

MCTFR *update*

minnesota center for twin and family research Spring : Summer : 2013



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change and
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RECENT FINDINGS FROM OUR TWIN STUDIES: PERSONALITY GROWTH AND CHANGE DURING ADOLESCENCE AND EARLY ADULTHOOD AND LINKS TO SERIOUS DEPRESSION

By: **Sylia Wilson**



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Postdoctoral Research Assistant Sylia Wilson, former graduate student Ana DiRago, and Principal Investigator William Iacono recently submitted a paper for publication that examined links between personality and depression during adolescence and early adulthood. Using information from interviews and questionnaires completed by twins when they were 17, 20, 24, and 29 years old, the researchers found that most twins showed positive changes in personality as they became young adults, but that having certain personality traits made it more likely that some twins would experience depression, and that depression sometimes interfered with positive personality growth.

This decrease in negative emotionality and increase in constraint has been referred to as the “maturity principle”—as people get older, they become better able to cope with stressors and take on new responsibilities that require them to be dependable and reliable, like careers and parenting. Most twins reported steady positive emotionality (a tendency to experience positive emotions, like happiness, and to be active, energetic, and socially outgoing) through adolescence and adulthood.



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MCTFR twins were surveyed about their personality traits, or their tendency to think, feel, and act in a particular way. Like other studies have found, most twins reported decreasing negative emotionality (a tendency to experience negative emotions, like sadness, anger, fear, and stress) as they moved from adolescence into adulthood. Most twins also reported increasing constraint (a tendency to be planful, careful, and responsible) as they became older.

However, some twins experienced serious depression during this period. Twins with higher negative emotionality and lower positive emotionality were more likely to later experience depression, and were more likely to experience recurrent bouts of serious depression. In addition, twins who experienced depression were less likely to show the positive personality changes (decreasing negative emotionality, increasing constraint) most twins showed as they became older. This was especially true for twins who experienced depression early on, when they were adolescents, and who experienced recurrent depression.

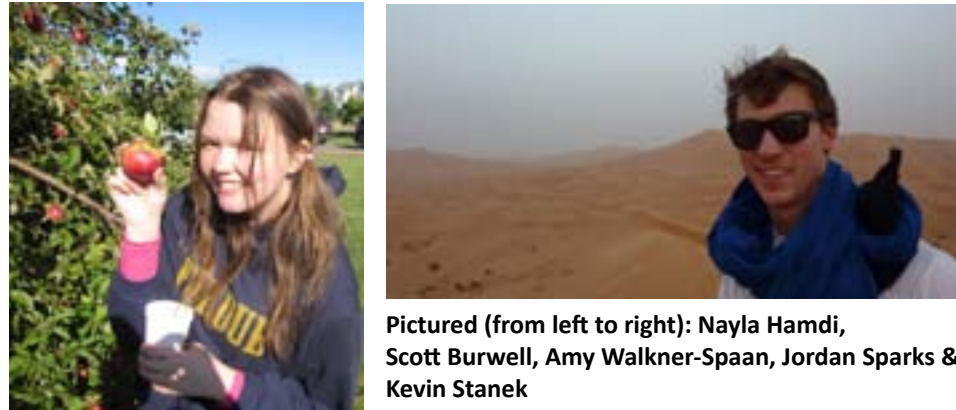


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This issue was made possible through the collaborative efforts of the following MCTFR staff: Kadie Johnson, Kristen Harne, Jon Klaphake, Shandell Pahlen, Emma Hamilton, & Alicia Kielbasa. Thank you for your hard work and creativity!

Meet the Staff: Graduate Students



Pictured (from left to right): Nayla Hamdi, Scott Burwell, Amy Walkner-Spaan, Jordan Sparks & Kevin Stanek

There are many people who work at the MCTFR, some of whom you interact with during your visit and some you never see. We would like to introduce a committee you do not see during your visit: the graduate students. The students use the data collected in the lab and interviews to write research publications. This "committee" is made up of members who work individually or with their research teams to study data they find interesting. All graduate students associated with the MCTFR are PhD students in a field of psychology or Family Social Sciences.

My name is Kevin Stanek and I am a 4th year doctoral student in Behavioral Genetics and Industrial/Organizational Psychology. I am currently using data from the MN Center for Twin and Family Research as one piece of my dissertation: the largest investigation ever of personality and intelligence. I recently took a trip to the Sahara.

Sarah Ward: I'm currently a 5th year graduate student in the Clinical Science and Psychopathology Research program. I am interested in studying the genetic and environmental contributions to the development of antisocial behavior in adolescence and adulthood. This summer, I was lucky enough to give a talk on my research at the Behavioral Genetics Conference in Edinburgh, Scotland.

My name is Scott Burwell and I am a Minnesota native and 2nd year graduate student in the University's Biological Psychopathology program. My research aims to understand how the development of brain function throughout adolescence and adulthood influences learning, decision making, and psychosocial problems. Moreover, I am interested in how the use of psychoactive medications or addictive substances may alter this developmental

trajectory. I do this work by analyzing brain measures (e.g., EEG and MRI) from twin participants collected while they performed tasks that are thought to tap into cognitive and motivational processes. When not busy with school and work, I enjoy being at my family's cabin near Virginia, MN, building log structures with my father or fishing on our recently refurbished pontoon.

My name is Kayla Anderson and I'm a 2nd year graduate student in Family Social Science. I currently use the SIBS study to look at how internationally adoptive families discuss racial and ethnic issues in their families. My current research focuses on how general family communication relates to discussing racial and ethnic differences - and how all of these conversations impact adolescent adjustment. My life goal is to set foot on all seven continents. I've currently been to four (Asia, Africa, North America, Europe).

Amy Walkner-Spaan, MSW: I am a 4th year PhD student in the Family Social Science program. My research interests include adoption, family relationships, and genetically unrelated families. I am currently using the SIBS data to study family relationship change in adoptive families from late adolescence into young adulthood. I also work with the Family Communication Project, which studies the impact of

communication on well-being in families created through assisted reproductive technology (ART). In my spare time I enjoy playing bass clarinet in the Grand Symphonic Winds, a music ensemble located in the Twin Cities.

Nayla Hamdi: I am a 3rd year graduate student. I study Clinical Psychology at the University of Minnesota and associated with the MCTFR. I am currently researching how genes interact with the environment to influence alcohol use. I am also interested in deriving accurate estimates of how common substance use disorders are through prospective assessment. I went on a road trip to Yellowstone Park last summer.

Peter Lynn: I am a 1st year clinical graduate student working primarily with analysis of the MCTFR EEG (brainwave) data. Currently, I am examining the effects of long-term alcohol use on the P300 ERP component using twins discordant for lifetime alcohol consumption. In my (little) spare time, I enjoy playing music, mostly piano and guitar, and spending time with my family.

Jordan Sparks: I am a 4th year graduate student in the Clinical program. I am using the MCTFR twin study data to look at correlates of impulsive behaviors and adult outcomes associated with problematic alcohol use. Last year I won a tri-state cooking competition.

MCTFR Research

Around the world

By: Jonathan Klaphake & Kristen Harne

Have you ever wondered what happens with the research produced from your participation at the MN Center for Twin & Family Research? MCTFR researchers, post-doctoral fellows, and graduate students have been traveling around the globe presenting their research findings to other researchers at conferences related to genetics, psychology, and psychophysiology.

One such conference was the 52nd Annual Meeting of the Society for Psychophysiological Research (SPR). For five days in September, members of the MCTFR attended the SPR in New Orleans, Louisiana. Scientific conferences like the annual SPR conference give MCTFR researchers an opportunity to share our work with the broader scientific community as well as see what others are studying to further inform our studies.

In the last four years, the MCTFR has increased its participation



in SPR conferences, also increasing the number of posters presented: from 1 in 2009, 3 in 2010, 4 in 2011 and now 5 at the 2012 meeting (one of which won a poster award). Posters this year covered an array of topics and utilized multiple types of physiological data collected in our labs. These included: investigating neuronal networks involved in movement, P3 amplitude differences in males and females, the genetics of the startle blink response, the relationship between startle blinks and depression, and relationships between the error-related negativity (ERN) and different externalizing behaviors.

A few of the other recent conferences from the last year were:

- Behavior Genetics Association (BGA) Annual Meeting in Edinburgh, Scotland
- Conference on Emerging Adulthood (CEA) in Providence, Rhode Island
- International Organization of Psychophysiology conference (IOP) in Pisa, Italy
- Life History Research Society Meeting (LHRS) in Richmond, England
- Annual Meeting of the Society for Psychophysiology Research (SPR) in New Orleans, Louisiana
- Social Science Genetics Association Consortium's (SSGAC) meeting in Reykjavik, Iceland

Personality Changes and Emotionality

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Importantly, though, twins who remitted from depression (were free of serious depression for 5 years or longer) did show positive changes in personality, almost as if they had not experienced depression at all. This important finding suggests that experiencing even serious depression does not necessarily interfere with later positive growth and development, and that finding ways to help people recover from depression,

and stay depression free will help get them back on track.

Altogether, this research helps us better understand links between personality and depression. We are grateful to the many twins who participated in this research for their help in allowing us to answer important questions about development in adolescence and adulthood, and for potentially helping people experiencing serious depression.



Address Service Requested

MCTFR Word Search



Thanks again to all our participants who make our work possible.

T	X	W	M	T	P	C	S	C	K	P	E	I	H	K
C	L	N	P	O	E	I	S	T	Q	D	X	D	B	T
F	Q	J	Y	I	M	P	A	N	Y	I	L	E	W	T
M	J	Q	X	I	F	B	F	E	N	J	A	N	M	N
A	L	U	L	P	K	G	E	M	X	I	N	T	K	E
V	G	A	J	E	A	C	A	N	X	N	R	I	I	R
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W	L	A	Z	T	R	T	V	F	A	W	T	B	M	K
C	Y	K	X	Y	S	I	B	L	I	N	G	U	F	C

GENE
 ENVIRONMENT
 FAMILY
 IDENTICAL
 FRATERNAL
 SIBLING
 PERSONALITY
 BRAIN
 INHERIT
 SIMILAR
 DIFFERENT