Dan Klein
2-7859 (daniel.klein@stonybrook.edu)

Fall, 2019
Psych A 338

PSY 545: PSYCHOPATHOLOGY I: Conceptual Models and Internalizing Disorders

The goal of this class is to familiarize you with current concepts and research on child/adolescent, and adult psychopathology. The class meets on Thursdays from 1:00-2:50 in Psychology B 316.

This is the first semester of a two-semester sequence. During this semester, we will cover conceptual models, methodological issues, and internalizing disorders (e.g., mood and anxiety disorders). Next semester will focus on externalizing disorders (e.g., child disruptive behavior disorders, substance use disorders), personality disorders, and non-mood psychotic disorders.

Class meetings will be a combination of lectures designed to provide a broad overview of the topic for that class and discussion. The first few sessions will focus on broad conceptual and methodological issues. After that, we will discuss specific disorders, typically covering diagnosis and classification, epidemiology, course, and genetic, neurobiological, and psychosocial factors implicated in the etiology, pathogenesis, and maintenance of the disorder. We will generally not discuss assessment or treatment, as they are the focus of other courses.

The required readings, listed below, consist of 5-7 articles per week with a mix of reviews and empirical and theoretical papers. Please make the time to read each of the assigned articles. Some of the readings will be difficult, so don't be discouraged if you have to struggle with them. Focus on the main questions, findings, and implications of the papers, and don't worry if you cannot grasp the more technical details. Readings that address diversity issues are indicated by a + symbol. Almost all of the readings are available in the campus library electronic journal collections; I have placed a * in front of the exceptions, and will get those readings to you.

Requirements will include two non-cumulative in-class exams and three "thought papers". The exams are primarily intended to help motivate you to keep up with, and absorb, the material. They will consist of short answer/very brief essay questions covering <u>both</u> the lectures and readings. Each exam will count for 25% of your grade.

The thought papers should be relatively brief (2-4 pages double-spaced). The purpose of these papers is to encourage you to think critically and actively about the assigned readings and to formulate reactions to them as you read them. The thought papers can take many forms, including critiquing or challenging the argument made by an author, discussing some of the assigned readings in relation to other readings assigned in a previous week, integrating ideas across readings, identifying and evaluating unexpressed assumptions in a reading, or exploring the research implications of particular ideas. The thought papers should NOT be summaries of the readings. Also, I am not looking for you to do a literature search and write a mini-term paper. Lastly, try to avoid an intervention focus. What I will be looking for is creativity and the ability to develop and support a line of argument. Please email me the thought papers by the time of the class for which they are due. Each thought paper will count for 16.7% of your grade.

You may find it helpful to read the relevant sections from the American Psychiatric Associations's *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (DSM-5), although I am not assigning it.

Please feel free to email me to set up a time to discuss any issues regarding the format, content, or process of the course.

Learning Objectives:
1. Identify the conceptual foundation, development, and strengths and weaknesses of current and alternative classification systems for mental disorders.
2. Understand the basic concepts and conceptual frameworks for research on the development, etiology, psychopathology, and pathophysiology of the major psychiatric disorders.
3. Become familiar with the current literature on the diagnosis, epidemiology, course, and etiopathogenesis of bipolar and depressive disorders, the anxiety disorders, obsessive-compulsive disorder, and posttraumatic stress disorder.

These objectives will be assessed in the mid-term and final exams and the three thought papers described above.

August 29: Conceptual models; classification of psychopathology
(a) Defining mental disorder
(b) Conceptual models of psychopathology (diathesis-stress, vulnerability)
(c) Implications re: incomplete penetrance/resilience, final common pathways, etiological heterogeneity, multifinality and equifinality
(d) Diagnosis and classification (role of taxonomy, discreteness of boundaries, comorbidity, categorical vs dimensional classification)

Readings:
Wakefield, J.C. (1992). The concept of mental disorder: On the boundary between biological facts and social values. *American Psychologist, 47*, 373-388.
Kendler, K. S. (2019). From many to one to many - the search for causes of psychiatric illness. *JAMA psychiatry*.
Kendler, K. S. (2016). The nature of psychiatric disorders. *World Psychiatry, 15*, 5-12.
*Ingram, R. E., & Luxton, D. D. (2005). Vulnerability-stress models. In Hankin, B. L., & Abela, J. R. (Eds.), *Development of psychopathology: A vulnerability-stress perspective* (pp. 32-46). Thousand Oaks, Ca: Sage.
Del Giudice, M. (2016). The evolutionary future of psychopathology. *Current Opinions in Psychology, 7*, 44-50.
Krueger, R.F., & Markon, K.E. (2006). Reinterpreting comorbidity: A model-based approach to understanding and classifying psychopathology. *Annual Review of Clinical Psychology, 2*, 111-133.

September 5: The DSMs and empirical structural models of classification
(a) Evolution and development of the DSMs
(b) Reliability and validity

(c) Empirically-based structural taxonomies of child and adult psychopathology
(d) Role of culture

Readings:

Frances, A.J., & Widiger, T. (2012). Psychiatric diagnosis: Lessons from the DSM-IV past and cautions for the DSM-5 future. *Annual Review of Psychology, 8,* 109-130.

+La Roche, M. J., Fuentes, M. A., & Hinton, D. (2015). A cultural examination of the DSM-5: Research and clinical implications for cultural minorities. *Professional Psychology: Research and Practice, 46*(3), 183-189.

Angold, A., & Costello, E.J. (2008). Nosology and measurement in child and adolescent psychiatry. *Journal of Child Psychology and Psychiatry, 50,* 9-15.

Lahey, B. B., Krueger, R. F., Rathouz, P. J., Waldman, I. D., & Zald, D. H. (2016). A hierarchical causal taxonomy of psychopathology across the life span. *Psychological Bulletin, 141*(2), 142-186.

Kotov, R., Krueger, R. F., Watson, D., Achenbach, T. M., Althoff, R. R., Bagby, R. M., ... & Eaton, N. R. (2017). The Hierarchical Taxonomy of Psychopathology (HiTOP): A dimensional alternative to traditional nosologies. *Journal of Abnormal Psychology, 126*(4), 454-477.

September 12: The NIMH Research Domains Criteria (RDoC) and Network Models

(a) RDoC
(b) Critical perspectives
(c) Applications of RDoC perspective
(d) Network models

Kozak, M.J., & Cuthbert, B.N. (2016). The NIMH Research Domain Criteria initiative: Background, issues, pragramatics. *Psychophysiology, 53,* 286-297.

Lilienfeld, S. O. (2014). The Research Diagnostic Criteria (RDoC): An analysis of methodological and conceptual challenges. *Behaviour Research and Therapy, 62,* 129-139.

Dillon, D.G., Rosso, I.M., Pechtel, P., Killgore, W.D.S., Rauch, S.L., & Pizzagalli, D.A. (2014). Peril and pleasure: An RDoC-inspired examination of threat responses and reward processing in anxiety and depression. *Depression and Anxiety, 31,* 233-248.

Borsboom, D. (2017). A network theory of mental disorders. *World Psychiatry, 16*(1), 5-13.

Etkin, A. (2019). A reckoning and research agenda for neuroimaging in psychiatry. *American Journal of Psychiatry*, *176*(7), 507-511.

Etkin, A. (2019). A reckoning and research agenda for neuroimaging in psychiatry. *American Journal of Psychiatry, 176*(7), 507-511.

Paulus, M. P., & Thompson, W. K. (2019). The challenges and opportunities of small effects: the new normal in academic psychiatry. *JAMA Psychiatry, 76*(4), 353-354.

September 19: No class

September 26: Genetics

(a) Family, twin, adoption studies

(b) Biometric modeling of twin data
(c) Genetic markers and endophenotypes
(d) Candidate gene and genome wide association studies
(e) Rare structural variants
(f) Gene-environment correlation and gene-environment interaction
(g) Gene regulation and expression

First thought paper due at the beginning of class

Readings:

*Jang, K.L. (2005). The ABCs of behavioral genetics. In K.L. Jang (Ed.), *The behavioral genetics of psychopathology* (pp. 15-43). Mahwah, NJ: Erlbaum.

Kendler, K.S. (2013). What psychiatric genetics has taught us about the nature of psychiatric illness and what is left to learn. *Molecular Psychiatry, 18,* 1058-1066.

Sullivan, P. F., Agrawal, A., Bulik, C. M., Andreassen, O. A., Børglum, A. D., Breen, G., ... & Mathews, C. A. (2017). Psychiatric genomics: an update and an agenda. *American Journal of Psychiatry*, *175*(1), 15-27.

Beauchaine, T. P., & Constantino, J. N. (2017). Redefining the endophenotype concept to accommodate transdiagnostic vulnerabilities and etiological complexity. *Biomarkers in Medicine*, *11*(9), 769-780.

Dick, D.M., Agrawal. A., Keller, M.C., Adkins, A., Aliev, F… Sher, K.J. (2015). Candidate gene-environment interaction research: Reflection and recommendations. *Perspectives in Psychological Science, 10,* 37-59.

Maier, R. M., Visscher, P. M., Robinson, M. R., & Wray, N. R. (2018). Embracing polygenicity: a review of methods and tools for psychiatric genetics research. *Psychological medicine*, *48*(7), 1055-1067.

October 3: Psychiatric epidemiology; the developmental psychopathology perspective; research methods in psychopathology

(a) Psychiatric epidemiology
(b) The developmental psychopathology perspective: Key concepts and issues (e.g., developmental continuities and discontinuities, developmental pathways, protective factors and resilience, contextual influences)
(c) Inferring direction of causality: follow-up, follow-back, and high risk designs
(d) Vulnerability markers
(e) Ruling out third variables: issues regarding choice of control groups; problems with matching; problems with statistical controls; patient versus community samples; case control vs cohort designs

Readings:

+Kessler, R.C., Berglund, P., Demler, O., Jin, R., Merikangas, K.R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*, 593-602.

Scott, K. M., Lim, C., Al-Hamzawi, A., Alonso, J., Bruffaerts, R., Caldas-de-Almeida, J. M., ...

& Kawakami, N. (2016). Association of mental disorders with subsequent chronic physical conditions: world mental health surveys from 17 countries. *JAMA Psychiatry, 73*(2), 150-158.
+Pickett, K. E., & Wilkinson, R. G. (2010). Inequality: an underacknowledged source of mental illness and distress. *The British Journal of Psychiatry, 197*(6), 426-428.
Cicchetti, D., & Toth, S.L. (2009). The past achievements and future promises of developmental psychopathology: The coming of age of a discipline. *Journal of Child Psychology and Psychiatry, 50*, 16-25.
Copeland, W.E., Adair, C.E., Smetanin, P.....Angold, A. (2013). Diagnostic transitions from childhood to adolescence to early adulthood. *Journal of Child Psychology and Psychiatry, 54*, 791-799.
Copeland. W.E., Wolke, D., & Costello, E.J. (2015). Adult functional outcomes of common childhood psychiatric problems: A prospective longitudinal study. *JAMA Psychiatry, 72*(9), 892-899.
Luciano, M. (2013). Adolescent brain development in normality and psychopathology. *Development & Psychopathology, 25*, 1325-1345.

October 10: Mood disorders: Classification, epidemiology, and course

(a) Phenomenology
(b) Classification and subtypes
(c) Boundaries with anxiety and psychotic disorders
(d) Epidemiology (including sex differences and cohort effects) and cross-cultural findings
(e) Course and prognosis of bipolar disorder, major depressive disorder, and persistent depressive disorder

Readings:

Nelson, J. C., Bickford, D., Delucchi, K., Fiedorowicz, J. G., & Coryell, W. H. (2018). Risk of psychosis in recurrent episodes of psychotic and nonpsychotic major depressive disorder: a systematic review and meta-analysis. *American Journal of Psychiatry*, *175*(9), 897-904.
Wakefield, J.C., & Schmitz, M.F. (2014). Predictive validation of single-episode uncomplicated depression as a benign subtype of unipolar major depression. *Acta Psychiatrica Scandinavica, 129*, 445-457.
Klein, D.N., Shankman, S.A., & Rose, S. (2006). Ten-year prospective follow-up study of the naturalistic course of dysthymic disorder and double depression. *American Journal of Psychiatry, 163*, 872-880.
Solomon, D.A., Leon, A.C., Coryell, W.H.,… Keller, M.B. (2010). Longitudinal course of bipolar I disorder: Duration of mood episodes. *Archives of General Psychiatry, 67*, 339-347.
+Hyde, J.H., Mezuklis, A.H., & Abramson, L.Y. (2008). The ABCs of depression: Integrating affective, biological and cognitive models to explain the emergence of the gender difference in depression. *Psychological Review, 115*, 291-313.
Vidal-Ribas, P., Brotman, M. A., Valdivieso, I., Leibenluft, E., & Stringaris, A. (2016). The status of irritability in psychiatry: a conceptual and quantitative review. *Journal of the American Academy of Child & Adolescent Psychiatry*, *55*(7), 556-570.
Diniz, B. S., Butters, M. A., Albert, S. M., Dew, M. A., & Reynolds, C. F. (2013). Late-life

depression and risk of vascular dementia and Alzheimer's disease: systematic review and meta-analysis of community-based cohort studies. *The British Journal of Psychiatry, 202*(5), 329-335.

October 17: Mid-Term Examination

October 24 Mood Disorders: Development, genes and environment

(a) Continuities and discontinuities of MDD across the life span
(b) Continuity/discontinuity of pre- vs post-pubertal bipolar disorder
(c) Population and molecular genetics of bipolar disorder and MDD
(d) Early adversity
(e) Conceptual and methodological issues in assessing life stress
(f) Life stress in bipolar disorder and MDD

Readings:

Rice, F., Sellers, R., Hammerton, G., Eyre, O., Bevan-Jones, R., Thapar, A. K., ... & Thapar, A. (2017). Antecedents of new-onset major depressive disorder in children and adolescents at high familial risk. *JAMA Pychiatry*, *74*(2), 153-160.

Flint, J., & Kendler, K.S. (2014). The genetics of major depression. *Neuron, 81*(3), 484-503.

Kendler, K. S., Ohlsson, H., Sundquist, K., & Sundquist, J. (2018). Sources of parent-offspring resemblance for major depression in a national Swedish extended adoption study. *JAMA Psychiatry, 75*(2), 194-200.

Waszczuk, M. A., Zavos, H. M. S., Gregory, A. M., & Eley, T. C. (2016). The stability and change of etiological influences on depression, anxiety symptoms and their co-occurrence across adolescence and young adulthood. *Psychological Medicine, 46*(1), 161-175.

*Monroe, S.M., Slavich, G.M., & Georgiades, K. (2014). The social environment and depression: The roles of life stress. In I.H. Gotlib and C.L. Hammen (Eds.), *Handbook of Depression and Its Treatment* (3rd ed) (pp. 296-314). New York: Guilford Press.

Nelson, J., Klumparendt, A., Doebler, P., & Ehring, T. (2017). Childhood maltreatment and characteristics of adult depression: meta-analysis. *The British Journal of Psychiatry, 210*(2), 96-104.

October 31: Mood Disorders: Psychological aspects and suicide

(a) Temperament and personality
(b) Cognitive theories of depression
(c) Attentional and cognitive biases in depression
(d) Emotional reactivity in depression
(e) Motivational models of bipolar disorder
(f) Suicidality

Readings:

Kendler, K.S., Gatz, M., Gardner, C.O., & Pedersen, N.L. (2006). Personality and major depression: A Swedish longitudinal, population-based twin study. *Archives of General Psychiatry, 63*, 1113-1120.

Gotlib, I.H., & Joormann, J. (2010). Cognition and depression: Current status and future directions. *Annual Review of Clinical Psychology, 6,* 285-312.
Morris, M.C., Ciesla, J.A., & Garber, J. (2008). A prospective study of the cognitive-stress model of depressive symptoms in adolescents. *Journal of Abnormal Psychology, 117,* 719-734.
Rottenberg, J. (2017). Emotions in depression: What do we really know?. *Annual Review of Clinical Psychology, 13,* 241-263.
Alloy, L.B., Nusslock, R., & Boland, E.M. (2015). The development and course of bipolar spectrum disorders: An integrated reward amnd circadian rhythm dysregulation model. *Annual Review of Clinical Psychology, 11,* 213-250.
Rogers, M. L., & Joiner, T. E. (2019). Exploring the temporal dynamics of the interpersonal theory of suicide constructs: A dynamic systems modeling approach. *Journal of Consulting and Clinical Psychology, 87*(1), 56-66.

Second thought paper due at the beginning of class

November 7: Mood Disorders: Neurobiology

(a) Neurochemistry of mood disorders
(b) Neuroendocrinology of MDD
(c) Sleep architecture in MDD
(d) Structural and functional neuroanatomy of mood disorders

Readings:

Jacobs, B.L. (2004). Depression: the brain finally gets into the act. *Current Directions in Psychological Science, 13,* 103-106.
Disner, S.G., Beevers, C.G., Haigh, E.A.P., & Beck, A.T. (2011). Neural mechanisms of the cognitive model of depression. *Nature Reviews Neuroscience, 12,* 467-477.
Kujawa, A., & Burkhouse, K. L. (2017). Vulnerability to depression in youth: Advances from affective neuroscience. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2*(1), 28-37.
Belleau, E. L., Treadway, M. T., & Pizzagalli, D. A. (2018). The impact of stress and major depressive disorder on hippocampal and medial prefrontal cortex morphology. *Biological Psychiatry,* 443-453.
Vrshek-Schallhorn, S., Doane, L.D., Mineka, S., Zinbarg, R.E., Craske, M.G., & Adam, E.K. (2013). The cortisol awakening response predicts major depression: Predictive stability over a 4-year follow-up and effect of depression history. *Psychological Medicine, 43,* 483-493.
Slavich, G. M., & Irwin, M. R. (2014). From stress to inflammation and major depressive disorder: A social signal transduction theory of depression. *Psychological Bulletin, 140*(3), 774-815.

November 14: Anxiety Disorders: General risk factors and Panic Disorder

(a) Issues in defining and classifying anxiety disorders
(b) Behavioral theories of anxiety disorders
(c) Shared cognitive, neural, and genetic risk factors,

(d) Panic disorder: Classification, epidemiology genetics, neurobiology, and cognitive and behavioral theories

Readings:

Craske, M.G., Rauch, S.L., Ursano, R., Prenoveau, J., Pine, D.S., & Zinbarg, R.E. (2009). What is an anxiety disorder? *Depression and Anxiety, 26*, 1066-1085.

Copeland, W.E., Angold, A., Shanahan, L., & Costello, E.J. (2014). Longitudinal patterns of anxiety from childhood to adulthood: The Great Smokey Mountains Study. *Journal of the American Academy of Child and Adolescent Psychiatry, 53*, 21-33.

Hettema, J.M., Neale, M.C., & Kendler, K.S. (2001). A review and meta-analysis of the genetic epidemiology of anxiety disorders. *American Journal of Psychiatry, 158*, 1568-1578.

Mineka, S., & Oehlberg, K. (2008). The relevance of recent developments in classical conditioning to understanding the etiology and maintenance of anxiety disorders. *Acta Psychologica, 127*, 567-580.

LeDoux, J. E., & Pine, D. S. (2016). Using neuroscience to help understand fear and anxiety: a two-system framework. *American Journal of Psychiatry*, *173*(11), 1083-1093.

Moitra, E., Duarte-Velez, Y., Lewis-Fernández, R., Weisberg, R. B., & Keller, M. B. (2018). Examination of ataque de nervios and ataque de nervios like events in a diverse sample of adults with anxiety disorders. *Depression and anxiety*, *35*(12), 1190-1197.

November 21: Anxiety Disorders: Specific Phobia and Social, Generalized, and Separation Anxiety Disorders

(a) Genetics of anxiety disorders and fear
(b) Specific Phobia, Social Anxiety Disorder, and Agoraphobia: Classification, epidemiology, development, neurobiology, and cognitive-behavioral theories
(d) Generalized anxiety disorder: Classification, epidemiology, development, neurobiology, and cognitive-behavioral theories
(e) Separation anxiety disorder: Classification, epidemiology, development, course, and etiological factors

Readings:

Waters, A. M., & Craske, M. G. (2016). Towards a cognitive-learning formulation of youth anxiety: A narrative review of theory and evidence and implications for treatment. *Clinical Psychology Review*, *50*, 50-66.

Clauss, J.A., & Bickford, J.U. (2012). Behavioral inhibition and risk for developing social anxiety disorder: A meta-analytic study. *Journal of the American Academy of Child and Adolescent Psychiatry, 51*, 1066-1075.

Newman, M.G., Llera, S.J., Erickson, T.M., Przeworski, A., & Castonguay, L.G. (2013). Worry and generalized anxiety disorder: A review and theoretical synthesis of evidence on nature, etiology, mechanisms, and treatment. *Annual Review of Clinical Psychology, 9*, 275-297.

MacLeod, C., Grafton, B., & Notebaert, L. (2019). Anxiety-linked attentional bias: Is it reliable? *Annual Review of Clinical Psychology*, *15*, 529-554.

Olatunji, B.O., & Wolitzky-Taylor, K.B. (2009). Anxiety sensitivity and the anxiety disorders: A

meta-analytic review and synthesis. *Psychological Bulletin, 135*, 974-999.
Vaidyanathan, U., Patrick, C.J., & Cuthbert, B.N. (2009). Linking dimensional models of internalizing psychopathology to neurobiological systems: Affect-modulated startle as an indicator of fear and distress disorders and affiliated traits. *Psychological Bulletin, 135*, 909-942.

November 28: Thanksgiving

December 5: Posttraumatic Stress Disorder and Obsessive-Compulsive Disorder

(a) PTSD: Phenomenology, classification, and conceptual controversies
(b) PTSD: Epidemiology, development, and course
(c) PTSD: Genetics, neuroendocrinology, and structural and functional neuroanatomy
(d) PTSD: Cognitive theories
(e) OCD: Phenomenology, classification, and the OCD spectrum
(f) OCD: Epidemiology, development, and course
(g) OCD: Genetics, neurobiology, and cognitive theories

Third thought paper due at the beginning of class

Readings:

Rosen, G.M., & Lilienfeld, S.O. (2008). Posttraumatic stress disorder: An empirical evaluation of core assumptions. *Clinical Psychology Review, 28*, 837-868.
Hoge, C. W., Yehuda, R., Castro, C. A., McFarlane, A. C., Vermetten, E., Jetly, R., ... & Marmar, C. R. (2016). Unintended consequences of changing the definition of Posttraumatic Stress Disorder in DSM-5: Critique and call for action. *JAMA Psychiatry, 73(7*), 750-752.
Dohrenwend, B.P., Yager, T.J., Wall, M.M., & Adams, B.G. (2013). The roles of combat exposure, personal vulnerability and involvement in harm to civilians or prisoners in Vietnam-War-related posttraumatic stress disorder. *Clinical Psychological Science, 1*, 223-238.
DiGangi, J.A., Gomez, D., Mendoza, L., Jason, L.A., Keys, C.B., & Koenen, K.C. (2013). Pretrauma risk factors for posttraumatic stress disorder: A systematic review of the literature. *Clinical Psychology Review, 33,* 728-744.
Abramowitz, J.S., & Jacoby, R.J. (2015). Obsessive-compulsive and related disorders: A critical review of the new diagnostic class. *Annual Review of Clinical Psychology, 11*, 165-186.
Hezel, D.M., & McNally, R.J. (2016). A theoretical review of cognitive biases and deficits in obsessive-compulsive disorder. *Biological Psychology, 121*, 221-232.
Pauls, D. L., Abramovitch, A., Rauch, S. L., & Geller, D. A. (2014). Obsessive–compulsive disorder: an integrative genetic and neurobiological perspective. *Nature Reviews Neuroscience*, *15*(6), 410.

Final exam during final exam period; exact date to be determined.