

TRANSFORMING MENTAL HEALTH CARE IN THE ARAB WORLD: A SCOPING REVIEW OF ARAB TMS STUDIES FOR PSYCHIATRIC DISORDERS

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POSTER PRESENTATION

BACKGROUND

- Mental health care in the Arab world has historically been under-addressed and stigmatized.
- rTMS has emerged as a promising, non-invasive neuromodulation therapy for treatment-resistant psychiatric disorders.
- Compared with ECT, rTMS may offer fewer cognitive side effects and can complement pharmacological care.
- Evidence from Arab countries remains scattered, with uncertainty around quality, outcomes, and implementation barriers.

RESEARCH QUESTION

What is the current evidence on the use, effectiveness, and challenges of repetitive Transcranial Magnetic Stimulation (rTMS) for psychiatric disorders in Arab countries?

DESIGN & METHODOLOGY

- Design: Scoping review guided by Arksey & O'Malley's framework.
- Databases searched: PubMed, OVID, Web of Science, CINAHL, Scopus, and EMBASE.
- Timeframe: 2018–2024.
- Search strategy: Keywords and MeSH terms including “TMS”, “rTMS”, “mental health”, “treatment modalities”, and “Arab countries”.
- Eligibility: Peer-reviewed English-language studies focused on rTMS in psychiatric patients in Arab countries.
- Analysis: Narrative synthesis following PRISMA and SWiM guidance; quality appraisal using CASP.

REVIEW FLOW

Databases — Screening — Eligibility — 19 studies

Six major databases were searched to map Arab rTMS evidence for psychiatric disorders.

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RESULTS AT A GLANCE

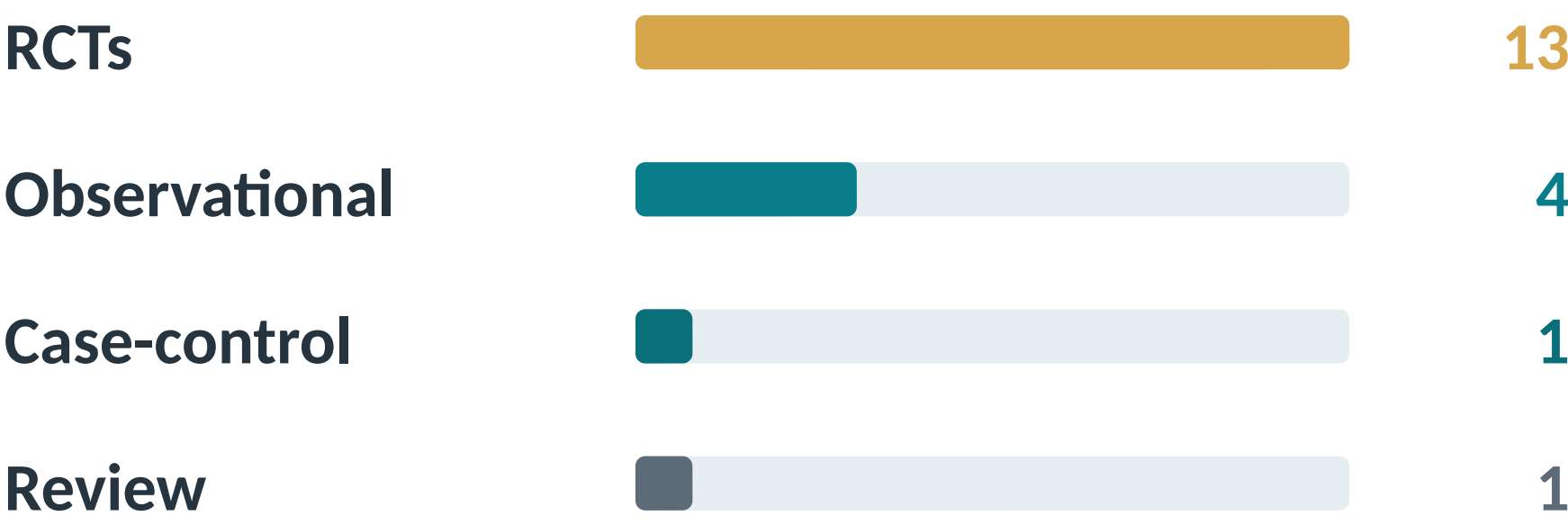
19
studies
included

13
randomized
trials

6
Arab
countries

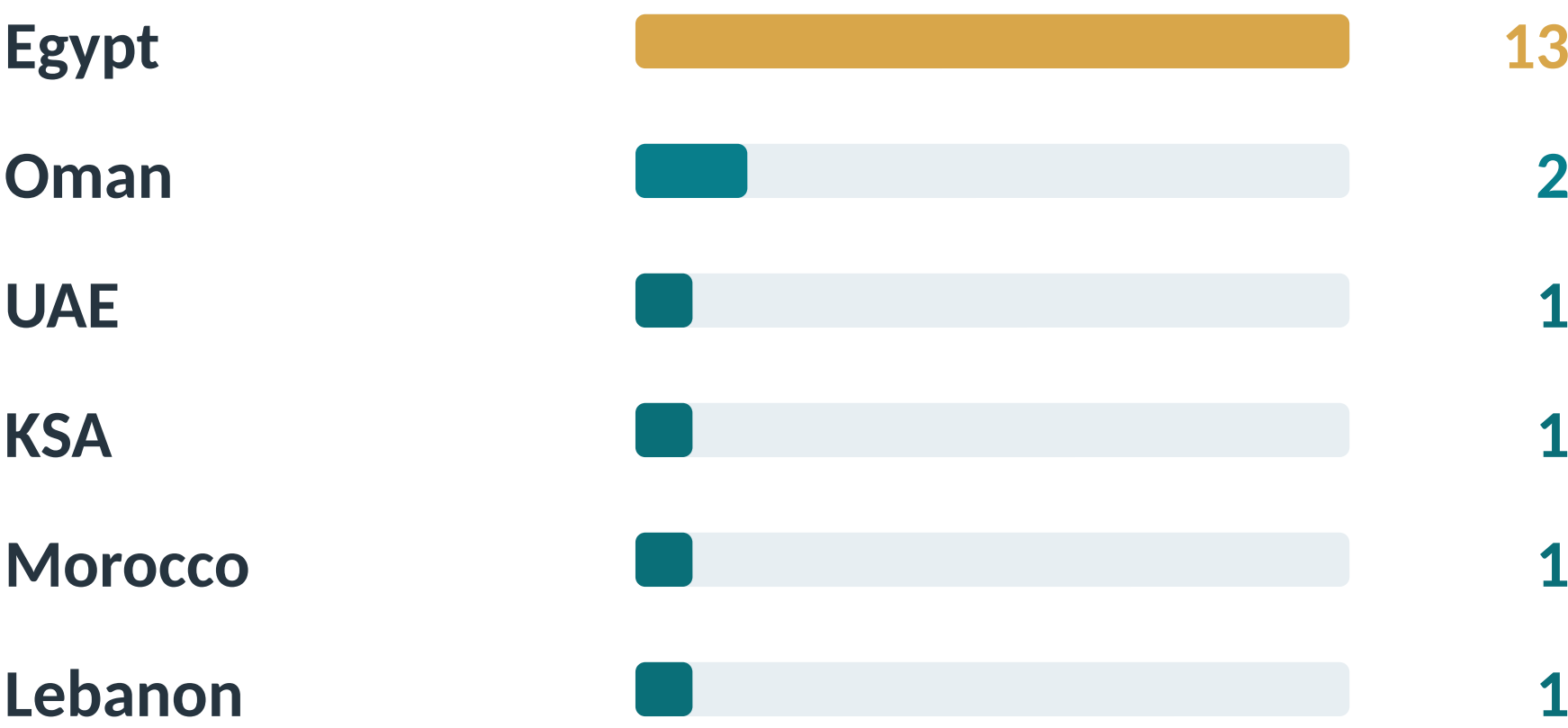
6–96
sample
size
range

STUDY DESIGNS

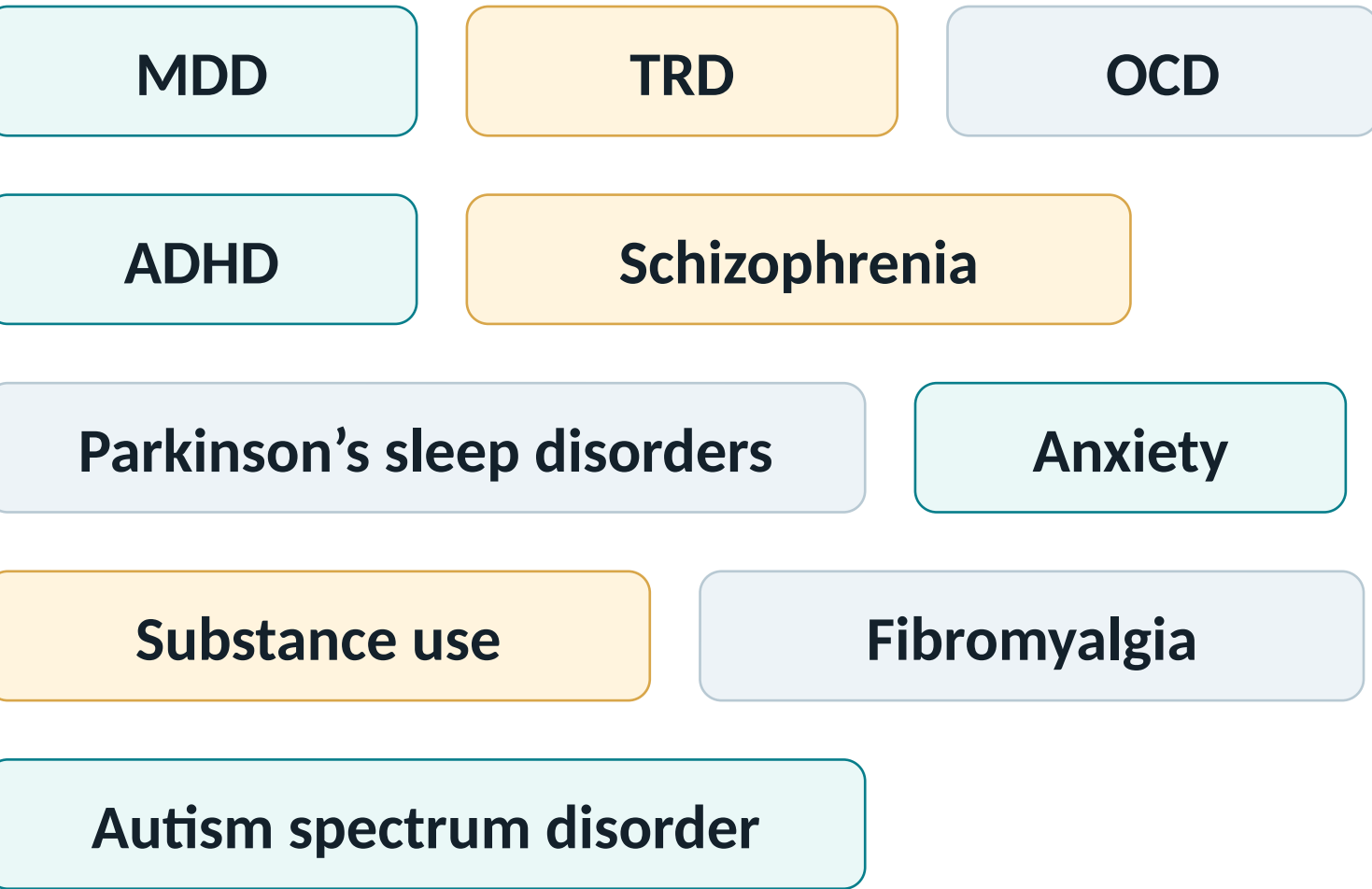


Evidence is dominated by randomized trials, but study sizes remain small and heterogeneous.

COUNTRIES REPRESENTED



PSYCHIATRIC & RELATED CONDITIONS STUDIED



Most studies focused on depression-spectrum disorders, but the literature also covers OCD, ADHD, schizophrenia and several comorbid or related neuropsychiatric presentations.

KEY FINDINGS

- rTMS appears effective in treatment-resistant depression, OCD, ADHD, and schizophrenia.
- Notable improvements were reported in sleep symptoms and comorbid anxiety in selected studies.
- Advantages include non-invasive delivery, minimal side effects, cumulative benefits, and potential use alongside medications.
- The literature suggests growing regional capacity for neuromodulation research, but evidence remains uneven across Arab countries.

INTERPRETATION FOR ARAB MENTAL HEALTH CARE

- rTMS may represent a transformative treatment modality for psychiatric disorders in the Arab world.
- The evidence base is promising but geographically concentrated, especially in Egypt.
- Implementation requires attention to cost, infrastructure, professional training, and cultural stigma.
- Regional collaboration could accelerate safe and equitable adoption of neuromodulation services.

IMPLEMENTATION CHALLENGES

- | | |
|----------|---|
| Cost | High equipment and maintenance expenses |
| Training | Limited certified professionals and supervision pathways |
| Access | Uneven service availability across countries |
| Stigma | Low public awareness and misconceptions about brain stimulation |

CONCLUSIONS

- Current Arab rTMS evidence supports efficacy and safety across multiple psychiatric conditions.
- The field is promising, but requires stronger multicentre, long-term, and culturally adapted studies.
- To fully integrate rTMS into mental health care, investment is needed in training, access, awareness, and cost-effectiveness evaluation.

Main message: Evidence is emerging — implementation must now become strategic.

FUTURE DIRECTIONS

- Conduct long-term, large-scale regional studies.
- Develop culturally tailored protocols and referral pathways.
- Expand training, certification, and quality assurance.
- Launch public awareness campaigns to reduce stigma.
- Evaluate cost-effectiveness and equity of access.

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Full reference list available in the published article.