th>
<th>Mechanism</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>Personal difficulties</td>
<td>Poor understanding of support available</td>
<td>Poor engagement with support networks</td>
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<tr>
<td>MH difficulties</td>
<td>Fear of repercussions</td>
<td></td>
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<tr>
<td>Medical student abuse</td>
<td>Stigma</td>
<td></td>
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<tr>
<td>Medical school culture</td>
<td>Need to achieve and be seen as competent</td>
<td></td>
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<tr>
<td>Clinical and academic stressors</td>
<td>Inadequate support</td>
<td></td>
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<tr>
<td>GMC regulatory process</td>
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Outcome 2: Problem is not identified

Exemplar: students experiencing a high academic burden of responsibility (C) may lack the ‘mental space’ to process and reflect on their issues (M), resulting in difficulties being identified late or not at all (O)

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<td>Personal difficulties</td>
<td>Fear of repercussions</td>
<td>Problem is not identified</td>
</tr>
<tr>
<td>MH difficulties</td>
<td>Stigma</td>
<td></td>
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<tr>
<td>Clinical and academic stressors</td>
<td>Lack of self-reflection</td>
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<td>GMC regulatory process</td>
<td>Need to be seen as competent</td>
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Outcome 3: Negative self-perception

Exemplar: a culture of medical student abuse and ward ‘pimping’ (C) constantly challenges a student’s desire to be seen as competent and resilient (M), which in turn may fuel negative self-perception (O)

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<td>Personal difficulties</td>
<td>Stigma</td>
<td>Negative self-perception</td>
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<tr>
<td>MH difficulties</td>
<td>Need to achieve, to be seen as competent and resilient</td>
<td></td>
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<tr>
<td>Medical student abuse</td>
<td>Comparison of self to peers</td>
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Outcome 4: inappropriate work-life balance

Exemplar: an unclear or ‘hidden’ curriculum (C) leads to uncertainty over exactly what knowledge is required to pass examinations (M); as a result students commonly overwork themselves and neglect an appropriate balance (O).

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<td>Personal difficulties</td>
<td>Lack of self-reflection</td>
<td>Inappropriate work-life balance</td>
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<tr>
<td>MH difficulties</td>
<td>Uncertainty over clinical/academic requirements</td>
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<tr>
<td>Medical student abuse</td>
<td>Need to achieve, to be seen as competent and resilient</td>
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Outcome 5: maladaptive coping mechanisms

Exemplar: a student culture which is seen to endorse excessive drinking (C) can normalise this behaviour (M), leaving vulnerable individuals to use alcohol as a coping mechanism at times of anxiety and stress (O)

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<th>Outcome</th>
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<tbody>
<tr>
<td>Personal characteristics</td>
<td>Need to achieve and be seen as competent</td>
<td>Maladaptive coping mechanisms</td>
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<tr>
<td>Medical student abuse</td>
<td>Inadequate support</td>
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Final Programme Theory

- Individual factors
- Group/Social factors
- Institutional factors

Overlapping mechanisms

5 Sub-Outcomes

Mental health outcomes
Career outcomes

Watch this space!
Limitations

• Combinations of several contextual and mechanistic factors are at play; difficult to illustrate this fully – but acts as a starting point

• Single author screening and appraisal

• Limited by current literature: e.g. negative viewpoint

Conclusions

• Identified 5 sub-outcomes related to MH in the medical student population and defined CMO configurations for these

• Further work needs to determine which factors are necessary/sufficient and which are most appropriate targets for intervention
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References: