Diagnosing the Diagnosers: The Effectiveness of Online Educational Interventions for Diagnosing Mental Health Disorders in Primary Care and Community Settings

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INTRODUCTION

Most people with mental health disorders are not seen by a psychiatrist. The diagnosis is made by a general practitioner, a nurse practitioner, or another primary care provider and depends on that provider's ability to recognise the disorder. Regier et al. (1993) described primary care as the de facto mental health system on this basis.

GPs' unassisted sensitivity for detecting anxiety disorders was 30.5%, with identification rates showing no significant change across more than three decades of studies examined (Olariu et al., 2015).

Online educational interventions deliver training through web-based modules, e-learning platforms, and interactive virtual scenarios, allowing practitioners to complete training without leaving clinical practice.

Individual evaluations of these interventions generally report favourable outcomes, but each study is confined to one intervention, one profession, or one country. The field needs to be mapped systematically.

METHODOLOGY

Design: This review followed PRISMA guidelines and was structured using the PICOS framework. The review was conducted as part of a Laidlaw Scholars Research Placement at the UCL Department of Primary Care and Population Health, building on a protocol and search strategy developed prior to this stage of the project.

Eligibility: Full criteria is given below:

Criterion	Include	Exclude
Population	Studies focused on undergraduate students and involving primary care practitioners (GPs, family physicians, nurse practitioners) or community-based health professionals involved in diagnosing mental health disorders	Non-health professionals
Intervention	Online educational interventions explicitly designed to improve diagnostic abilities for mental health disorders, including web-based training, e-learning modules, or interactive virtual scenarios.	Purely informational tools, passive screening tools, or decision-support tools without educational components.
Comparator	No intervention, usual practice, or alternative educational methods (e.g., face-to-face workshops, paper-based learning).	Comparisons of different formats of the same online intervention.
Outcomes	Diagnostic accuracy, sensitivity/specificity, confidence in diagnosis, or diagnostic knowledge.	General attitudes, satisfaction, or unrelated outcomes.
Study design	RCTs, quasi-experimental studies, and cohort studies.	Qualitative studies
Publication	Peer-reviewed journal articles and academic theses/dissertations, published from 2010 onward, in English	Conference abstracts, editorials, non-English
Time frame	Studies published from 2010 onwards (to reflect the growth of online learning technology).	Studies published prior to 2010.

Search strategy:

- The search strategy combined four concept blocks: mental health disorders, diagnosis, primary care and community settings, and online educational interventions.
- Within each block, controlled vocabulary terms and free-text keywords were combined with the Boolean operator OR. The four blocks were then combined using AND.
- An original search was conducted prior to this stage of the project, returning 2,416 records in Ovid MEDLINE, 894 in PsycINFO, 573 in Web of Science, and 273 in PubMed, for a combined original total of 4,156 records.
- The search strategy was verified against the protocol, and searches were rerun in Ovid MEDLINE and PsycINFO to capture literature published since the original search.

Study selection:

- All records were imported into Rayyan for title and abstract screening.
- Before full screening began, reviewers screened a shared random subset of records independently to establish inter-rater reliability.
- Disagreements flagged by Rayyan were resolved through group discussion, with unresolved conflicts escalated to the supervising team.

CONCLUSION

The scale and variation of the literature confirmed that the evidence on this topic requires systematic treatment, and no single study within it can stand for the evidence as a whole. The verified search strategy and the screening records produced during this placement form part of the audit trail required under PRISMA reporting.
This poster reports the stage of the review completed during a six-week research placement.

REFERENCES

Find the list of references and the full paper here:

OBJECTIVES

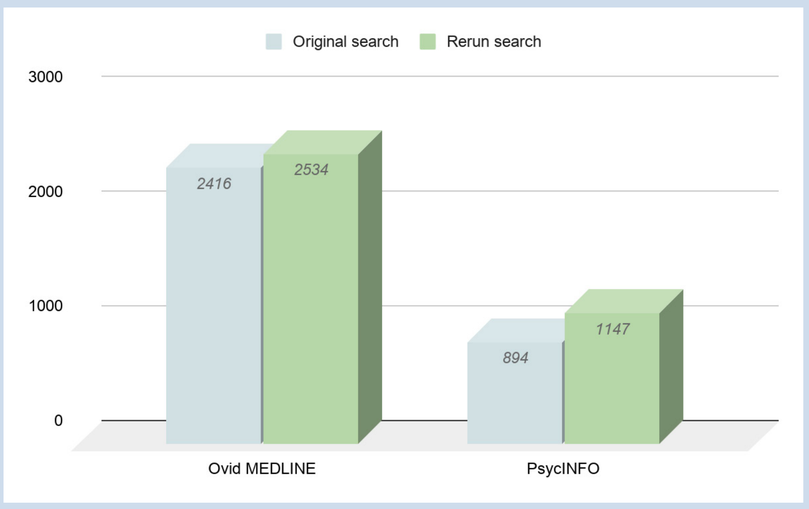
The objective of this review was to assess the effectiveness of online educational interventions in improving the diagnostic abilities of primary care or community-based health professionals for mental health disorders.

The review informs a new case on eCREST, UCL's online diagnostic training tool for primary care.

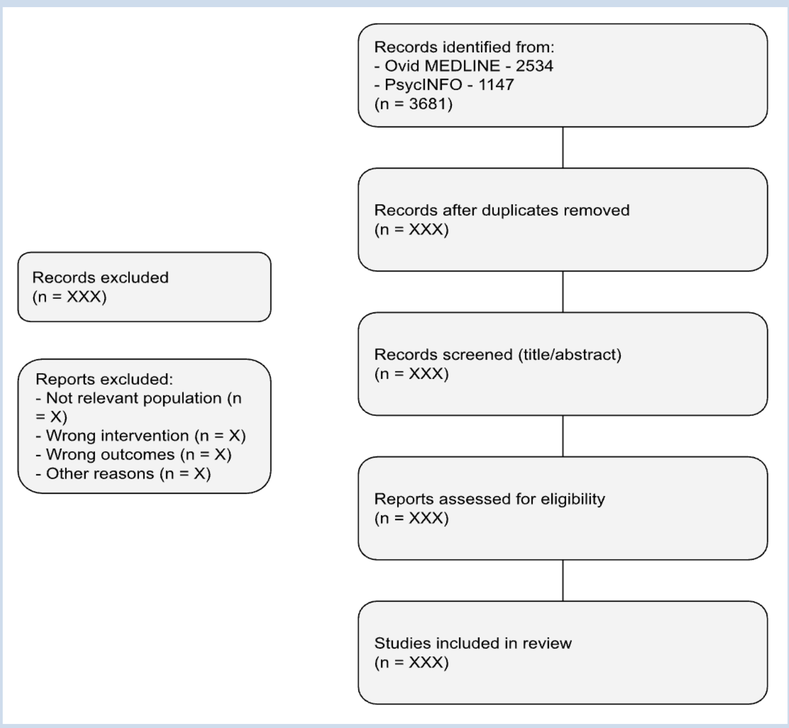
RESULTS

Search Results:
Database searches were rerun in Ovid MEDLINE and PsycINFO, returning 2,534 and 1,147 records, respectively, for a combined total of 3,681 records across these two databases. This represents an increase from the original search, which returned 2,416 records in Ovid MEDLINE and 894 in PsycINFO.

This difference may reflect newly indexed publications as well as changes in database content, indexing, or search execution.



The above figure compares the record counts from the original and rerun searches in Ovid MEDLINE and PsycINFO. The rerun returned 118 additional records in Ovid MEDLINE and 253 in PsycINFO.



Adapted from Page et al. (2021)

Limitations:

- The findings reported here are confined to the identification stage.
- Search counts establish the size of the literature but carry no information about study quality, effect direction, or comparability.
- Web of Science and PubMed were not rerun, so the 3,681 records do not represent the full retrievable literature.

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