

# WISCONSIN TWIN RESEARCH NEWSLETTER

Summer 2006

Volume XXX

Published by: UW Twin Center



## Spotlight on Research

### Replication Study on Effects of Classroom Separation

The Fall 2004 newsletter described results of a study on classroom separation with a twin sample from the UK (see Tully, Moffitt, Caspi, Taylor, Kiernan, & Andreou, 2004). Using teacher ratings of behavior at school, Tully and colleagues found that twins who were separated by age 5 had significantly more internalizing problems, while twins who were separated after age 5 had more internalizing problems and lower reading scores, as compared to non-separated same-sex fraternal twins. Overall, results showed that identical twins had more difficulties than same sex fraternal twins.

In fall of 2005, the journal of Twin Research and Human Genetics published a replication study using a large Dutch twin sample from the Netherlands Twin Registry (van Leeuwen, van den Berg, van Beijsterveldt, & Boomsma, 2005). Van Leeuwen and colleagues obtained reports of behavior from mothers at ages 3, 5, 7, and 12 years, with teacher reports at 7 and 12 years, and national testing scores at age 12. This provided a report of behavior problems before the twins entered school, and provided information about behavior at both home and school for short- and long-term periods of time. Results suggested that at age 7, separated twins had more internalizing and externalizing problems than non-separated twins, according to both mother and teacher reports; *however*, these effects could only be attributed to the separation for the mother ratings of internalizing problems. Pre-existing differences in externalizing problems at age 3 accounted for the other effects, perhaps due to a decision to separate twins based on these problems. At age 12, the effects of separation were significant for maternal and teacher ratings of internalizing and externalizing

problems; *however*, these effects were explained by preexisting differences at age 3 and not to the separation in school. Separation at an early age seemed to only have short-term effects on internalizing problems at age 7, which disappeared by age 12. No differences in the national testing scores were found between the groups. Unlike Tully, findings did not differ for identical and same-sex fraternal twins. Van Leeuwen and colleagues suggested this may be due to differences in why twins are separated in each country, making the generalizability of the findings something to consider. Based on these findings, van Leeuwen and colleagues suggest that in the long-term, separation does not affect problem behavior or academic achievement. Rather, differences are partly explained by existing behavioral problems of the twins prior to entering school.

While this study provides an additional step toward understanding the effects of classroom separation on twin behavior and development, it is important to remember that even though some twins experienced problems, many of the separated twins adjusted and progressed well despite the separation. The decision of classroom separation should be made on an individual basis, keeping in mind the characteristics and personality of each twin. Staying together might be best for some twins, while separation may work better for others. This study emphasizes the need for parents and teachers to work together in order to find the best arrangement for each individual family and child. By working together, monitoring progress and behavior, and getting involved if problems are found, parents and teachers can help each child succeed.

---

To view a copy of the newsletter, please visit our website at [www.psych.wisc.edu/wtp](http://www.psych.wisc.edu/wtp).

Tully, L. A., Moffitt, T. E., Caspi, A., Taylor, A., Kiernan, H., & Andreou, P. (2004). What effect does classroom separation have on twins' behavior, progress at school, and reading abilities? *Twin Research*, 7(2), 115-124. (\*\*Purchase thru [www.ingentaconnect.com](http://www.ingentaconnect.com)).

van Leeuwen, M., van den Berg, S. M., van Beijsterveldt, T. C. E. M., & Boomsma, D. I. (2005). Effects of twin separation in primary school. *Twin Research and Human Genetics*, 8(4), 384-391. (\*\*\*Free thru [www.ingentaconnect.com](http://www.ingentaconnect.com)).

## Parental Control over Classroom Placement of Twins

In April of 2005, Minnesota passed a Twins Law that gives parents of twins (and other multiples) the right to make decisions about whether or not to separate their twins in the classroom. Under this law, the school is obligated to make a placement based on parental request, unless the school board determines otherwise based on the principal's request. It allows the principal to request a change in placement after the initial grading period if there are problems with a disruptive child.

Currently, Kathy Dolan of New York is seeking the same legislation after facing resistance about her request to keep her six-year-old twin boys together in first grade. She discovered that there was no formal policy for her school district and that principals were given discretion when it came to classroom placement of multiples. She is taking steps to establish a law similar to the one passed in Minnesota. You can read about the petition at [www.twinslegislation.com](http://www.twinslegislation.com).

Pamela Fierro at [multiples.about.com](http://multiples.about.com) suggests the following if you do not agree with your school's procedures for placement of your twins in the classroom.



1. Request to see the policy in writing, as often there is no written guideline.
2. Do your research. The two research articles above provide the most recent empirical data. Many advocacy groups support flexible placement based on information from parents of multiples. They may provide further support for your position.
3. Discuss the issue with professionals who know your children best, such as pediatricians, caregivers, daycare workers, and teachers. Find out from them what they believe your children's educational needs to be.
4. Document how your children respond when separated or how they are when together. For example, one may shut down or become very quiet when separated from his or her cotwin.
5. Be your own advocate. Don't be afraid to do what you believe is best for you, your children, or your family.

## The Genetics of Spontaneous Fraternal Twinning

In 2004 there were over 70,000 births in Wisconsin, including over 1000 twin births. Of those, about 2/3 were fraternal (1/2 mixed sex, 1/4 both female, and 1/4 both male). The cause of spontaneous fraternal twinning is multiple ovulation, which has a partial genetic basis. Fraternal twinning varies across racial groups and increases with maternal age and parity. In the US, the highest rates of fraternal twinning are in African Americans and the lowest in Asian Americans. This is unlike identical twinning, which occurs for every 1 in 250 births, and holds regardless of race, age, and parity.

Derom and colleagues used genome scanning technology to search through DNA from every chromosome to identify genes that may be linked to fraternal twinning. They performed genome-wide scans on 14 Flemish families with 57 mothers of spontaneous fraternal twins. Each family had at least 3 sets of fraternal twins within three generations. The results pointed to three chromosomes (numbers 2, 7, and 18) that may contain genes that contribute to dizygotic twinning.

Interestingly, within their sample they found no heterogeneity between the pedigrees for those who had fraternal twins spontaneously and those who had twins born after fertility treatment. The authors suggest that this may mean that only mothers who carry the certain gene(s) are likely to have multiple births after fertility treatment. And, those who do not have the certain gene(s) would not be likely to have multiples, even after fertility treatment. They suggest, that if this is really the case, then it may be possible to screen mothers prior to fertility treatment to identify who is likely to have multiples.

These results are to be taken with caution, as the study needs to be replicated and the results verified. Even so, they provide an interesting initial glimpse into the complex process of fraternal twinning.



### Twin Celebrations

**Twin-O-Rama** in Cassville, WI has been cancelled for 2006. Stay tuned for plans for 2007.  
**Twins Days Festival** in Twinsburg, OH will be held August 4-6, 2006. Visit [www.twinsdays.org](http://www.twinsdays.org) or call (330) 425-3652.

## An Invitation to Participate in Research for a Book in Progress



The *Twins and Different* book is **not** affiliated with the UW Twin Center or the Wisconsin Twin Project, but any families interested in participating can contact Maria or Ruth.

Dear Parents,

*We are parents of multiples contacting other parents of multiples to share their parenting experiences by participating in a questionnaire for the book, Twins and Different. Twins and Different is an investigation into how being part of a unique physical bond, multiple birth, affects children's social and learning development. Our purpose is to gain a better understanding of the socialization process of twins prior to elementary school. Our goal is to provide educators and caregivers with a better appreciation of twinship and other multiple relationships in a society that is focused on individual achievement.*

*The questionnaire has been designed to determine when and how our children are introduced to the social and educational information and activities that they are expected to know for the early years of elementary school. It is also a forum for parents to express their concerns and challenges of nurturing multiples and preparing them for school. The questionnaire should take approximately 20 minutes to complete. Questionnaires can be sent to you by email or regular mail.*

*We are very excited about this project and we hope that it is of interest to you. Please let us know if we can send you a questionnaire.*

Sincerely,

Maria Moreno  
mcmoreno@tds.net  
608-241-9355

Ruth Brown  
jandrbrown@charter.net  
608-232-1485

Maria received her doctorate in Cultural Anthropology from UW Madison and Ruth has a background in business and science writing. At present, his project is not affiliated with a university or a research program. Rather, the audience they are writing for is one that is interested in reading about parenting multiples, in both practical and anecdotal terms.

## It Takes Two-- Fun for All Ages!

### Box Guitar

This project is appropriate for kids ages 5 and up.

What you'll need:

- A small cardboard box
- Large rubber bands of different thicknesses
- A pencil or other stick similar in size



What to do:

- Cut an oval shaped hole in the top of the cardboard box. (Tissue boxes work especially well for this project because they already have a hole in the top!)
- Stretch a few rubber bands around the box and across the hole.
- Put a pencil or other stick under the rubber bands on one side of the hole.
- Optional: Tape a paper towel tube to one side of the box to make it look like a real guitar.

To play your guitar, just strum away!

## Twins and Autism

We estimate that there are as many as 130 pairs of twins under the age of 18 years in Wisconsin in which one or both twins has autism, or some other form of pervasive developmental disorder (PDD-NOS or Asperger Syndrome). We have great personal and scientific interest in these disorders, and we received a large grant from the National Institute of Health to begin a twin research study to help understand the complexities of autism.



Thus far, we have located over 90 twin pairs in which one or both has autism or a related challenge; however, this is an insufficient number to do our research. We would appreciate a phone call or email from the parents of any twin with autism (identical or fraternal, boy or girl, regardless of whether the co-twin has a disorder or not) living anywhere in Wisconsin. We would appreciate our readers mentioning our efforts to parents of twins with autism spectrum disorders. All we need to know at this time are the age and diagnosis of the twins, as well as contact information for the future. We would like to know about the existence of all such twin pairs, even if they might not choose to participate in the study. If you want to relay information to us about a twin or set of twins with autism or other related disorder, please contact Shaun Schweigert at (608) 262-1568.

Please let us know if your address or phone number changes.

Email: [wisconsintwins@waisman.wisc.edu](mailto:wisconsintwins@waisman.wisc.edu)  
Phone: (608) 265-2674



Visit our **NEW** website!  
<http://psych.wisc.edu/wtp>



**Thank You!**

As an expert on your own twins, you possess important knowledge. We appreciate the time you take to talk on the phone, fill out questionnaires, and visit with us. Each piece of information furthers research in child development.

We value your input!

## DO YOU HAVE COMMENTS, QUESTIONS, OR SUGGESTIONS?

- If your twins are under 3 years old, contact Carrie Arneson at [clarneso@wisc.edu](mailto:clarneso@wisc.edu) or (608) 265-2674.
- If your twins are over the age of 3 years, contact Nicci Schmidt at [nlschmidt2@wisc.edu](mailto:nlschmidt2@wisc.edu) or Cory Schmidt at [ckshmidt@wisc.edu](mailto:ckshmidt@wisc.edu) or (608) 265-2674.
- If you want to relay information to us about a twin or set of twins with autism or other related disorder, please contact Shaun Schweigert at (608) 262-1568 or Dr. Goldsmith by email at [hhgoldsm@wisc.edu](mailto:hhgoldsm@wisc.edu).

Address Service Requested

Wisconsin Twin Project  
University of Wisconsin-Madison  
Waisman Center  
1500 Highland Ave., Room 575  
Madison, WI 53705

NONPROFIT ORG.  
US POSTAGE PAID  
MADISON, WI  
PERMIT 658