

Thomas S. Kubarych, Ph.D.

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Citizenship: USA

Education

- **Ph.D. Psychology, University of Edinburgh, 1999.**
- **M.S. Biostatistics, Columbia University, 2003.**
- **Master of Liberal Arts in Psychology, Harvard University, 1996.**
- **B.S. Regents College, State University of New York, 1984.**

Work Experience

Virginia Institute for Psychiatric and Behavioral Genetics

Department of Psychiatry, Virginia Commonwealth University

Research Associate, April 2003-present (Affiliated Faculty, February 2015-present)

- Application of psychometric theory, factor analysis, item response theory, latent class analysis and factor mixture modeling to improving measurement of psychiatric symptoms and subsequent diagnosis of disorders via DSM criteria to examine empirical basis for DSM nosological system and develop more efficient methods of analysis and classification.
- Structural equation modeling of genetic and environmental contributions to psychiatric and substance use disorders, brain regions, and personality constructs.
- Developed and published methodology to account for stem-probe format of structured clinical interviews (phenotype: generalized anxiety disorder).
- Studies of measurement non-invariance across age, sex, and study (major depression, anxiety disorders, and personality disorders).
- Apply to issues in substance abuse assessment.
- Develop and apply methodology for detection of latent-non-normality. Analysis of latent non-normality in fears and phobias.
- Factor, class, latent transition, and mixture models in support of DSM-V Task Group tasked to determine whether or not Mixed Anxiety and Depression Disorder should be added to DSM-V.
- Factor analysis and genetic association analysis of neurocognitive measures in schizophrenia.

- Comparisons performance of factor, class, and mixture models.
- Gene-by-environment interaction effects of psychopathy as moderator of developmental trajectories of externalizing disorders.
- Growth curve modeling of externalizing and inhibitory control.
- Data cleaning.
- Advanced training in statistical genetics and genetic epidemiology. Certificates from 22nd International Statistical Genetics Methods Workshop, August 11-15, 2008 in Leuven, Belgium and Advanced Workshop for Gene Finding and Genetic Epidemiology, Egmond an Zee, Netherlands, October 4-8, 2004.

Columbia University, January 2000-December 2001

- National Institute of Mental Health (NIMH) Postdoctoral Research Fellow in Mental Health Statistics, January 2000-December 2001. Enrolled in full time M.S. Biostatistics program.
- Presentations to American Psychopathological Association and International Society for the Study of Individual Differences.

New York State Psychiatric Institute, January 2002 – March 2003

- Regression analysis of anxiety disorder research.
- Author of paper recently cited as “most statistically rigorous” confirmatory factor analysis of Narcissistic Personality Inventory.

Teaching Experience

Virginia Commonwealth University

- Developed and taught Honors College course
- Lecturer to psychiatry residents on personality disorders

University of Edinburgh, Department of Psychology

- Taught first year undergraduate psychology.

Eastern European Language and Leadership Training Program

- Taught English in Russia

Publications

Bigdeli, TB, Nuechterlein, KH, Sugar, CA, Subotnik, KL, Kubarych, T, Neale, MC, Kendler, KS and Asarnow, RF (202). Evidence of shared familial factors influencing neurocognitive endophenotypes in adult- and childhood-onset schizophrenia. *Psychological Medicine* 50 1672-1679.

Kubarych, TS, Maes, HM, Silberg, JL, Eaves, LJ, Aggen, SH, Gillespie, NA, Neale, MC (in preparation). A multivariate ordinal sex limitation model of illicit substance use, alcohol dependence and antisocial personality disorder.

Kubarych, TS, Maes, HM, Kendler, KS, Aggen, SH, Gillespie, NA, Neale, MC (in preparation). A Multivariate Ordinal Sex Limitation Model of Cannabis Initiation, Cannabis Use Disorder and Antisocial Personality Disorder.

Kubarych, TS, Silberg, JL, Eaves, LJ, Aggen, SH, Gillespie, NA, Neale, MC (in preparation). Predicting cannabis use disorder from a growth curve of inhibitory control.

Kubarych, TS, Clark, SL, Aggen, SH, Gillespie, NA, Neale, MC (in preparation). Age and sex differences in the measurement and meaning of substance use disorders: results from the National Survey of Drug Use and Health 2010

Hettema, JM, Aggen, SH, Kubarych, TS, Neale, MC, Kendler, KS (2015). Identification and validation of mixed anxiety-depression. *Psychological Medicine* 45, 3075-3084.

Kubarych, TS, Neale, MC, Kendler, KS, Aggen, SH, Estabrook, R, Edwards, AC, Clark, SL, Martin, NG, Hickie, IB, Gillespie, MA (2014). Comparing factor, class and mixture models of cannabis initiation and DSM cannabis use disorder (CUD) criteria, including craving, in the Brisbane Longitudinal Twin Study. *Twin Research and Human Genetics* 17(2), 89-98.

Latendresse, S, Kubarych, TS, Dick, DM, et al (in preparation). Callous/unemotional psychopathy as a moderator of *CHRM2* influences on trajectories of externalizing behavior.

Jak, A.J. Prom-Wormley, E., Kubarych, TS, Pannizon, M.S., Eyler, L.T., Fennema-Notestine, C., Franz, C.E., Neale, M.C., Dale, A.M., & Kremen, W.S. (under review). Common Genetic Factors Influence Both Adiposity and Brain Structure. *NeuroImage*

Geng, X., Prom-Wormley, E.C., Perez, J., Kubarych, T.S., Styner, M., Lin W., Neale, M.C., Gilmore, J.H. White Matter Heritability using Diffusion Tensor Imaging in Neonatal Brains (2012). *Twin Research and Human Genetics* 15, 336-350.

Panizzon, MS, Fennema-Notestine, C, Kubarych, TS, Chen, CH, Eyler, ET, Fischl, B, Franz, CE, Grant, MD, Hamza, S, Jak, A.; Terry L Jernigan, Ph.D.; Michael J Lyons, Ph.D.; Michael C Neale, Ph.D.; Elizabeth Prom-Wormley, Ph.D.; Larry Seidman, Ph.D.; Ming T Tsuang, M.D., Ph.D., D.Sc.; Hao Wu, Ph.D.; Hong Xian, Ph.D.; Anders M Dale, Ph.D.; William S Kremen, Ph.D. (2012) Genetic and Environmental Influences of White

and Gray Matter Signal Contrast: A New Phenotype for Imaging Genetics? *NeuroImage* 60, 1686-1695.

Kubarych, TS, Prom-Wormley, EC, Franz, CE, Panizzon, MS Dale, AM, Fischl, B, Eyler, ET, Fennema-Notestine, C, Grant, MD, Hauger, RL, Hellhammer, DH, Jak, AJ, Jernigan, TL, Lupien, SJ, Lyons, MJ, Mendoza, SP, Neale, MC, Seidman, LJ, Tsuang, MT and Kremen, WS (2012). A multivariate twin study of hippocampal volume, self-esteem and well-being in middle age. *Genes, Brain and Behavior* 11, 539-554.

Torgersen, S, Myers, J, Reichborn-Kjennerud, T, Røysamb, E., Kubarych, TS and Kendler, K.S. (2012). The heritability of Cluster B personality disorders assessed both by personal interview and questionnaire. *Journal of Personality Disorders* 26, 848-866.

Aggen, SH, Kendler, KS, Kubarych, TS and Neale, MC (2011). Age and sex moderation effects in the assessment of major depression: a population-based item analysis of the DSM criteria. *Twin Research and Human Genetics* 14, 524-538.

Kubarych, TS, Aggen SH, Kendler, KS, Torgersen, S, Reichborn-Kjennerud, T and Neale, MC (2010). Measurement non-invariance of DSM-IV Narcissistic Personality Disorder Criteria across Age and Sex in a Population-Based Sample of Norwegian Twins. *International Journal of Methods in Psychiatric Research* 19, 156-166.

Kubarych, TS, Aggen, SH, Hettema, JM, Kendler, KS and Neale, MC (2008). Assessment of generalized anxiety disorder symptoms in women and girls in the National Comorbidity Survey and Virginia Twin Study of Psychiatric and Substance Use Disorders: a comparative study. *Psychological Assessment* 20, 206-216.

Kubarych, T.S., van den Berg, S.M., Reichborn-Kjennerud, T., Kendler K.S., Torgersen S., Aggen S.H., Neale, M.C. (2007). DSM-IV Narcissistic Personality Disorders symptoms: An item response theory analysis using WinBUGS. *Behavior Genetics* 37, 769.

Neale, MC, Aggen, SH, Maes, HH, Kubarych, TS, and Schmitt, JE (2006). Methodological issues in the assessment of substance use phenotypes. *Addictive Behaviors* 31, 1010-1034.

Schmitt, JE, Mehta, PD, Aggen, SH, Kubarych, TS and Neale, MC(2006). Semi-nonparametric methods for detecting latent non-normality: a fusion of latent trait and ordered latent class modeling. *Multivariate Behavioral Research* 41, 427-433.

Kubarych, TS, Aggen, SH, Hettema, JM, Kendler, KS and Neale, MC (2005). Endorsement frequencies and factor structure of DSM-III-R and DSM-IV generalized anxiety disorder symptoms in women: implications for future research, classification, treatment and comorbidity. *International Journal of Methods in Psychiatric Research* 14, 69-81.

Kubarych, TS (2005). Self-deception and Peck's analysis of evil. *Philosophy, Psychiatry, and Psychology* 12, 247-255.

Kubarych, TS (2005). On studying evil. *Philosophy, Psychiatry, and Psychology* 12, 265-269.

Kubarych, TS, Deary, IJ and Austin, EJ (2004). The narcissistic personality inventory: factor structure in a non-clinical sample. *Personality and Individual Differences* 36(4), 857-872.

Representative Invited Lectures, Seminars, and Conference Papers

Impulsivity, Inhibitory Control, and Substance Use. VIPBG Seminar, February 20, 2014.

Narcissism, Self-Deception, Conscience, and Evil. Invited lecture at Theology on Tap, February 17, 2014.

Comparing Factor, Class and Mixture Models. VIPBG seminar, 2013.

Measurement Non-Invariance and Structured Missingness in Psychiatric Epidemiology. RAND Corporation, April 2009.

Narcissism, Psychiatry, and Freedom. Invited lecture at 11th annual meeting of the International Network of Philosophy and Psychiatry, October 7, 2008.

Using Item-Factor Analysis to Detect Measurement Non-Invariance. Invited lecture at Fordham Conference on Applied Psychometrics, June 2008.

Narcissism, Self-deception, Conscience, and Evil. Invited lecture at Institute for Psychological Sciences, November 14, 2007

DSM-IV Narcissistic Personality Disorder Symptoms: an item response theory analysis using WinBUGS. Annual meeting of the Behavior Genetics Association, 2007.

Measurement Invariance of Generalized Anxiety Disorder Symptoms in Women in the National Comorbidity Survey and Virginia Twin Registry. Annual meeting of the American Psychological Association, 2006.

Analysis of Generalized Anxiety Disorder Symptoms from Structured Clinical Interviews. Annual meeting of the Behavior Genetics Association, 2004.

Narcissism, the big five, and response to disconfirming feedback. International Society for the Study of Individual Differences conference, 2001.

Other Positions Held

Grassmarket Community, Edinburgh, Scotland, September 1996-December 1999

- Provide meals and assistance to homeless people.
- Leader, 1997-1998.

Fox Sports, TV statistician, NFL Europe League (1997-1999)

- Provided live game statistics to Fox Sports commentators in booth during home games of Scottish Claymores.

CTA INCORPORATED, Aerospace Systems Engineer/Analyst (1987 - 1995)

Major projects included:

- 1991 - 1995, Bedford, MA. Staff Engineer/Analyst. Systems engineering and project management to integrate new missile warning system into integrated missile-air-space attack warning and assessment system-of-systems. Manage scheduling database to ensure that systems are ready to be mutually tested. Proposal writing.
- 1988 - 1991, Carson, CA. Staff Engineer/Analyst. Government on-site representative monitoring software development of over 1 million lines of code for missile warning system. Human factors engineering of missile warning displays. Received commendation from USAF for outstanding performance (attached below).
- 1987 - 1988, Ridgecrest, CA. Engineer/Analyst. Software requirements analysis, preliminary and detailed design for estimated 400,000 lines of code for simulation and modeling application.

Northrop Corporation, Hawthorne, CA, Engineer/Technical Writer (1985-1987).

- Programming in Pascal and technical writing for F-14 and A-6 avionics.

Microlog, Inc., Suffern, NY (1984)

- Technical Support Manager.
- Technical support for PC expansion products.

Languages: Native English speaker; reading knowledge of German, High School Spanish, Elementary French.

Statistical Software: SAS, Mplus, R, WinBUGS, Stata, SPSS, EQS, Merlin, Plink.

Professional Memberships: American Statistical Association, American Psychological Association.

Other Professional Interests: Industrial/Organizational Psychology, Forensic Psychology, Cognitive Psychology, Behavioral Economics, Terrorism Research



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS ELECTRONIC SYSTEMS DIVISION (AFSC)
HANSKOM AIR FORCE BASE, MASSACHUSETTS 01731-5000

15 September 1989

Mr Raymond McMillan
Vice President, SDAS Program Manager
Computer Technology Associates
175 Middlesex Turnpike Rd
Bedford, MA 01730

Dear Mr McMillan

I am pleased to recognize the outstanding performance of Tom Kubarych in support of the Command Center Processing and Display System-Replacement Program. Tom's on-site presence at the TRW plant in Dominguez Hills, CA has been invaluable in providing the Program Office with the technical insights needed to permit timely consideration of high risk design and test issues. His keen instinct for digging out problems independently and for describing these succinctly in his weekly reports to the Program Office have led to a better appreciation by the Government team for the true state of the software development progress. For example, Tom recently identified problems in the System Control software which is a key element of the overall software design. Prior to Tom's report, the Government was unaware of the difficulties in this area. Tom has also identified timing problems which point out areas requiring improvement in order to meet Quantitative Performance Requirements. Tom has managed these accomplishments without antagonism toward his TRW counterparts--no mean feat requiring a mature sense of tact and diplomacy.

In addition, Tom took the initiative to first gain SPO approval and to then provide excellent and informed coverage as the Government representative to the Program Configuration Control Board and Software Configuration Control Board.

In summary, Tom is having a significant positive impact on the CCPDS-R Program. His contributions have been critical in ensuring the mission of the Integrated Tactical Warning and Attack Assessment system which visibly reflect positively upon the CTA role in support of the CCPDS-R Office.

PAUL E. HEARTQUIST, Lt Colonel, USAF
Program Manager, CCPDS-R Program
Space and Missile Warning
Systems Program Office

Tom,

I want to express my personal appreciation along with that of CTA, for the quality of your work on CCPDS-R. You are clearly making a difference. Keep it up!

Tom A. Johnston