Improving the Diagnosis and Treatment of Pediatric Bipolar Disorder through a Series of Online Educational Interventions

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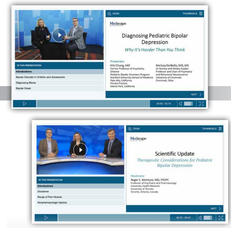
BACKGROUND

Although pediatric bipolar disorder (PBD) is estimated to have increased 10-fold in recent years, the diagnosis, and therefore the subsequent treatment, eludes many psychiatrists and pediatricians. This study was conducted to determine whether a series of 2 online educational interventions could address underlying educational needs in diagnosis and treatment of PBD.

METHODS

PRE-ASSESSMENT

POST-ASSESSMENT



Psychiatrists
Activity 1 (n=636)
Activity 2 (n=569)

Pediatricians
Activity 1 (n=241)
Activity 2 (n=302)

The online CME curriculum consisted of 2 video-based CME activities with leading faculty in the area of pediatric bipolar disease. The activities launched between March 9, 2019 and June 14, 2018, and data were collected for 4 to 8 weeks.

Psychiatrists
Activity 1
Activity 2

Pediatricians
Activity 1
Activity 2

TWO ANALYSES OF THE PRE/POST SAMPLE

AGGREGATED LEARNING

Overall group tracked pre and posteducation

LINKED LEARNING

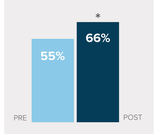
Each individual tracked pre and posteducation

RESULTS

These activities resulted in significant increases in overall knowledge, from an average of 55% pre- to 66% post-test and 47% pre- to 60% post-test, for psychiatrists and pediatricians, respectively.

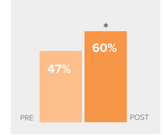
Psychiatrists (n= 1205)

AGGREGATED RESULTS



Pediatricians (n= 543)

AGGREGATED RESULTS



Activity 1

McNEMAR'S CHI-SQUARE TEST *P <.001

SIGNIFICANCE (P <.05)

CRAMER'S V EFFECT SIZE: MEDIUM 0.125

MODEST (.0) EXTENSIVE (>.3)

Activity 2

McNEMAR'S CHI-SQUARE TEST *P <.001

SIGNIFICANCE (P <.05)

CRAMER'S V EFFECT SIZE: MEDIUM 0.096

MODEST (.0) EXTENSIVE (>.3)

RECOGNITION OF PBD

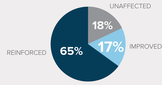
Despite 70% of psychiatrists recognizing at baseline how bipolar disorder presents differently in children than in adults, participation in the education resulted in a significant improvement to 82% (*P* <.001)

Pediatricians also improved their recognition regarding different presentations of bipolar disorder among children and adults following the education (44% pre to 66% post, *P* <.001)

Psychiatrists (n=636)

AGGREGATED RESULTS

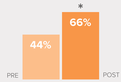
LINKED LEARNING RESULTS



*P <.001; V=.134

Pediatricians (n=241)

AGGREGATED RESULTS



LINKED LEARNING RESULTS

*P <.001; V=.212

Which of the following influences how bipolar depression presents differently in children vs adults? (Correct Answer: Irritability)

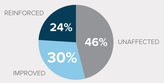
FAMILY HISTORY

Psychiatrists and pediatricians had improved knowledge about the increased risk of having a parent with bipolar disease and developing a mood disorder following participation in the CME activity

Psychiatrists (n=636)

AGGREGATED RESULTS

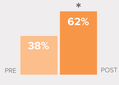
LINKED LEARNING RESULTS



*P <.001; V=.245

Pediatricians (n=241)

AGGREGATED RESULTS



LINKED LEARNING RESULTS

*P <.001; V=.240

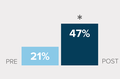
A child or adolescent with 1 parent with bipolar disorder has approximately what percentage of increased risk of developing any type of mood disorder compared with the general population? (Correct Answer: 30%)

TREATMENT FOR PEDIATRIC BIPOLAR DEPRESSION

Psychiatrists and pediatricians demonstrated increased knowledge (121% and 233% relative increase, respectively) regarding FDA-approved treatments for pediatric bipolar depression

Psychiatrists (n=569)

AGGREGATED RESULTS

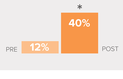


LINKED LEARNING RESULTS

*P <.001; V=.270

Pediatricians (n=302)

AGGREGATED RESULTS



LINKED LEARNING RESULTS

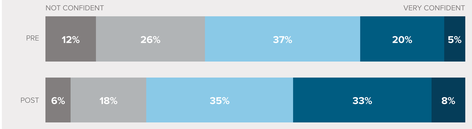
*P <.001; V=.325

Currently, there are 2 agents that are approved by the FDA for the treatment of acute bipolar depression in children and adolescents aged 10 to 17 years. Which of the following pairs are FDA-approved for the treatment of acute pediatric bipolar depression? (Correct Answer: OFC and lurasidone)

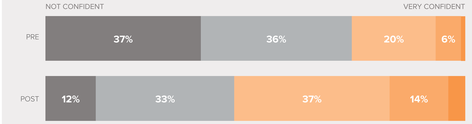
SELF EFFICACY RESULTS

14% of psychiatrists and 31% of pediatricians increased confidence in diagnosing pediatric bipolar depression

Psychiatrists (n=636)



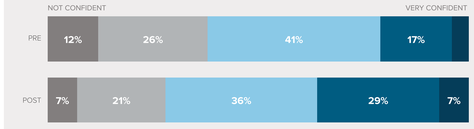
Pediatricians (n=241)



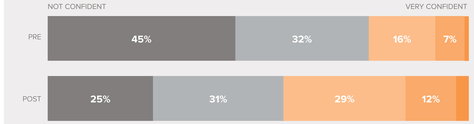
Self-efficacy: How confident are you in diagnosing pediatric bipolar depression? (Select ranking from 1 [Not confident] to 5 [Very confident])

13% of psychiatrists and 24% of pediatricians increased confidence in their knowledge of current and emerging treatments for pediatric bipolar depression

Psychiatrists (n=569)



Pediatricians (n=302)



Self-efficacy: How confident are you in your knowledge of current and emerging treatments for pediatric patients with bipolar depression? (Select ranking from 1 [Not confident] to 5 [Very confident])

CONCLUSION

- **This study demonstrates the success of online, video-based CME activities on improving knowledge and competence regarding pediatric bipolar disorder for psychiatrists and pediatricians**
- **Further education to address identified gaps for each audience is warranted**

ACKNOWLEDGMENTS

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