Supplement 1 – Literature review of the genetic coherence of higher-order spectra

Internalizing spectrum encompasses five subfactors: fear, distress, eating pathology, mania and sexual problems. The intergenerational transmission of anxiety and depressive disorders is largely non-specific (Kendler, Davis, & Kessler, 1997; Starr, Conway, Hammen, & Brennan, 2013), and twin studies support a common genetic factor underlying emotional disorders (Cosgrove et al., 2011; Hettema, Neale, Myers, Prescott, & Kendler, 2006; Kendler, Aggen, et al., 2011; Kendler & Myers, 2014; Lahey, Van Hulle, Singh, Waldman, & Rathouz, 2011; Mikolajewski, Allan, Hart, Lonigan, & Taylor, 2013; Mosing et al., 2009; Silberg, Rutter, & Eaves, 2001), although separate genetic influences on distress and fear subfactors have also been identified (Hettema, Prescott, Myers, Neale, & Kendler, 2005; Kendler, Prescott, Myers, & Neale, 2003; Kendler et al., 1995; Waszczuk, Zavos, Gregory, & Eley, 2014). Furthermore, multiple forms of eating pathology aggregate in families (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004; Strober, Freeman, Lampert, Diamond, & Kaye, 2000; Thornton, Mazzeo, & Bulik, 2010) and share genetic overlap (Bulik et al., 2010; O'Connor et al., 2016; Waszczuk, Waaktaar, Eley, & Torgersen, 2019), with a number of structural twin studies finding a common genetic factor influencing eating pathology and emotional disorders (Kendler, Aggen, et al., 2011; Kendler et al., 1995; Silberg & Bulik, 2005; Thornton, Welch, Munn-Chernoff, Lichtenstein, & Bulik, 2016; Wade, Fairweather-Schmidt, Zhu, & Martin, 2015). For example, Silberg and Bulik (2005) identified a single genetic factor influencing eating disorder, depression, overanxious and separation anxiety symptoms in children, and this genetic factor also contributed to the continuity of symptoms into adolescence. Finally, twin and family studies indicate a partial genetic overlap between mania and unipolar depression (McGuffin et al., 2003; Smoller & Finn, 2003; Song et al., 2015). Overall, although the genetic overlap between different disorders and subfactors within the internalizing spectrum is prominent, genetic evidence linking certain disorders,

such as mania and eating pathology, or sexual dysfunction and other subfactors (Forbes, Baillie, Eaton, & Krueger, 2017), is currently lacking.

Externalizing spectra: disinhibited and antagonistic, jointly harbor antisocial behavior subfactor, which contains syndromes such as conduct disorder (CD) and antisocial PD. Additionally, disinhibited externalizing spectrum consists of the substance abuse subfactor, and antagonistic externalizing harbors four PDs: narcissistic, histrionic, paranoid and borderline. Developmental studies focused on disorders within the antisocial behavior subfactor identified common genetic influences (Bornovalova, Hicks, Iacono, & McGue, 2010; Cosgrove et al., 2011; Hink et al., 2013; Lahey et al., 2011; Mikolajewski et al., 2013; Tuvblad, Zheng, Raine, & Baker, 2009), with parent-child resemblance accounted for by the transmission of general liability to these behaviors (Bornovalova et al., 2010). The substance abuse subfactor was also found to be characterized by a highly heritable single latent factor (Hicks, Schalet, Malone, Iacono, & McGue, 2011). Investigating disorders within antisocial behavior and substance abuse subfactors together, twin studies consistently identify a higher-order heritable disinhibited externalizing factor (Hicks, Foster, Iacono, & McGue, 2013; Hicks, Krueger, Iacono, McGue, & Patrick, 2004; Kendler, Aggen, et al., 2011; Kendler & Myers, 2014; Kendler et al., 2003; Krueger et al., 2002; Wolf et al., 2010; Young, Stallings, Corley, Krauter, & Hewitt, 2000), with non-specific intergenerational transmission of a wide range of disinhibited externalizing disorders. Notably, the substance use subfactor may have a significant proportion of unique genetic etiology, independent of the influences shared with the disinhibited externalizing spectrum (Kendler et al., 2003). Within the antagonistic externalizing spectrum, twin data generally support genetic commonality among PDs with antagonistic properties(Kendler et al., 2008; Livesley, Jang, & Vernon, 1998; Torgersen et al., 2008), and their genetic links to disorder within the antisocial behavior subfactor

(Kendler, Aggen, et al., 2011). Overall, disinhibited and antagonistic externalizing spectra have shown genetic coherence.

Thought disorder spectrum encompasses schizophrenia spectrum disorders, mood disorders with psychosis, three PDs: schizotypal, schizoid and paranoid, and the mania subfactor. Family and twin studies have found that schizophrenia and the three PDs aggregate in families (Calkins, Curtis, Grove, & Iacono, 2004; Ettinger, Meyhöfer, Steffens, Wagner, & Koutsouleris, 2014; Kendler, Czajkowski, Tambs, Torgersen, Aggen, Neal, et al., 2006; Kendler & Gardner, 1997; Kendler et al., 1993; Tarbox & Pogue-Geile, 2011) and share genetic influences (Kläning et al., 2016). One twin study identified a single genetic factor that explained all variance in schizotypal PD and also contributed to paranoid PD and schizoid PD (Kendler, Czajkowski, Tambs, Torgersen, Aggen, Neale, et al., 2006). Another analysis of this cohort that included the full range of PDs also assigned avoidant PD and dependent PD to this factor (Kendler et al., 2008), a result confirmed in another analysis (Kendler, Aggen, et al., 2011), but these two studies did not include schizophrenia or bipolar disorders, which may explain why factor content broadened beyond thought disorders. Importantly, family and twin modelling results also indicate genetic overlap among psychotic and bipolar disorders (i.e., between the thought disorder spectrum and mania subfactor), providing support for the placement of the mania subfactor under the thought disorder spectrum (Bramon & Sham, 2001; Cardno, Rijsdijk, Sham, Murray, & McGuffin, 2002; Cardno et al., 2012; Lichtenstein et al., 2009; Pettersson, Larsson, & Lichtenstein, 2016; Song et al., 2015). Overall, existing genetic evidence supports the coherence of the thought disorder spectrum, however structural studies that examine full range of thought disorders in context of diverse psychopathology are needed.

Detachment spectrum contains four PDs: schizoid, avoidant, dependent and (negatively loading) histrionic. To date only three twin studies have addressed the issue of distinctiveness

of the detachment spectrum from the rest of psychopathology. First, a twin study encompassing a broad range of maladaptive personality traits found a genetic factor influencing intimacy problems and restricted expression traits, which are key features of detachment (Livesley et al., 1998). Second, analysis of all PDs found a unique genetic factor shared by schizoid and avoidant PDs, and with a smaller loading on dependent PD (Kendler et al., 2008), which was also confirm in a study looking across a broad range of PDs and clinical disorders (Kendler, Aggen, et al., 2011). Thus, twin studies to date suggest that the detachment spectrum shares a degree of common genetic etiology, but its distinctiveness from thought disorder is not certain.

Somatoform spectrum includes somatic symptom disorder and illness anxiety disorder. Relatively little is known about the genetic structure of this spectrum. One twin study to date suggested that a common genetic factor contributes to four somatic symptoms: recurrent headache, irritable bowel syndrome, chronic impairing fatigue, and chronic widespread pain (Kato, Sullivan, Evengård, & Pedersen, 2009), independent of genetic influences shared with major depression and generalized anxiety disorder. Other twin studies suggest that a significant proportion of genetic influences on somatoform spectrum symptoms are independent from internalizing problems (Gillespie, Zhu, Heath, Hickie, & Martin, 2000; Hansell et al., 2012), however somatoform and internalizing spectrum may share genetic underpinnings at a higher level of generality (Ask, Waaktaar, Seglem, & Torgersen, 2016; Ball et al., 2011; Gillespie et al., 2000; Hansell et al., 2012; Kato et al., 2009; Kendler, Aggen, et al., 2011). Structural studies often have poor somatic symptom coverage that prevents modelling the separate genetic factor and future work should consider a wider symptom coverage.

Supplement 2 – Structure of environmental influences

Although non-shared environment typically contributes to the distinction among psychiatric conditions, a proportion of environmental influences contributes to the coherence of HiTOP spectra, with higher-order *non-shared* environmental factors found for internalizing (Hettema et al., 2006; Hettema et al., 2005; Mosing et al., 2009; Thornton et al., 2016), externalizing (Bornovalova et al., 2010; Krueger et al., 2002; Seglem, Torgersen, Ask, & Waaktaar, 2015; Tuvblad et al., 2009; Young et al., 2000), thought disorder (Cardno et al., 2012) and somatoform (Kato et al., 2009) spectra, although they accounted for considerably less variance in the phenotypes than higher-order genetic factors. Nonetheless, some studies found non-shared environmental factors that do not align with the HiTOP (Ørstavik et al., 2012; Torgersen et al., 2008). For example, in addition to a common set of non-shared environmental influences on four externalizing PDs: antisocial, borderline, narcissistic and histrionic, the first two PDs shared an additional set of higher-order environmental influences, indicating closer etiology that is not in line with the current HiTOP classification (Torgersen et al., 2008). Furthermore, some studies in youth reported that *shared* environmental influences parallel the externalizing (Bornovalova et al., 2010; Burt, Krueger, McGue, & Iacono, 2001; Hicks et al., 2013; Hicks et al., 2011; Seglem et al., 2015; Tuvblad et al., 2009) and internalizing (Eley et al., 2003; Silberg & Bulik, 2005; Silberg et al., 2001) spectra. Future research should identify specific environmental influences that contribute to the coherence of and distinctions between major psychopathologic dimensions. Studies that have started identifying transdiagnostic environmental risk factors found that child maltreatment and discrimination may operate at the level of higher-order spectra (Anda et al., 2006; Eaton, 2014; Kendler, Eaves, et al., 2011; Keyes et al., 2012; Lahey et al., 2012; Vachon, Krueger, Rogosch, & Cicchetti, 2015). Finally, HiTOP spectra are sensitive to the interplay between genetic and environmental vulnerabilities. For instance, heritability

estimates for the internalizing spectrum vary across environmental circumstances (e.g. socio-economic status, school environment) (Lamb, Middeldorp, Van Beijsterveldt, & Boomsma, 2012; South & Krueger, 2011).

Supplementary references (also included in the Manuscript references)

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., . . . Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. *European Archives of Psychiatry and Clinical Neuroscience*, *256*(3), 174-186.

Ask, H., Waaktaar, T., Seglem, K. B., & Torgersen, S. (2016). Common etiological sources of anxiety, depression, and somatic complaints in adolescents: a multiple rater twin study. *Journal of Abnormal Child Psychology, 44*(1), 101-114.

Ball, H. A., Siribaddana, S. H., Sumathipala, A., Kovas, Y., Glozier, N., Rijsdijk, F., . . . Hotopf, M. (2011). Genetic and environmental contributions to the overlap between psychological, fatigue and somatic symptoms: a twin study in Sri Lanka. *Twin Research and Human Genetics*, *14*(01), 53-63.

Bornovalova, M. A., Hicks, B. M., Iacono, W. G., & McGue, M. (2010). Familial transmission and heritability of childhood disruptive disorders. *American Journal of Psychiatry, 167*(9), 1066-1074.

Bramon, E., & Sham, P. C. (2001). The common genetic liability between schizophrenia and bipolar disorder: a review. *Current Psychiatry Reports*, *3*(4), 332-337.

Bulik, C. M., Thornton, L. M., Root, T. L., Pisetsky, E. M., Lichtenstein, P., & Pedersen, N. L. (2010). Understanding the relation between anorexia nervosa and bulimia nervosa in a Swedish national twin sample. *Biological psychiatry, 67*(1), 71-77.

Burt, S. A., Krueger, R. F., McGue, M., & Iacono, W. G. (2001). Sources of covariation among attention-deficit/hyperactivity disorder, oppositional defiant disorder, and conduct disorder: the importance of shared environment. *Journal of abnormal psychology*, *110*(4), 516.

Calkins, M. E., Curtis, C. E., Grove, W. M., & Iacono, W. G. (2004). Multiple dimensions of schizotypy in first degree biological relatives of schizophrenia patients. *Schizophrenia bulletin, 30*(2), 317-325.

Cardno, A. G., Rijsdijk, F. V., Sham, P. C., Murray, R. M., & McGuffin, P. (2002). A twin study of genetic relationships between psychotic symptoms. *American Journal of Psychiatry, 159*(4), 539-545.

Cardno, A. G., Rijsdijk, F. V., West, R. M., Gottesman, I. I., Craddock, N., Murray, R. M., & McGuffin, P. (2012). A twin study of schizoaffective-mania, schizoaffective-depression, and other psychotic syndromes. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics, 159*(2), 172-182.

Cosgrove, V. E., Rhee, S. H., Gelhorn, H. L., Boeldt, D., Corley, R. C., Ehringer, M. A., . . . Hewitt, J. K. (2011). Structure and etiology of co-occurring internalizing and externalizing disorders in adolescents. *Journal of Abnormal Child Psychology, 39*(1), 109-123.

Eaton, N. R. (2014). Transdiagnostic psychopathology factors and sexual minority mental health: Evidence of disparities and associations with minority stressors. *Psychology of sexual orientation and gender diversity, 1*(3), 244.

Eley, T. C., Bolton, D., O'Connor, T. G., Perrin, S., Smith, P., & Plomin, R. (2003). A twin study of anxiety-related behaviours in pre-school children. *Journal of Child Psychology and Psychiatry, 44*(7), 945-960.

Ettinger, U., Meyhöfer, I., Steffens, M., Wagner, M., & Koutsouleris, N. (2014). Genetics, cognition, and neurobiology of schizotypal personality: a review of the overlap with schizophrenia. *Frontiers in psychiatry, 5*, 18.

Forbes, M. K., Baillie, A. J., Eaton, N. R., & Krueger, R. F. (2017). A place for sexual dysfunctions in an empirical taxonomy of psychopathology. *The Journal of Sex Research, 54*(4-5), 465-485.

Gillespie, N., Zhu, G., Heath, A., Hickie, I., & Martin, N. (2000). The genetic aetiology of somatic distress. *Psychological medicine, 30*(05), 1051-1061.

Hansell, N., Wright, M., Medland, S., Davenport, T., Wray, N., Martin, N., & Hickie, I. (2012). Genetic co-morbidity between neuroticism, anxiety/depression and somatic distress in a population sample of adolescent and young adult twins. *Psychological medicine, 42*(06), 1249-1260.

Hettema, J. M., Neale, M. C., Myers, J. M., Prescott, C. A., & Kendler, K. S. (2006). A population-based twin study of the relationship between neuroticism and internalizing disorders. *American Journal of Psychiatry, 163*(5), 857-864.

Hettema, J. M., Prescott, C. A., Myers, J. M., Neale, M. C., & Kendler, K. S. (2005). The structure of genetic and environmental risk factors for anxiety disorders in men and women. *Archives of General Psychiatry, 62*(2), 182-189.

Hicks, B. M., Foster, K. T., Iacono, W. G., & McGue, M. (2013). Genetic and environmental influences on the familial transmission of externalizing disorders in adoptive and twin offspring. *JAMA psychiatry, 70*(10), 1076-1083.

Hicks, B. M., Krueger, R. F., Iacono, W. G., McGue, M., & Patrick, C. J. (2004). Family transmission and heritability of externalizing disorders: a twin-family study. *Archives of General Psychiatry, 61*(9), 922-928.

Hicks, B. M., Schalet, B. D., Malone, S. M., Iacono, W. G., & McGue, M. (2011). Psychometric and genetic architecture of substance use disorder and behavioral disinhibition measures for gene association studies. *Behavior genetics, 41*(4), 459-475.

Hink, L. K., Rhee, S. H., Corley, R. P., Cosgrove, V. E., Hewitt, J. K., Schulz-Heik, R. J., . . . Waldman, I. D. (2013). Personality dimensions as common and broadband-specific features for internalizing and externalizing disorders. *Journal of Abnormal Child Psychology, 41*(6), 939-957.

Jacobi, C., Hayward, C., de Zwaan, M., Kraemer, H. C., & Agras, W. S. (2004). Coming to terms with risk factors for eating disorders: application of risk terminology and suggestions for a general taxonomy. *Psychological bulletin, 130*(1), 19.

Kato, K., Sullivan, P. F., Evengård, B., & Pedersen, N. L. (2009). A population-based twin study of functional somatic syndromes. *Psychological medicine, 39*(03), 497-505.

Kendler, K. S., Aggen, S. H., Czajkowski, N., Roysamb, E., Tambs, K., Torgersen, S., . . . Reichborn-Kjennerud, T. (2008). The structure of genetic and environmental risk factors for DSM-IV personality disorders: a multivariate twin study. *Archives of General Psychiatry, 65*(12), 1438-1446.

Kendler, K. S., Aggen, S. H., Knudsen, G. P., Røysamb, E., Neale, M. C., & Reichborn-Kjennerud, T. (2011). The structure of genetic and environmental risk factors for syndromal and subsyndromal common DSM-IV axis I and all axis II disorders. *The American Journal of Psychiatry, 168*(1), 29-39.

Kendler, K. S., Czajkowski, N., Tambs, K., Torgersen, S., Aggen, S. H., Neal, M. S., & Reichborn-Kjennerud, T. (2006). Dimensional representation of DSM-IV Cluster A personality disorders in a population-based sample of Norweigen twins: A multivariate study. *Psychological medicine, 36*, 1583-1591.

Kendler, K. S., Czajkowski, N., Tambs, K., Torgersen, S., Aggen, S. H., Neale, M. C., & Reichborn-Kjennerud, T. (2006). Dimensional representations of DSM-IV cluster A personality disorders in a population-based sample of Norwegian twins: a multivariate study. *Psychological medicine, 36*(11), 1583-1591.

Kendler, K. S., Davis, C. G., & Kessler, R. C. (1997). The familial aggregation of common psychiatric and substance use disorders in the National Comorbidity Survey: a family history study. *The British Journal of Psychiatry, 170*(6), 541-548.

Kendler, K. S., Eaves, L. J., Loken, E. K., Pedersen, N. L., Middeldorp, C. M., Reynolds, C., . . . Gardner, C. O. (2011). The impact of environmental experiences on symptoms of anxiety and depression across the life span. *Psychological Science, 22*(10), 1343-1352.

Kendler, K. S., & Gardner, C. O. (1997). The risk for psychiatric disorders in relatives of schizophrenic and control probands: a comparison of three independent studies. *Psychological medicine, 27*(02), 411-419.

Kendler, K. S., McGuire, M., Gruenberg, A. M., O'Hare, A., Spellman, M., & Walsh, D. (1993). The Roscommon Family Study: III. Schizophrenia-related personality disorders in relatives. *Archives of General Psychiatry, 50*(10), 781-788.

Kendler, K. S., & Myers, J. (2014). The boundaries of the internalizing and externalizing genetic spectra in men and women. *Psychological medicine, 44*(03), 647-655.

Kendler, K. S., Prescott, C. A., Myers, J., & Neale, M. C. (2003). The structure of genetic and environmental risk factors for common psychiatric and substance use disorders in men and women. *Archives of General Psychiatry, 60*(9), 929-937.

Kendler, K. S., Walters, E. E., Neale, M. C., Kessler, R. C., Heath, A. C., & Eaves, L. J. (1995). The structure of the genetic and environmental risk factors for six major psychiatric disorders in women: Phobia, generalized anxiety disorder, panic disorder, bulimia, major depression, and alcoholism. *Archives of General Psychiatry, 52*, 374-383.

Keyes, K. M., Eaton, N. R., Krueger, R. F., McLaughlin, K. A., Wall, M. M., Grant, B. F., & Hasin, D. S. (2012). Childhood maltreatment and the structure of common psychiatric disorders. *The British Journal of Psychiatry, 200*(2), 107-115.

Kläning, U., Trumbetta, S. L., Gottesman, I. I., Skytthe, A., Kyvik, K. O., & Bertelsen, A. (2016). A danish twin study of schizophrenia liability: investigation from interviewed twins for genetic links to affective psychoses and for cross-cohort comparisons. *Behavior genetics, 46*(2), 193-204.

Krueger, R. F., Hicks, B. M., Patrick, C. J., Carlson, S. R., Iacono, W. G., & McGue, M. (2002). Etiologic connections among substance dependence, antisocial behavior, and personality: modeling the externalizing spectrum. *Journal of abnormal psychology, 111*(3), 411-424.

Lahey, B. B., Applegate, B., Hakes, J. K., Zald, D. H., Hariri, A. R., & Rathouz, P. J. (2012). Is there a general factor of prevalent psychopathology during adulthood? *Journal of abnormal psychology, 121*(4), 971.

Lahey, B. B., Van Hulle, C. A., Singh, A. L., Waldman, I. D., & Rathouz, P. J. (2011). Higher-order genetic and environmental structure of prevalent forms of child and adolescent psychopathology. *Archives of General Psychiatry, 68*(2), 181-189.

Lamb, D. J., Middeldorp, C. M., Van Beijsterveldt, C. E., & Boomsma, D. I. (2012). Gene–environment interaction in teacher-rated internalizing and externalizing problem behavior in 7-to 12-year-old twins. *Journal of Child Psychology and Psychiatry, 53*(8), 818-825.

Lichtenstein, P., Yip, B. H., Björk, C., Pawitan, Y., Cannon, T. D., Sullivan, P. F., & Hultman, C. M. (2009). Common genetic determinants of schizophrenia and bipolar disorder in Swedish families: a population-based study. *The Lancet, 373*(9659), 234-239.

Livesley, W. J., Jang, K. L., & Vernon, P. A. (1998). Phenotypic and genetic structure of traits delineating personality disorder. *Archives of General Psychiatry, 55*(10), 941-948.

McGuffin, P., Rijsdijk, F., Andrew, M., Sham, P., Katz, R., & Cardno, A. G. (2003). The heritability of bipolar affective disorder and the genetic relationship to unipolar depression. *Archives of General Psychiatry, 60*(5), 497-502.

Mikolajewski, A. J., Allan, N. P., Hart, S. A., Lonigan, C. J., & Taylor, J. (2013). Negative affect shares genetic and environmental influences with symptoms of childhood internalizing and externalizing disorders. *Journal of Abnormal Child Psychology, 41*(3), 411-423.

Mosing, M. A., Gordon, S. D., Medland, S. E., Statham, D. J., Nelson, E. C., Heath, A. C., . . . Wray, N. R. (2009). Genetic and environmental influences on the co-morbidity between depression, panic disorder, agoraphobia, and social phobia: a twin study. *Depression and Anxiety, 26*(11), 1004-1011.

O'Connor, S. M., Beam, C. R., Luo, X., Cohen, L. A., VanHuysse, J. L., Emery, R. E., . . . Neale, M. (2016). Genetic and environmental associations between body dissatisfaction, weight preoccupation, and binge eating: Evidence for a common factor with differential loadings across symptom type. *International Journal of Eating Disorders, 50*(2), 157-161.

Ørstavik, R. E., Kendler, K. S., Røysamb, E., Czajkowski, N., Tambs, K., & Reichborn-Kjennerud, T. (2012). Genetic and environmental contributions to the co-occurrence of depressive personality disorder and DSM-IV personality disorders. *Journal of Personality Disorders*, *26*(3), 435.

Pettersson, E., Larsson, H., & Lichtenstein, P. (2016). Common psychiatric disorders share the same genetic origin: a multivariate sibling study of the Swedish population. *Molecular psychiatry, 21*(5), 717-721.

Seglem, K. B., Torgersen, S., Ask, H., & Waaktaar, T. (2015). Weak etiologic links between control and the externalizing behaviors delinquency and substance abuse in adolescence. *Personality and Individual Differences, 75*, 179-184.

Silberg, J. L., & Bulik, C. M. (2005). The developmental association between eating disorders symptoms and symptoms of depression and anxiety in juvenile twin girls. *Journal of Child Psychology and Psychiatry, 46*(12), 1317-1326.

Silberg, J. L., Rutter, M., & Eaves, L. (2001). Genetic and environmental influences on the temporal association between earlier anxiety and later depression in girls. [erratum appears in Biol Psychiatry 2001 Sep 1;50(5):393.]. *Biological psychiatry, 49*(12), 1040-1049.

Smoller, J. W., & Finn, C. T. (2003). *Family, twin, and adoption studies of bipolar disorder.* Paper presented at the American Journal of Medical Genetics Part C: Seminars in Medical Genetics.

Song, J., Bergen, S. E., Kuja-Halkola, R., Larsson, H., Landén, M., & Lichtenstein, P. (2015). Bipolar disorder and its relation to major psychiatric disorders: a family-based study in the Swedish population. *Bipolar disorders, 17*(2), 184-193.

South, S. C., & Krueger, R. (2011). Genetic and environmental influences on internalizing psychopathology vary as a function of economic status. *Psychological medicine, 41*(1), 107-117.

Starr, L., Conway, C., Hammen, C., & Brennan, P. (2013). Transdiagnostic and disorder-specific models of intergenerational transmission of internalizing pathology. *Psychological medicine*, 1-12.

Strober, M., Freeman, R., Lampert, C., Diamond, J., & Kaye, W. (2000). Controlled family study of anorexia nervosa and bulimia nervosa: evidence of shared liability and transmission of partial syndromes. *American Journal of Psychiatry, 157*(3), 393-401.

Tarbox, S. I., & Pogue-Geile, M. F. (2011). A multivariate perspective on schizotypy and familial association with schizophrenia: a review. *Clinical Psychology Review, 31*(7), 1169-1182.

Thornton, L. M., Mazzeo, S. E., & Bulik, C. M. (2010). The heritability of eating disorders: methods and current findings. In *Behavioral neurobiology of eating disorders* (pp. 141-156): Springer.

Thornton, L. M., Welch, E., Munn-Chernoff, M. A., Lichtenstein, P., & Bulik, C. M. (2016). Anorexia nervosa, major depression, and suicide attempts: shared genetic factors. *Suicide and life-threatening behavior*.

Torgersen, S., Czajkowski, N., Jacobson, K., Reichborn-Kjennerud, T., Røysamb, E., Neale, M., & Kendler, K. (2008). Dimensional representations of DSM-IV cluster B personality disorders in a population-based sample of Norwegian twins: a multivariate study. *Psychological medicine, 38*(11), 1617-1625.

Tuvblad, C., Zheng, M., Raine, A., & Baker, L. A. (2009). A common genetic factor explains the covariation among ADHD ODD and CD symptoms in 9–10 year old boys and girls. *Journal of Abnormal Child Psychology, 37*(2), 153-167.

Vachon, D. D., Krueger, R. F., Rogosch, F. A., & Cicchetti, D. (2015). Assessment of the Harmful Psychiatric and Behavioral Effects of Different Forms of Child Maltreatment. *JAMA psychiatry*, 1135-1142.

Wade, T. D., Fairweather-Schmidt, A. K., Zhu, G., & Martin, N. G. (2015). Does shared genetic risk contribute to the co-occurrence of eating disorders and suicidality? *International Journal of Eating Disorders, 48*(6), 684-691.

Waszczuk, M. A., Waaktaar, T., Eley, T. C., & Torgersen, S. (2019). Aetiological influences on continuity and co-occurrence of eating disorders symptoms across adolescence and emerging adulthood. *International Journal of Eating Disorders*.

Waszczuk, M. A., Zavos, H. M. S., Gregory, A. M., & Eley, T. C. (2014). The phenotypic and etiological structure of depression and anxiety disorder symptoms in childhood, adolescence and young adulthood. *JAMA Psychiatry*, *71*(8), 905-916. doi:10.1001/jamapsychiatry.2014.655

Wolf, E. J., Miller, M. W., Krueger, R. F., Lyons, M. J., Tsuang, M. T., & Koenen, K. C. (2010). Posttraumatic stress disorder and the genetic structure of comorbidity. *Journal of abnormal psychology*, *119*(2), 320.

Young, S. E., Stallings, M. C., Corley, R. P., Krauter, K. S., & Hewitt, J. K. (2000). Genetic and environmental influences on behavioral disinhibition. *American journal of medical genetics*, *96*(5), 684-695.