FLORIDA STATE UNIVERSITY COLLEGE OF ARTS AND SCIENCES

IMPROVING METHODS FOR CAUSAL INFERENCE IN ADDICTION SCIENCE: PRESENTING A NEW EXTENSION OF THE CO-TWIN CONTROL MODEL USING QUANTILE MULTILEVEL MODELING

By

KEANAN J. JOYNER

A Dissertation submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy Keanan J. Joyner defended this dissertation on October 22, 2021.

The members of the supervisory committee were:

Christopher J. Patrick

Professor Directing Dissertation

Deborah Ebener

University Representative

Greg Hajcak

Committee Member

Christopher Schatschneider

Committee Member

Jeanette Taylor

Committee Member

Yaacov Petscher

Committee Member

The Graduate School has verified and approved the above-named committee members, and certifies that the dissertation has been approved in accordance with university requirements.